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December 15, 2022

British Columbia Utilities Commission
Suite 410
900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Ms. Sara Hardgrave, Acting Commission Secretary and Manager, Regulatory Services

Re: ICBC's 2023 Revenue Requirements Application

Dear Ms. Hardgrave:

Enclosed is ICBC's Application requesting several approvals from the BCUC for Policy Year (PY) 2023 with respect to universal compulsory automobile insurance (Basic insurance). This Application is being filed today in accordance with *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004 (Special Direction IC2)*, as amended by Order in Council 666/22, December 12, 2022 (B.C. Reg. 269/2022).[1]

In the Application, ICBC seeks approval for a Basic insurance rate change of 0% for PY 2023, consistent with accepted actuarial practice and subject to legislative requirements. The proposed rate change includes a capital provision equal to an amount of 7% of required premium, to continue to build ICBC's capital levels while also promoting rate stability in the long term. In accordance with *Special Direction IC2*, the rates approved by the BCUC in response to this Application must remain in force, unless ICBC applies for a change, throughout PY 2023. *Special Direction IC2* defines PY 2023 as encompassing the 24-month period from April 1, 2023 to March 31, 2025.

Other approvals requested in this Application relate to reporting: ICBC proposes to discontinue reporting on the Legal Representation Conversion Rate metric, and proposes changes to the compliance reporting schedule for the 2023/24 fiscal year.

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[1] Order in Council 666/2022 (gov.bc.ca)

The Application also provides responses to BCUC directives from the October 28, 2021 Decision on the 2021 Revenue Requirements Application (Order G-307-21) and the April 7, 2022 Decision on ICBC's Application in Support of a Basic Insurance Relief Rebate (Order G-96-22).

ICBC requests that the information redacted from Chapter 8, Appendix 8J – 2022/23 Annual Information Technology Capital Expenditure Plan be kept confidential. Public disclosure of this information could influence negotiations on current and future IT capital projects and may result in economic harm to ICBC and its customers. ICBC has provided an un-redacted version of Chapter 8, Appendix 8J to the BCUC under a separate confidential cover. Should interveners require access to the information filed under confidential cover, ICBC requests that an appropriate undertaking of confidentiality be signed before any confidential information is released. ICBC asks that the BCUC inform ICBC should any requests for confidential information be made and that ICBC is provided an opportunity to file comments with respect to any requests.

ICBC respectfully submits that the proposed rate change in this Application meets the requirements of accepted actuarial practice and applicable legislation. The proposed Basic insurance rate change sought in this Application is fair, just and reasonable. ICBC seeks approval on an interim basis by January 16, 2023, pending the BCUC's final decision. ICBC requests that any difference between the interim and final approved Basic insurance rate change for PY 2023 be reflected in policies beginning April 1, 2024. This approach is the most cost-effective and helps minimize customer impacts.

Kindly direct all communication regarding this Application to:

Randy Yu Senior Manager, Regulatory Affairs ICBC Head Office, Room 504 151 W Esplanade North Vancouver, BC V7M 3H9 Telephone: 604-982-2441 Email: randy.yu@icbc.com	Matthew Ghikas and Madison Grist Legal Counsel Fasken Martineau DuMoulin LLP Suite 2900 550 Burrard Street, Vancouver, BC V6C 0A3 Telephone: 604-631-3191 604-631-3114 Email: mghikas@fasken.com mgrist@fasken.com

Sincerely,

Randy Yu

Senior Manager, Regulatory Affairs

Cc: Bill Carpenter, Vice President, Insurance, ICBC

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CHAPTER 1

APPLICATION OVERVIEW

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A EXECUTIVE SUMMARY

1. ICBC is a provincial Crown corporation that is the sole provider of universal compulsory automobile insurance (Basic insurance) to BC motorists. Basic insurance is regulated by the BCUC, and ICBC is required to submit a general Basic rate change application (referred to as a Revenue Requirements Application (RRA)) to the BCUC every year in order to set rates for the upcoming policy year.[1] ICBC does not earn a profit or any return for the Government on Basic insurance; rather, it is a "closed system", in which all variances between required and collected premiums remain in the corporation as Basic capital and get accounted for in future rate setting. ICBC also provides customers with Optional insurance coverages, operating under an open competitive regulatory framework which is not regulated by the BCUC.

2. In this Application, ICBC requests BCUC approval of a rate change of 0% for Policy Year (PY) 2023, which *Special Direction IC2, as amended by Order in Council 666/22, December 12, 2022 (B.C. Reg. 269/2022)* defines as encompassing Basic insurance policies sold during the 24-month period from April 1, 2023 to March 31, 2025. In other words, ICBC is proposing that the rates for PY 2023 remain unchanged. ICBC's request is based on the combined effect of actuarial analysis and a legislative overlay.

3. ICBC's ability to maintain current rates for PY 2023 is enabled by the continued benefits of adopting Enhanced Care on May 1, 2021. The cost of servicing and paying out claims continues to represent, by far, the largest cost component of ICBC's Basic insurance costs. Before the Enhanced Care product was implemented, ICBC was challenged with increasing claims costs, particularly Bodily Injury (BI) claims costs, which had increased at rates much higher than inflation. Even with significant efforts to manage claims costs as described in previous revenue requirements applications, successive annual net losses put a strain on ICBC's capital position, jeopardizing its ability to provide British Columbians with affordable Basic insurance coverage. Enhanced Care removed a significant amount of costs from the system while increasing eligible benefits for injured customers and improving rate affordability by lowering Basic insurance rates by 15% on May 1, 2021.

4. Not only are Basic insurance costs lower and expected to be more stable under Enhanced Care, ICBC's New Money Rate has increased for this policy year resulting in an increase in projected investment income on new premiums collected. Coupled with an overall decrease in the capital provision, the actuarial indicated rate change for the 24-month period is -6.5%.

[1] Unless directed otherwise.

5. The proposed 0% Basic rate change over a 24-month period allows ICBC to rebuild its depleted capital and absorb unexpected adverse events like volatility in the investment market. Volatility in the investment market has been the main driver in the reduction of ICBC's Basic Minimum Capital Test (MCT) ratio in the first half of the 2022/23 fiscal year.

6. In addition, the proposed 0% Basic insurance rate change positions ICBC well to absorb longer-term uncertainty around the current economic environment, crash frequency and claims cost estimates under a new Enhanced Care product. Under the new product, claims payments can occur well into the future especially for those claimants who are more seriously injured. As this is a new product within BC, actuarial best estimates rely on data from another jurisdiction, adding to the uncertainty of ICBC's Basic insurance costs. Furthermore, there could be additional inflationary costs pressures on vehicle repair parts costs and vehicle prices, as well as capacity issues in the vehicle repair industry and parts shortages affected by the disruptions in supply chains. Please refer to Chapter 7, Appendix 7B, Claims Cost Management for details.

7. In summary, a 24-month rate change set at 0% provides customers with stable rates for two years while allowing ICBC to rebuild capital to help weather future financial adversity, which in turn, will support stable and predictable rates in the longer term.

8. ICBC respectfully submits that the approvals sought in this Application are just and reasonable and should be approved. ICBC's requests are included in a draft order for the BCUC, attached to this Chapter as Appendix 1A, BCUC Draft Order to the 2023 RRA.

B OVERVIEW OF THE PROPOSED RATE CHANGE

9. The legal framework governing the BCUC's regulation of ICBC includes *Special Direction IC2 to the BCUC Utilities Commission, B.C. Regulation 307/2004, as amended (Special Direction IC2)*. Recent amendments to *Special Direction IC2* are discussed in Chapter 2, The Legislative and Regulatory Framework. The amendments provide key parameters for this Application, including stipulating:

- Policy Year 2023 covers a 24-month period, beginning on April 1, 2023 and ending on March 31, 2025.
- While the capital management plan (CMP) in existence on May 27, 2016 must remain in place, the capital build or release and maintenance provisions are replaced by a capital provision equal to an amount of 7% of required premium.

- The rate smoothing provision requiring a rate change based on a +/- 1.5 percentage point band on the previous rate change has been removed.
- The provision to set rates in a manner that allows ICBC to maintain MCT at 100% is suspended for PY 2023.

10. *Special Direction IC2* states that the general rate change cannot be less than 0%, which ICBC refers to as a "rate change floor". The actuarially indicated rate change for PY 2023 of -6.5% reflects best estimates of ICBC's actuaries and is in accordance with Accepted Actuarial Practice (AAP) in Canada, subject to applicable legislation. The proposed rate change in the Application is consistent with applying the rate change floor to the actuarial indicated rate change. As in previous applications, details of the actuarial indicated rate change are provided in Chapter 3, Actuarial Indicated Rate Change Analysis, and some additional information on the rate change floor is included in Chapter 4, Capital Management Plan.

11. The proposed 0% rate change (supported by the application of a rate change floor) provides rate stability to customers over the 24-month period and helps build additional capital over a period where capital levels are below management targets. A proposed 0% rate change also mitigates some uncertainty around ICBC's estimates during the 24-month policy period.

12. Some of the costs associated with these uncertainties are offset by higher expected investment return forecasts for PY 2023. Interest rate movements and the continued transition of the ICBC investment portfolio toward the strategic asset mix have created higher estimates of investment yields for PY 2023.

13. In preparing this Application, ICBC's actuaries and the external actuary have noted they cannot foresee any change in assumption that would accord with accepted actuarial practice and would result in a change to the PY 2023 actuarial indicated rate change such that it would be greater than the proposed rate change of 0%, given the magnitude of the differential between the rate change floor and the actuarial indicated rate change.

C OTHER REQUESTS FOR APPROVAL

C.1 DISCONTINUE REPORTING ON LEGAL REPRESENTATION CONVERSION RATE

14. With the implementation of the Rate Affordability Action Plan (RAAP) product reforms on April 1, 2019 and the subsequent transition to the Enhanced Care model on May 1, 2021, there are very few new legal-based (tort) claims being opened. Litigation costs and BI claim payments have been significantly removed from ICBC's costs. Due to the low number of new legal-based BI claims being opened, particularly since the implementation of Enhanced Care, the Legal Representation Conversion Rate (LRCR) metric no longer provides a meaningful comparison with prior fiscal years when ICBC was under legal-based insurance models. As a result, ICBC no longer has a business need to continue to monitor legal representation and therefore proposes to discontinue reporting on the LRCR in future RRAs. Please refer to Chapter 8, Appendix 8F, Injury Claim Transition to the Enhanced Care model and LRCR for more details.

C.2 PROPOSED DATES FOR COMPLIANCE REPORTING

15. *Special Direction IC2* exempts ICBC from the requirements to apply for a rate change order by December 15, 2023, but does not exempt ICBC from filing fiscal year 2023/24 annual compliance reports that are the subject of prior BCUC orders. While the annual filing dates work in one instance, ICBC believes that it is reasonable to adjust the timing of two reports. Figure 1.1 sets out ICBC's proposed filing dates for various filings and the rationale for each proposal.

Figure 1.1 – Compliance Reporting Timetable Proposal

Compliance Report	Order	Filing Date if No RRA	Proposed Next Filing Date	Reason
Road Safety	May 19, 2015 Decision on the 2014 Revenue Requirements Application (Order G-81-15)	September 30	December 15, 2024	There are no new programs requiring an update in FY2023/24. ICBC publicly provides a significant amount of road safety information in the media as well as on icbc.com.
Performance Measures	May 11, 2016 Letter (L-10-16)	August 31	December 15, 2023	To align the timing of the compliance report with the IT Strategic Plan.
Information Technology (IT) Capital Expenditure Report	August 9, 2010 Letter (L-61-10)	The requirement is to file on a consistent annual date, which has been December 15.	December 15, 2023	ICBC is requesting to maintain the December 15 annual date and file concurrently with Performance Measures and the IT Strategic Plan.

16. In accordance with the BCUC's July 26, 2018 Decision on ICBC's Application to Streamline Information Technology Compliance Reporting Requirements (Order G-139-18), ICBC is directed to file, once every three years, an Information Technology (IT) Strategic Plan in the RRA with the BCUC. ICBC last filed this report with the 2021 RRA and will file the next report on December 15, 2023, in alignment with Order G-139-18.

17. ICBC will submit a review of its Financial Allocation Methodology in December 2023 in accordance with the October 28, 2021 Decision on the Policy Year 2021 RRA, Order G-307-21.

D RESPONSES TO BCUC DIRECTIVES G-307-21 AND G-96-22

18. Figure 1.2 below sets out the BCUC's directions from the October 28, 2021 Decision on the 2021 RRA (Order G-307-21). It highlights the information that ICBC is to provide in this Application and includes where the information is located. In addition, this figure also includes ICBC's response to the BCUC's direction in its April 7, 2022 Decision on the Basic Insurance Relief Rebate Application (Order G-96-22).

Figure 1.2 – Responses to BCUC Directives

Directions Related to Order G-307-21	Page	Location of ICBC's Response
ICBC is directed to provide an analysis of the expected savings that will be achieved and the forecast versus actual savings achieved in FY 2022/23 and 2023/24 related to phasing out the modified tort and full tort insurance models, as part of its next general rate change application for PY 2023, which is scheduled to be filed by December 15, 2022.	35	The analysis is contained in Chapter 6, Operating Expenses and Allocation Information, Sub-section D.1.3.
Given interveners' desire to have input into design elements of this new capital management plan, and ICBC's stated willingness to hold an information session for interveners and BCUC staff prior to filing that plan, the Panel expects and encourages ICBC to do so by the summer of 2022 before finalizing that plan for filing with the BCUC.	40	ICBC conducted an information workshop on June 23, 2022.
The Panel approves the combining of the Insurance Expense Ratio with the Non-Insurance Expense Ratio into a new measure to be referred to as the Expense Ratio. At the same time, the Panel directs ICBC to continue reporting on the Insurance Expense Ratio as a separate measure to better reflect its actual insurance operations.	58	The reporting of the combined Expense Ratios, including the continued reporting of the Insurance Expense Ratio can be found in Chapter 8, Compliance Reports Appendix 8A Performance Measures.
Directions Related to Order G-96-22	**Page**	**ICBC's Response**
ICBC is directed to report on the actual administrative cost of the Relief Rebate and the associated impacts as part of its next application for a general rate change, which is scheduled to be filed by December 15, 2022.	2	ICBC was directed to report the actual administrative costs incurred in distributing the Relief Rebate to customers and reports $2.74 million of costs incurred to date against a budget of $5 million.[1]

[1] ICBC is still handling costs associated with reissuances and exceptions.

E IMPLEMENTATION OF ORDER AND INTERIM RATE CONSIDERATIONS

19. ICBC requests that the BCUC approve the proposed 0% Basic insurance rate change for PY 2023 on an interim basis by January 16, 2023, to be effective April 1, 2023.

20. In the event that the BCUC approves a final rate change which is different from the proposed 0% rate change, there will be impacts on Basic insurance certificates written between April 1, 2023 and the date that the BCUC implements the new final rate. ICBC has proposed an approach to address this circumstance that generally aligns with what it has proposed in prior RRAs.

E.1 DEFERRAL OF ANY DIFFERENCE BETWEEN INTERIM AND FINAL RATE

21. ICBC proposes to defer the implementation of any rate variances arising from the BCUC's final decision to policies on April 1, 2024. Given the 24-month policy year, it is possible to implement rate variations arising from the BCUC's final decision into policies beginning April 1, 2024. Under this proposal, most customers will see a full year of the interim rate of 0% and upon renewal in the subsequent year will see the impacts of the variance between the final rate and the interim rate. ICBC has selected April 1, 2024 to align with the on-going effective dates of Basic insurance rate changes.

22. Deferring the implementation of rate variances until what would normally have been the following policy year will prevent customer confusion and dissatisfaction by eliminating the need to adjust the premium paid mid-way through the policy. Further, ICBC expects operational savings from avoiding back-billing active certificates, and will eliminate operational and distribution costs from issuing refund cheques.

E.2 EFFECTIVE DATE OF IMPACT ON DRIVER PENALTY POINT PREMIUM AND DRIVER RISK PREMIUM

23. Premiums associated with the Driver Penalty Point (DPP) Premium and Driver Risk Premium (DRP) will reflect the general Basic insurance rate change once the BCUC has approved permanent rates. In the event that BCUC approves a final rate change, which is different from the proposed 0% rate change, ICBC proposes to implement the DPP and DRP rate change effective on the first day of the month at least 60 days following the date of the final order. For example, if the BCUC's final decision is rendered on September 15, 2023, then changes to the DPP and DRP would be applied on December 1, 2023.

F APPLICATION ORGANIZATION AND STRUCTURE

24. This Application continues to separate the rate-related content from the compliance reporting content, in recognition of the forward-focused view associated with the proposed rate change versus the historical view of compliance-related content that does not affect the proposed rate change.

25. For greater clarity, Chapters 2 to 7 contain information affecting the proposed rate change. Chapter 8, Compliance Reporting, provides the reporting required in accordance with previous BCUC orders but has no bearing on the proposed rate change. To assist readers' understanding

of the terminologies and acronyms used throughout this Application, a Participants' Reference Guide has been appended to the Application.

26. Figure 1.3 lists the chapters in the Application, alongside a brief summary of the purpose of each chapter and the equivalent chapter in the 2021 RRA.

Figure 1.3 – Chapter Organization

2023 RRA	Purpose	Equivalent in 2021 RRA
Chapter 1 **Application Overview**	Provides a high-level overview of the Application inclusive of an executive summary, approvals sought, and commentary on the directives set out in BCUC Orders G-307-21 and G- 96-22.	Chapter 1
Chapter 2 **Legislative and Regulatory Framework**	Provides Government Directions, Orders in Council applicable to this Application plus a chronology of legal events since the 2021 RRA.	Chapter 2
Chapter 3 **Actuarial Indicated Rate Change Analysis**	Provides the actuarial analysis used to determine the actuarial indicated rate change in accordance with accepted actuarial practice, subject to applicable legislation.	Chapter 3
Chapter 4 **Capital Management Plan**	Provides a summary of the components within ICBC's CMP.	n/a
Chapter 5 **Investments**	Discusses the New Money Rate and Yield on Capital Available for Rate Setting. These rates are used in the actuarial indicated rate change analysis.	Chapter 5
Chapter 6 **Operating Expenses and Allocation Information**	Provides information on the main drivers of operating expenses and on the allocation of operating expenses to Basic insurance.	Chapter 6
Chapter 7 **Business Operations**	Provides an overview of insurance distribution and claims cost management.	Chapter 4
Chapter 8 **Compliance Reporting**	Compliance reporting is provided in accordance with previous BCUC orders requiring reports to be amalgamated within RRAs. This information has no bearing on the proposed rate for PY 2023.	Chapter 7
Participants' Reference Guide	A user guide that sets out some background on ICBC, provides a glossary to the acronyms used in this Application and frequently asked questions on rate setting versus financial reporting.	Chapter 8

27. Figure 1.4 is a listing of compliance reports in this Application and their equivalent in the 2021 RRA. As noted above, this information has no bearing on the proposed rate for PY 2023.

Figure 1.4 – Compliance Reporting

Topic	2023 RRA (Chapter 8)	Equivalent in 2021 RRA (Chapter 7)
Performance Measures	Appendix 8A	Appendix 7A
Investment Performance Information	Appendix 8B	Appendix 7G
Detailed Operating Expense Information	Appendix 8C	Appendix 7H
Cost Allocation Tables	Appendix 8D	Appendix 7I
Fraud Investigation Metrics	Appendix 8E	Appendix 7F
Injury Claims Transition to Enhanced Care and Legal Representation Conversion Rate [1]	Appendix 8F	Appendix 7E
Road Safety	Appendix 8G	Appendix 7B
Government Initiatives	Appendix 8H	Appendix 7J
Historical Information and Basic Insurance Information Sharing (BIIS)	Appendix 8I	Appendix 7K Appendix 7L
Annual Information Technology (IT) Capital Expenditure Plan	Appendix 8J	Appendix 7D
Information Technology (IT) Strategic Plan	(no reporting requirement)	Appendix 7C

[1] Injury Claims Transition to Enhanced Care in Appendix 8F of this Application replaces the Rate Affordability Action Plan (RAAP) product reform metrics that were presented in Appendix 7E of the 2021 RRA, as RAAP product reform changes were superseded by the Enhanced Care Model on May 1, 2021.

G PROPOSED REGULATORY PROCESS

28. Figure 1.5 below sets out a proposed initial regulatory process for this Application. The proposed process aligns with what the BCUC has adopted in prior proceedings and includes steps that will contribute to an understanding of the Application.

Figure 1.5 – Proposed Regulatory Timetable

Process Step	Proposed Timing
Approval of Interim Rate Change	January 16, 2023
Information Workshop (If Required)	January 30, 2023
Round 1 Information Requests (IRs)	February 13, 2023
ICBC Response to Round 1 IRs	March 17, 2023
Procedural Conference	April 3, 2023

H COMMUNICATIONS

29. Communications regarding this Application should be directed to:

Randy Yu Senior Manager, Regulatory Affairs ICBC Head Office, Room 504 151 W Esplanade North Vancouver, BC V7M 3H9 Telephone: 604-982-2441 Email: randy.yu@icbc.com	Matthew Ghikas and Madison Grist Legal Counsel Fasken Martineau DuMoulin LLP Suite 2900 550 Burrard Street, Vancouver, BC V6C 0A3 Telephone: 604-631-3191 604-631-3114 Email: mghikas@fasken.com mgrist@fasken.com

All of which is respectfully submitted.

December 15, 2022

INSURANCE CORPORATION OF BRITISH COLUMBIA

William M. Carpenter

Bill Carpenter,
Vice President, Insurance, ICBC

APPENDIX 1A
BCUC DRAFT ORDER
TO THE 2023 RRA

bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
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ORDER NUMBER
G-xx-Year

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

the *Insurance Corporation Act*, RSBC 1996, Chapter 228, as amended

and

Insurance Corporation of British Columbia
Revenue Requirements Application for Universal Compulsory Automobile Insurance
Effective April 1, 2023

BEFORE:
Commissioner
Commissioner
Commissioner

on Month, Day, 2023

ORDER

WHEREAS:

A. On December 15, 2022, the Insurance Corporation of British Columbia (ICBC) filed an application with the British Columbia Utilities Commission (BCUC) for its 2023 Revenue Requirements for Universal Compulsory Automobile Insurance (Basic insurance), seeking a Basic insurance rate change order of 0 percent of current rates for the policy year commencing April 1, 2023 (PY 2023), among other requests (Application);

B. Pursuant to the *Insurance Corporation Act* and *Special Direction IC2 to the BCUC, BC Regulation 307/2004*, as amended (Special Direction IC2), the BCUC's jurisdiction with respect to the regulation of ICBC's revenue requirements and rates is restricted to Basic insurance. The BCUC has no jurisdiction over ICBC's Optional insurance business;

C. On December 12, 2022, the Lieutenant Governor General in Council approved Order in Council No. (OIC) 666/22 directing ICBC to file a 24-month Basic insurance revenue requirements application for PY 2023, and to reflect in the rates a capital provision equal to 7% of the required premium for PY 2023.

D. Pursuant to section 89 of the Utilities Commission Act and section 15 of the Administrative Tribunals Act, ICBC seeks approval of the requested rate on an interim basis for all policies, consistent with past revenue requirements applications, with an effective date on or after April 1, 2023. ICBC further requests to defer the implementation of any difference between interim and permanent rates until April 1, 2024; and

E. The BCUC has commenced review of the Application and considers that establishing an interim rate and regulatory timetable are warranted.

NOW THEREFORE the BCUC orders as follows:

1. Pursuant to section 89 of the Utilities Commission Act, the requested 0 percent rate change to Basic insurance rates on an interim basis is approved for implementation for all existing, new or renewable policies following the issuance of the interim rate order with an effective date on or after April 1, 2023.

2. ICBC is directed to file with the BCUC, within 30 days of the issuance of this order, amended Basic insurance rate schedules in accordance with the terms of this order.

3. A regulatory timetable for review of the Application, as set out in Appendix A to this Order, is hereby established.

4. ICBC is directed to provide notice to all Basic insurance policyholders affected by the interim rate and the conditions under which it is subject to refund or additional billing. The notice must be given with the Renewal Reminder, or other similar form, issued by ICBC to Basic insurance policyholders in the ordinary course of business for renewal policies, or at the time of purchase for new policies.

5. ICBC is directed to provide adequate notice of the Application and a copy of this order regarding the review of the Application to the public by including it on ICBC's website, as soon as reasonably possible, but no later than Month, Day, 2023.

6. In accordance with the Rules of Practice and Procedure as attached to BCUC Order G-178-22, parties who wish to participate in the proceeding may submit a letter of comment, register as an interested party or request intervener status. Parties requesting intervener status must register with the BCUC by completing a Request to Intervene Form available on the BCUC's website. Those requesting intervener status are to specifically state the nature of their interest in the Application and to generally identify the issues they intend to pursue and the extent of their anticipated involvement in the proceeding.

DATED at the City of Vancouver, in the Province of British Columbia, this XX day of January, 2023.

BY ORDER

(X. X. last name)
Commissioner

Attachments

Insurance Corporation of British Columbia (ICBC) 2023 Revenue Requirements Application (2023 RRA)
Effective April 1, 2023

REGULATORY TIMETABLE

Action	Date (year)
Interim Rate Change Order	By January 16, 2023
Information Workshop	January 30, 2023
Round 1 Information Requests	February 13, 2023
ICBC Response to Information Requests	March 17, 2023
Procedural Conference*	April 3, 2023

*Location: To be determined

bcuc
British Columbia
Utilities Commission

We want to hear from you

ICBC 2023 REVENUE REQUIREMENTS APPLICATION

On December 15, 2022, the Insurance Corporation of British Columbia (ICBC) filed an application with the British Columbia Utilities Commission (BCUC) seeking approval for, among other things, a Universal Compulsory Automobile Insurance (Basic insurance) rate change of 0 percent for the policy year commencing April 1, 2023.

By Order G-XX-23, the BCUC has approved ICBC's request on an interim basis. The BCUC has established an open and transparent public proceeding to review ICBC's revenue requirements application, which includes an opportunity for public comment and participation.

Any parties who wish to participate in the BCUC's regulatory review process are invited to register as interveners, interested parties or submit letters of comment. All submissions will be considered by the Panel in its review of the Application. For more information about the Application, please visit the Proceeding Webpage on bcuc.com under "Regulatory Activities – Current Proceedings".

HOW TO PARTICIPATE

- **Submit a letter of comment**
- **Register as an interested party**
- **Request intervener status**

IMPORTANT DATES

1. **Day, Month Date, 2023** – Deadline to register as an intervener with the BCUC

For more information on getting involved, please visit our website (**www.bcuc.com/get-involved**) or contact us at the information below.

GET MORE INFORMATION

Insurance Corporation of British Columbia

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British Columbia Utilities Commission

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CHAPTER 2

LEGISLATIVE AND REGULATORY FRAMEWORK

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A INTRODUCTION

1. The legislative and regulatory framework in which ICBC operates is established by the Legislature and the Lieutenant Governor in Council. Section B of this Chapter provides an overview of this framework. Section C is an overview of the recent modifications to *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004, as amended* (*Special Direction IC2*) (provided in Appendix 2A) with Appendix 2B providing the most recent version of *Special Direction IC2* prior to these changes. Section D discusses the regulations that came into force on May 1, 2021 to support the provision of Enhanced Care. Section E provides information on the legislative and regulatory amendments since the 2021 Revenue Requirements Application (2021 RRA). Section F provides an overview of a class action lawsuit brought against ICBC. Section G discusses future accounting standards that will impact financial statements, the details of which are contained in Appendix 2C.

2. The Actuarial Rate Level Indication Analysis contained in Chapter 3 complies with the regulatory framework described in this Chapter. ICBC's claims handling and operations are reflective of both the regulatory changes in support of Enhanced Care in Section D and the legislative and regulatory amendments since the 2021 RRA discussed in Section E.

B THE GENERAL LEGAL AND REGULATORY FRAMEWORK

3. The *Insurance Corporation Act*, as amended, and specified sections of the *Utilities Commission Act* (UCA), as amended by the Government from time to time provide the overarching regulatory framework for ICBC's provision of Basic insurance products and services.[1]

4. Under these two statutes, Government may, through the Lieutenant Governor in Council, provide additional directives to:

- ICBC pertaining to universal compulsory automobile insurance, which the BCUC is required to recognize and accept.[2]

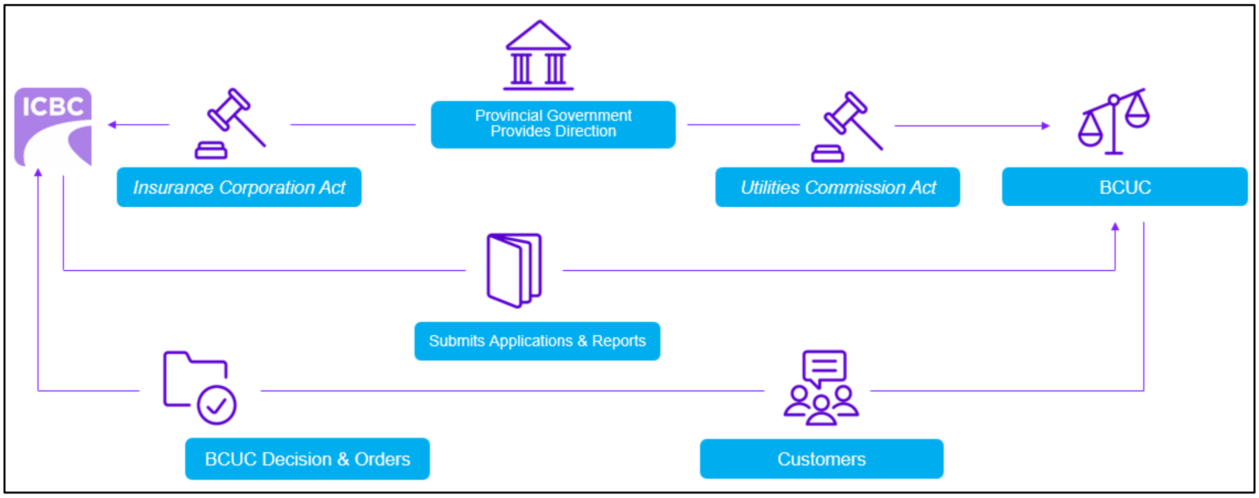
[1] Section 44 of the *Insurance Corporation Act* limits the UCA application to ICBC. For reference, section 44(1) states, in part, "Subject to subsections (3), (6) and (7), the *Utilities Commission Act*, other than sections 5 (4) to (9), 22, 23 (1) (a) to (d) and (2), 25 to 38, 40, 41, 43 (1) (b) (ii), 44.1, 44.2, 45 to 57, 59 (2) and (3), 60 (1) (b) (ii) and (2) to (4), Part 3.1, 97, 98, 106 (1) (k), 107 to 109 and 114, Parts 4 and 5 and sections 125.1 and 125.2 of that Act, applies to and in respect of the corporation as if it were a public utility…". In addition, section 44(2) of the *Insurance Corporation Act* provides that ICBC is not a public utility.

[2] Section 3 (1) (g) of *Special Direction IC2*: "when regulating and fixing universal compulsory vehicle insurance rates, regulate and fix those rates in a manner that recognizes and accepts action taken by the corporation in compliance with government directives issued to the corporation."

- The BCUC directly, in the form of a Special Direction, as to the manner in which ICBC is regulated.[3]

5. ICBC receives further oversight from the BCUC as part of its role in ensuring universal compulsory vehicle insurance and associated services within BC are provided in a manner that is adequate, efficient, just and reasonable.

Figure 2.1 – Schematic of the Regulatory Framework



C *SPECIAL DIRECTION IC2* AND THE RATE INDICATION

6. This framework, as amended, determines the provisions that are included in the actuarial rate analysis underlying the proposed rate change contained in this Application.

7. Key aspects of *Special Direction IC2* remain unchanged from prior applications, notably the requirement to determine rates according to accepted actuarial practice.

8. Recent amendments to *Special Direction IC2* (i.e., Order in Council (OIC) No. 666/2022, B.C. Reg. 269/2022*)* affect the policy year definition, the capital management plan (CMP) component of the actuarial rate indication, the customer renewal credit and the rate smoothing provisions. Specifically, *Special Direction IC2*, now stipulates that:

- Policy Year (PY) 2023 covers a 24-month period, beginning on April 1, 2023 and ending on March 31, 2025.

[3] Section 47 of the ICA and section 3 of the UCA.

- While the CMP in existence on May 27, 2016 must remain in place, the capital build or release and maintenance provisions are replaced by a capital provision equal to an amount of 7 percent of required premium.
- Required premium means, in relation to a policy year, the total present value of the projected amount of each of the following for that policy year:
  a. Loss and loss adjustment expense;
  b. General expenses;
  c. Road safety and loss management costs;
  d. Broker fees;
  e. Tax payable by the corporation under the *Insurance Premium Act*;
  f. Income from the following:
     i. Miscellaneous revenue;
     ii. Investment returns on capital available for rate setting;
  g. Allowance required to build and maintain capital.
- The customer renewal credit in section 3 (1)(h) is not in effect for PY 2023.
- Section 3 (1.1) is repealed and replaced with section 3 (1.11) removing the requirement for ICBC to apply for a rate change order based on a +/- 1.5 percentage points band on the previous year's rate change and providing that the commission must not decrease rates.
- In accordance with section 3 (1.2) the requirement under section 3 (1)(b) to set the rate in a manner that allows ICBC to maintain a Minimum Capital Test (MCT) of 100% is not in effect for PY 2023.

9. Further discussion on amendments to the CMP are contained in Chapter 4, Capital Management Plan, of this Application.

10. ICBC has previously included discussion on the Minimum Capital Test (MCT), in accordance with the May 19, 2015 Decision on the 2014 Revenue Requirements Application, within Chapter 2. However, this Application contains a discussion on ICBC's Capital Management Plan in Chapter 4, which is better suited to the discussion of MCT.

11. The Office of the Superintendent of Financial Institutions (OSFI) released revised MCT guideline that will be in force for insurers' reporting years beginning on or after January 1, 2023 (i.e., April 1, 2023 for ICBC). The guidelines were primarily updated to reflect nomenclature

changes as a result of the new International Financial Reporting Standard 17 – Insurance Contracts (IFRS 17), discussed in Section G. There is no significant impact to the actual MCT calculation methodology for ICBC as a result of the guideline revisions.

D REGULATORY CHANGES IN SUPPORT OF ENHANCED CARE

12. On May 1, 2021, ICBC launched Enhanced Care, a new care-based approach for automobile insurance. The new Enhanced Care model reduced automobile insurance premiums for policyholders while giving British Columbians access to significantly improved accident benefits if they are injured in a crash, regardless of who is responsible. At the same time vehicle damage became part of an insured's Basic insurance coverage, removing the need to sue an at-fault driver to cover the cost of vehicle repairs, replacement and loss of use.

13. While the legislative changes to the *Insurance (Vehicle) Act*, R.S.B.C. 1996, c. 231, (IVA) came into force with Royal Assent on August 14, 2020, the supporting regulations came into force on May 1, 2021 and are summarized in Figure 2.2 below.

Figure 2.2 – Summary of Enhanced Care Regulations

Name of the Regulation	Description of the Regulation
Enhanced Accident Benefits Regulation	• Sets the limitation on proceedings and actions the insured must take in relation to entitlements under the regulation. • Prescribes the circumstances and benefits available to the insured in the event of an accident; including health care, rehabilitation, family and caregiver benefits. Enhanced Accident Benefits are tied to the BC Consumer Price Index and capped at 6% as described in Division 2- Consumer Price Index Adjustments.
Permanent Impairment Regulation	• Defines catastrophic injuries resulting in permanent impairment and prescribes the compensation payable to the injured based on set parameters for calculating permanent impairment ratings by injury.
Income Replacement and Retirement Benefits and Benefits for Students and Minors Regulation	• Prescribes income replacement for full-time earners, temporary and part-time earners, non-earners, retired persons, students and minors injured in an automobile accident. • Establishes the criteria and limits on income replacement entitlement by employment class and the formulae to calculate benefits. • The regulation is the basis of the determination and calculation of benefits is in alignment with the *IVA*, the *Employment Standards Act*, *Employee Standards Act* (Canada), *Canada Pension Plan* and the All-items Consumer Price Index for British Columbia and data published by Statistics Canada.
Basic Vehicle Damage Coverage (BVDC) Regulation	• Sets the limitation on proceedings and prescribes the class of person whom proceedings may be commenced or maintained. • Prescribes eligible vehicles under the *Motor Vehicle Act* and *Commercial Vehicle Act*. • Defines actions required of the insured claimant in respect to the damaged vehicle and claim and governs ICBC in providing indemnification and payment to the insured. Including processes for disputes arising from damage or loss of a vehicle due to an accident.
Insurance (Vehicle) Transitional Regulation	• Technical amendments to the IVA to make permanent provisions to the *BVDC Regulation* that were temporarily in place under the *Insurance (Vehicle) Transitional Regulation*.

14. The IVA and the cumulative regulations together set forth the circumstances, terms and amounts payable to injured parties under the Enhanced Care Basic insurance model's Enhanced

Accident Benefits and Basic Vehicle Damage Coverage to assist our customers in recovering from a motor vehicle accident. The costs related to these coverages are reflected in the actuarial analysis starting in PY 2021, as reflected in Chapter 3, Actuarial Indicated Rate Change Analysis.

15. To further public trust in ICBC, the BC Government established an independent Fairness Office with the passing of the *Fairness Officer Regulation* approved by OIC No. 317 (317/2021), dated June 4, 2021. The regulation prescribes the matters over which the Fairness Officer has no jurisdiction, the classes and circumstances of complaints that may be investigated, and the requirement to submit budgets and annual reports to the corporation to improve the transparency and accountability of ICBC.

16. OIC No. 247 (247/2022), dated May 2, 2022 amended section 5 of the *Health Care Costs Recovery Regulations*, restricting amounts recoverable from pedestrians, cyclists and other active transportation users who have been injured in a vehicle-related accident. Where the pedestrian, cyclist or other active transportation user has sustained a severe or catastrophic injury, fatality or if there is not enough evidence to determine liability beyond 50/50, ICBC will not seek to recover any costs. To support non-severe injured persons involved in a vehicle accident, a committee of experts will review the claim to determine responsibility and if any costs will be recovered.

17. A Notice of Civil Claim was filed with the Supreme Court of British Columbia challenging the constitutionality of the Enhanced Care model introduced under the IVA and the *Civil Resolution Tribunal Act*. A hearing or trial date has not yet been set in regards to the claim.

E LEGISLATIVE AND REGULATORY AMENDMENTS SINCE THE 2021 RRA

18. In addition to the suite of Enhanced Care regulations, there have been regulatory amendments that affect ICBC operations, but do not impact the 2023 rate indication.

19. On October 28, 2021 the *Insurance (Vehicle) Amendment Act, 2021* (Bill 12) received royal assent therefore amending the IVA respecting agreements that ICBC may enter into to advance the purposes of the IVA and with respect to payments made under agreements entered into by ICBC.

20. The Government Directive of March 24, 2022 with respect to the Application in Support of a Relief Rebate approved by Order in Council 146/2022, March 25, 2022 instructed ICBC to issue a Relief Rebate to eligible holders of a Basic insurance certificate in effect at any time throughout

the period of February 1, 2022 to February 28, 2022 in the amount of $110 for personal motor vehicles and $165 for commercial motor vehicles. The BCUC was directed under *Special Direction IC2,* as amended by OIC No.147 (147/22), B.C. Reg. 70/2022 and approved the Application in Support of a Relief Rebate by Order G-96-22.

21. Amendments to the *Motor Vehicle Act* under the *Motor Vehicle Amendment Act* (No. 2), 2020 (Bill 20), allowed ICBC to remove the requirement to display license plate validation decals as of May 1, 2022. This change paved the way forward for online renewals for ICBC's customers, improving customer service and operational efficiency as discussed in Chapter 7, Business Operations, Appendix 7A, Insurance Distribution.

E.1 PRE-ENHANCED CARE LEGISLATIVE AND REGULATORY UPDATES

22. Since the 2021 Revenue Requirement Proceeding, there have been updates on pre-Enhanced Care legislative changes that do not impact the proposed rate change in this Application, but could have an impact on the 2022/23 and 2023/24 fiscal year outlooks and are summarized below.

E.1.1 TORT CLAIMS

23. The Government introduced the *Evidence Amendment Act, 2020* (Bill 9), which received Royal Assent on July 8, 2020, in response to the British Columbia Supreme Court's ruling that OIC No. 40 (40/2019) and OIC No. 131 (131/2019) enacting Rule 11-8 were unconstitutional. The amendments limited the number of experts and expert reports entered into evidence, with additional reports subject to judicial discretion. The amendments provide for additional limits to be placed on disbursements to reduce legal costs associated with tort claims.

24. Under the *Evidence Amendment Act, 2020*, the *Disbursements and Expert Evidence Regulation* places a limit on the amount recoverable from an unsuccessful litigant for disbursements related to motor vehicle personal injury litigation at 6% of the overall judgment or settlement. Potential savings due to the change in the *Evidence Act* regulations were reflected and discussed in The Statements and Schedules of Financial Information for the Year Ended March 31 (note 16).

25. A legal challenge was filed regarding the 6% cap on disbursements and on July 8, 2022, the British Columbia Supreme Court found the cap to be unconstitutional. As a result of this

decision, ICBC has included no savings in the provision for unpaid claims on account of this regulation and discussed in 2021/22 Annual Service Plan Report (note 15). On July 12, 2022, the Attorney General and ICBC appealed this decision. The appeal hearing is scheduled for January 25 and 26, 2023.

E.1.2 MODIFIED TORT CLAIMS

26. In 2019, the Government introduced changes to the IVA and *Civil Resolution Tribunal Act* (CRTA). The legislation provided for a "minor injury" definition, an associated cap of $5,500 for a minor injury, and granted jurisdiction to the Civil Resolution Tribunal (CRT) over three areas: the determination of entitlement to accident benefits, the determination of whether an injury is a minor injury and the determination of liability and damages in matters up to $50,000.[4]

27. On April 1, 2019, the Trial Lawyers Association of BC (TLABC) filed a civil claim seeking a declaration that the minor injury legislation and legislation granting jurisdiction to the CRT was unconstitutional. On March 2, 2021, the British Columbia Supreme Court ruled that the CRT's jurisdiction over minor injury claims was unconstitutional.[5] The Attorney General and ICBC appealed this decision.

28. On May 12, 2022, the BC Court of Appeal overturned the British Columbia Supreme Court decision. The TLABC has since filed leave to appeal to the Supreme Court of Canada (SCC). The SCC's decision on whether it will hear the appeal is expected in the first quarter of 2023. In the meantime, parties are either proceeding to the CRT or their actions are on hold pending the SCC decision.

F CLASS ACTION CERTIFICATION

29. In March 2020, a Notice of Civil Claim was filed under the *Class Proceedings Act* in the Supreme Court of British Columbia against ICBC and the Province of British Columbia. The civil suit alleged that ICBC made illegal payments to the Province for the reimbursement of Medical Services Plan (MSP) costs for medical services rendered to an individual injured in a motor vehicle accident. The lawsuit alleged that those payments were improperly included as part of the total amount payable to an insured under Part 7 of the IVA, therefore reducing the amount the individual received.

[4] Section 133 of the CRTA.
[5] 2019 BCSC 1824 Crowder v. British Columbia (Attorney General) (bccourts.ca).

30. There are two classes of allegedly injured parties. The first class (the Ratepayer Class) alleges reimbursement of MSP increased ICBC's operating costs unlawfully which in turn caused ICBC to increase rates to individuals paying basic insurance. The second class (Accident Victim Class) claims that ICBC unlawfully reimbursed MSP for medical practitioner visits out of their individual limits for accident benefits, which caused them to receive fewer benefits than their entitlement.

31. On April 22, 2022, the Supreme Court of British Columbia dismissed the ratepayer class action but allowed the accident victim class action to proceed against ICBC. Both sides have appealed the decision. An appeal date has not been set.

32. ICBC has reviewed closed cases to identify claims where payments were incorrectly directed toward MSP and is actively working with affected customers to address the situation.

G FUTURE CHANGES TO ACCOUNTING STANDARDS

33. ICBC has elected to defer implementation of IFRS 9 Financial Instruments (IFRS) from January 1, 2018, until April 1, 2023, as allowed under subsequent amendments to IFRS 4-Insurance Contracts (IFRS 4) to align with the effective date of IFRS 17, which is the new standard for the accounting for insurance contracts. ICBC qualifies for deferral of IFRS 9 based on an evaluation of ICBC's consolidated financial statements as at December 15, 2015, as required by the standard. The evaluation determined that the carrying amount of liabilities arising from insurance contracts was significant compared to the total amount of ICBC's liabilities as at December 15, 2015. Accordingly, the principal business activity remains with insurance contracts and meets the eligibility to defer IFRS 9.

34. IFRS 9 replaces the International Accounting Standard 39 Financial Instruments: Recognition and Measurement (IAS 39). IFRS 9 introduces a principle-based approach to the classification of financial assets based on the business model and the nature of the cash flows of the asset. All financial assets will be measured using fair value through profit or loss, fair value through other comprehensive income, or amortized cost. Financial liabilities will maintain the requirement and classification measurement from IAS 39. IFRS 9 introduces a three-staged expected loss impairment model for all financial assets at amortized cost. Finally, IFRS 9 brings in a new hedge accounting model that aligns the accounting for hedge relationships closely with risk management activities and permits hedge accounting to be applied to a wider variety of hedging instruments and risks, requiring additional disclosures.

35. IFRS 17 comes into effect on January 1, 2023 (i.e., for ICBC, April 1, 2023). To align with the fiscal year being April 1 to March 31, ICBC will transition to the new standard on April 1, 2023, establishing principles of recognition, measurement, presentation and disclosure of insurance contracts that supersede IFRS 4. Insurance obligations will be accounted for using current values and will be updated regularly, providing more useful information to users of financial statements.

36. Appendix 2C, International Financial Reporting Standard Timeline and Implementation, outlines the transition process and provides an overview of the changes to ICBC's financial reporting.

H CONCLUSION

37. Chapter 3, Actuarial Indicated Rate Change Analysis, complies with the regulatory framework described in this Chapter, including *Special Direction IC2*, attached to this Chapter as Appendix 2A. ICBC's claims handling and operations are reflective of both the regulatory changes in support of Enhanced Care in Section D and the legislative and regulatory amendments since the 2021 RRA discussed in Section E.

APPENDIX 2A

ORDER IN COUNCIL NO. 666 (666/2022) AMENDING *SPECIAL DIRECTION IC2*

PROVINCE OF BRITISH COLUMBIA

ORDER OF THE LIEUTENANT GOVERNOR IN COUNCIL

Order in Council No. 666 , *Approved and Ordered* December 12, 2022

Lieutenant Governor

Executive Council Chambers, Victoria

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that Special Direction IC2 to the British Columbia Utilities Commission, B.C. Reg. 307/2004, is amended as set out in the attached Schedule.

DEPOSITED

December 12, 2022

B.C. REG. **269/2022**

Presiding Member of the Executive Council

(This part is for administrative purposes only and is not part of the Order.)

Authority under which Order is made:

Act and section: *Insurance Corporation Act*, R.S.B.C. 1996, c. 228, ss. 44 and 47

Other: OIC 647/2004

R20640711

SCHEDULE

1 *Section 1 (1) of Special Direction IC2 to the British Columbia Utilities Commission, B.C. Reg. 307/2004, is amended*

(a) in the definition of "**capital management plan**" *by repealing paragraph (b) and by adding the following paragraph:*

(b.1) includes the capital provision;,

(b) in the definition of "**policy year**" *by repealing paragraph (b.1) and by adding the following paragraph:*

(b.3) the period beginning on April 1, 2023 and ending on March 31, 2025;*, and*

(c) by adding the following definitions:

"**capital available for rate setting**" means the amount of universal compulsory vehicle insurance capital available after deducting the following:

(a) the effect of present value in relation to the corporation's universal compulsory vehicle insurance claims liabilities;

(b) adjustments to reflect risks in relation to the corporation's universal compulsory vehicle insurance claims liabilities;

"**capital provision**" means, in relation to a policy year, an amount equal to 7% of the required premium for that policy year;

"**required premium**" means, in relation to a policy year, the total present value of the projected amount of each of the following for that policy year:

(a) loss and loss adjustment expense;

(b) general expenses;

(c) road safety costs and loss management costs;

(d) broker fees;

(e) tax payable by the corporation under the *Insurance Premium Tax Act*;

(f) income from the following:

(i) miscellaneous revenue;

(ii) investment returns on capital available for rate setting;

(g) allowance required to build and maintain capital.

2 *Section 3 is amended*

(a) by repealing subsection (1) (a.3),

(b) in subsection (1) by adding the following paragraph:

(a.6) during the 2023 policy year, refrain from issuing a general rate change order for that policy year unless the corporation applies for the order;,

(c) in subsection (1) (c) by striking out "(g) and (j) to (y)" *and substituting* "(g), (j), (u), (v) and (y),"*,*

(d) in subsection (1) (c) (i) (B) by striking out "March 31, 2020" *and substituting* "March 31, 2022" *and by striking out* "November, 2020" *and substituting* "November 2022",

(e) by repealing subsection (1) (c) (i) (C),

(f) in subsection (1) (c) (ii) by striking out "August 21, 2020" *and substituting* "April 1, 2023",

(g) in subsection (1) by repealing paragraphs (e), (k), (l), (m), (n), (o), (p), (q), (r), (s), (t), (w) and (x),

(h) in subsection (1) by adding the following paragraph:

(e.2) despite paragraph (d), for the 2023 policy year, ensure that rates are set in accordance with the capital management plan in existence on May 27, 2016,

(i) excluding the capital maintenance and build or release provisions of that plan, and

(ii) substituting the capital provision;,

(i) in subsection (1) (h) by adding "other than the 2023 policy year," *after* "insurance rates",

(j) by repealing subsection (1.1),

(k) by adding the following subsection:

(1.11) Despite subsection (1) (c) and (e.2) of this section, for each policy year for which the commission fixes universal compulsory vehicle insurance rates, other than the 2021 policy year, the commission must not decrease existing rates., *and*

(l) in subsections (1.2) and (1.3), by striking out "2020 and 2021" *and substituting* "2020, 2021 and 2023".

3 *Section 3.2 is repealed.*

4 *The following section is added:*

Directions relating to the 2023 policy year

3.4 Despite section 3, the commission must, by June 30, 2023, exempt the corporation from the requirement to apply for a general rate change order by December 15, 2023.

APPENDIX 2B

SPECIAL DIRECTION IC2 TO THE BC UTILITIES COMMISSION, BC REGULATION 307/2004, AMENDED AS OF MARCH 25, 2022

BRITISH COLUMBIA

Insurance Corporation Act

SPECIAL DIRECTION IC2 TO THE BRITISH COLUMBIA UTILITIES COMMISSION

B.C. Reg. 307/2004

Deposited and effective June 30, 2004
Last amended March 25, 2022 by B.C. Reg. 70/2022

Consolidated Regulations of British Columbia

This is an unofficial consolidation.

B.C. Reg. 307/2004 (O.C. 647/2004), deposited and effective June 30, 2004, is made under the *Insurance Corporation Act*, R.S.B.C. 1996, c. 228, ss. 44 and 47.

Prepared by:
Office of Legislative Counsel
Ministry of Attorney General
Victoria, B.C.

Insurance Corporation Act

SPECIAL DIRECTION IC2 TO THE BRITISH COLUMBIA UTILITIES COMMISSION

B.C. Reg. 307/2004

Contents

Definitions

1 (1) In this Special Direction:

"Act" means the *Insurance Corporation Act*;

"capital available" means capital available as that term is described in the MCT guideline;

"capital management plan" means the corporation's capital management plan in relation to the corporation's universal compulsory vehicle insurance business that

(a) was most recently approved by the commission, and

(b) includes capital maintenance and build or release provisions;

"capital management target" means the MCT target, determined in the capital management plan, that is the total of the following:

(a) the MCT required under section 3 (1) (b);

(b) the margin, expressed in percentage points of MCT, that reflects the corporation's risk profile in relation to the corporation's universal compulsory vehicle insurance business and its ability to respond to adverse events that arise from those risks;

(c) any additional margin, expressed in percentage points of MCT, consistent with relatively stable and predictable universal compulsory vehicle insurance rates;

"customer renewal credit" means a one-time, non-refundable, non-transferable credit that is

(a) available to an existing universal compulsory vehicle insurance policyholder,

(b) applied to reduce the universal compulsory vehicle insurance premium paid by the policyholder at the time of the policyholder's next renewal, and

(c) redeemable only within 12 months of the effective date of the order of the commission that approves the customer renewal credit;

"excess capital available" means universal compulsory vehicle insurance capital available in excess of the capital reflected in the capital management target specified in the capital management plan;

"existing rates" means the universal compulsory vehicle insurance rates in effect on the date the corporation files an application for a general rate change order;

"fiscal year" means the applicable fiscal year under section 22.1 of the Act;

"general rate change order" means a commission order that

(a) fixes rates, expressed as a percentage change from existing rates, for universal compulsory vehicle insurance to cover the overall revenue requirements of the corporation's universal compulsory vehicle insurance business, and

(b) does not include an order relating to rate design or customer renewal credit;

"loss costs" means the average amount of claims cost per universal compulsory vehicle insurance policy on an annualized basis, determined on the basis of accepted actuarial practice;

"loss costs forecast variance" means the difference, expressed in percentage points of a rate change fixed in a general rate change order, between

(a) the loss costs provision reflected in existing rates, and

(b) the loss costs that have emerged;

"MCT" means MCT as that term is described in the MCT guideline;

"MCT guideline" means the Guideline for Minimum Capital Test (MCT) for Federally Regulated Property and Casualty Insurance Companies issued by the Office of the Superintendent of Financial Institutions Canada as that guideline is amended or replaced from time to time;

"policy year" means one of the following, as applicable:

(a) and (b) Repealed. [B.C. Reg. 281/2020, s. 1 (b).]

(b.1) the period beginning on April 1, 2020 and ending on April 30, 2021;

(b.2) the period beginning on May 1, 2021 and ending on March 31, 2023;

(c) in any other case, the 12-month period beginning on April 1 in one year and ending on March 31 in the next year.

(2) In this regulation, a reference to a policy year that is described by a numerical reference to a calendar year is a reference to the policy year beginning in that calendar year.

[am. B.C. Regs. 229/2009, s. (a); 108/2010, s. 1; 115/2013, s. 1; 215/2016, s. 1; 171/2018, s. 1; 281/2020, s. 1.]

MCT

1.1 For each policy year for which the commission fixes universal compulsory vehicle insurance rates, the MCT must be determined

(a) using data available from the most recently completed quarter of the fiscal year at the time the corporation files an application for a general rate change order, and

(b) based on that data, by projecting the MCT as at the end of that fiscal year.

[en. B.C. Reg. 215/2016, s. 2.]

1.2 Repealed. [B.C. Reg. 171/2018, s. 2.]

Application

2 This Special Direction is issued to the commission under Division 2 of Part 2 of the Act.

[am. B.C. Regs. 215/2016, s. 3; 16/2020, s. 1.]

Directions relating to the corporation generally

3 (1) With respect to the exercise of its powers and functions under the Act in relation to the corporation generally, the commission must do all of the following:

(a) require the corporation to apply for a general rate change order by December 15 of each year to ensure that rates for the corporation's universal compulsory vehicle insurance business are effective by April 1 of the next year;

(a.01) to (a.2) Repealed. [B.C. Reg. 281/2020, s. 2 (a).]

(a.3) despite paragraph (a), require the corporation to apply by February 16, 2020, for a general rate change order for rates to be effective April 1, 2020;

(a.4) despite paragraph (a), require the corporation to apply by December 15, 2020 for a general rate change order for rates to be effective May 1, 2021;

(a.5) during the 2021 policy year, refrain from issuing a general rate change order for that policy year unless the corporation applies for the order;

(b) set rates for the corporation's universal compulsory vehicle insurance business in a way that will allow the corporation to maintain, in relation to its universal compulsory vehicle insurance business, at least 100% of MCT;

(c) subject to paragraphs (g) and (j) to (y) for each policy year for which the commission fixes universal compulsory vehicle insurance rates, fix those rates on the basis of accepted actuarial practice so that those rates allow the corporation to collect sufficient revenue

(i) to pay the following:

(A) the costs that are to be incurred by the corporation in that policy year for road safety programs under section 7 (i) of the Act, including, without limitation, payments by the corporation to any level of government with respect to road safety;

(B) the costs that are to be incurred by the corporation in that policy year for vehicle licensing, driver licensing and other services and activities of the corporation under section 7 (g) and (h) of the Act that are to be undertaken in that policy year in accordance with the agreement entitled “Service Agreement between The Ministry of Public Safety and Solicitor General and the Insurance Corporation of British Columbia” and dated as of September 1, 2003, including amendments and extensions to that agreement up to and including the amendment and extension entitled “Service Agreement Addendum Changes in Costs and Services to March 31, 2020” and executed in November, 2020;

(C) the payments that the corporation is to make in that policy year under the agreement entitled “Memorandum of Understanding between B.C. Provincial Government and ICBC” and executed in February, 2003;

(D) the remuneration that the corporation is to pay in that policy year to persons appointed as agents by the corporation under section 9.2 of the Act for collecting government fees, fines and other amounts payable by the corporation to the government and for collecting premiums, fees, debts and other revenue on behalf of the corporation,

(ii) to make the payments the corporation agreed to make under the agreement, dated for reference April 1, 2020, between the corporation and the government as represented by the Minister of Public Safety and Solicitor General entitled “Traffic and Road Safety Law Enforcement Funding Memorandum of Understanding”, including amendments to that agreement up to and including the amendment entitled “Amendment to Traffic and Road Safety Law Enforcement Funding Memorandum of Understanding”, dated for reference August 21, 2020, and

(iii) to achieve or maintain, as the case may be, the MCT requirement under paragraph (b);

(d) ensure that rates are set in accordance with the capital management plan;

(e) despite paragraph (d), for each policy year up to and including the 2020 policy year, ensure that rates are set in accordance with the capital management plan in existence on May 27, 2016,

(i) excluding the capital build or release provisions of that plan, and

(ii) using a calculation in relation to the capital maintenance provision that neither increases nor decreases the percentage number of a rate change fixed by a general rate change order for that policy year;

(e.1) despite paragraph (d), for the 2021 policy year, ensure that rates are set in accordance with the capital management plan in existence on May 27, 2016,

(i) excluding the capital build or release provisions of that plan,

(ii) substituting a capital build provision that would result in an 11.5 percentage point increase to the general rate change, after accounting for the effect on the capital build amount of investment income and expenses that vary with the amount of premium collected from a policyholder, and

(iii) using a calculation in relation to the capital maintenance provision that neither increases nor decreases the percentage number of a rate change fixed by a general rate change order for the 2021 policy year;

(f) Repealed. [B.C. Reg. 171/2018, s. 3 (e).]

(g) when regulating and fixing universal compulsory vehicle insurance rates, regulate and fix those rates in a manner that recognizes and accepts actions taken by the corporation in compliance with government directives issued to the corporation;

(h) for each policy year for which the commission fixes universal compulsory vehicle insurance rates, approve a customer renewal credit if

(i) there is excess capital available,

(ii) the customer renewal credit will not result in the MCT falling below the capital management target specified in the capital management plan, and

(iii) the commission determines that rates fixed by general rate change orders will remain relatively stable and predictable despite the approval of the customer renewal credit;

(i) subject to subsection (2) of this section, ensure that universal compulsory vehicle insurance rates are not based on age, gender or marital status;

(j) ensure that increases or decreases in universal compulsory vehicle insurance rates are phased in in such a way that those rates remain relatively stable and predictable;

(k) despite paragraph (j), within 20 days of the corporation applying for approval of a high-value vehicle charge in accordance with a government directive, approve and set the rates for the charge;

(l) despite paragraph (j), within 20 days of the corporation applying in accordance with a government directive for approval of changes to rates in relation to multiple chargeable claim payments, approve and set changes to rates to ensure that rates set at the maximum discount on the claim-rated scale, and which currently would not increase on account of a second or third chargeable claim payment made within 3 years, will increase when 2 or more chargeable claim payments are made within 3 years, and a chargeable claim payment will result in moving no less than 6 levels on the claim-rated scale regardless of the original level;

(m) despite paragraph (j), within 20 days of the corporation applying in accordance with a government directive for approval of changes to rates so that convictions for the use of an electronic device while driving are included in determining the annual driver risk premium payable by a person for a driver's certificate, approve and set the changes to rates;

(n) despite paragraphs (j) and (l), within 10 days of the corporation applying in accordance with a government directive to not implement the changes to rates approved pursuant to paragraph (l), approve and set rates that do not include the changes set out in paragraph (l);

(o) despite paragraph (j), within 45 days of the corporation applying in accordance with the government directive dated August 3, 2018 for a redesign of rates, regulate and fix the rates using the factors, criteria and guidelines set out in that government directive;

(p) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated April 18, 2019 for changes to its rate design, approve and set the changes to rates;

(q) despite paragraph (j), within 20 days of the corporation applying in accordance with the government directive dated June 26, 2019 for approval of changes to rates in connection with the modernization of passenger transportation services, approve and set the changes to rates;

(r) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated August 16, 2019 for changes to its rate design, approve and set the changes to rates effective September 1, 2019;

(s) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated November 15, 2019 for changes to its rate design, approve and set the changes to rates effective January 1, 2020;

(t) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated February 14, 2020 for approval of changes to rates in connection with the modernization of passenger transportation services, approve and set the changes to rates;

(u) despite paragraph (j), within 30 days of the corporation applying in accordance with the government directive dated November 30, 2020 for changes to rates, including a rebate, in connection with the *Attorney General Statutes (Vehicle Insurance) Amendment Act, 2020*, approve and set the changes to rates;

(v) despite paragraph (j), when regulating and fixing universal compulsory vehicle insurance rates for the 2021 policy year, regulate and fix those rates in accordance with

(i) the government directive to the corporation dated November 30, 2020 for changes to rates, including a rebate, in connection with the *Attorney General Statutes (Vehicle Insurance) Amendment Act, 2020*, and

(ii) the government directive to the corporation dated November 30, 2020 in relation to its application for a general rate change order for the 2021 policy year;

(w) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated January 26, 2021 for changes to rates in support of a COVID-19 rebate, approve and set the changes to rates;

(x) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated May 18, 2021 for changes to rates in support of a COVID-19 rebate, approve and set the changes to rates;

(y) despite paragraph (j), within 10 days of the corporation applying in accordance with the government directive dated March 24, 2022 for changes to rates in support of a relief rebate, approve and set the changes to rates.

(1.1) Despite subsection (1) (c) and (e) (i) of this section, for each policy year for which the commission fixes universal compulsory vehicle insurance rates, other than the 2021 policy year

(a) the commission may, in accordance with the capital management plan, exclude some or all of that policy year's loss costs forecast variance from the rate fixed by a general rate change order, and

(b) the percentage number of a rate change fixed by a general rate change order must differ from the percentage number of a rate change fixed by the previous general rate change order by no more than 1.5, and must not decrease existing rates.

(c) Repealed. [B.C. Reg. 281/2020, s. 3 (b).]

(1.2) Subsection (1) (b) and (c) (iii) does not apply with respect to the fixing of rates for the 2019, 2020 and 2021 policy years.

(1.3) Despite the definition of "capital management target" in section 1, for the 2019, 2020 and 2021 policy years, the capital management target is 145% of MCT.

(2) The commission may approve universal compulsory vehicle insurance rates that provide discounts to or are otherwise preferential for

(a) persons who are at least 65 years of age, or

(b) persons with disabilities.

(3) In regulating and fixing rates for the corporation, the commission must treat any premiums levied under section 34 (3) of the *Insurance (Vehicle) Act* as revenue for the corporation's universal compulsory vehicle insurance business.

(4) In this section, **"government directive"** means a directive in writing to the corporation

(a) given by the minister responsible for Part 1 of the Act, and

(b) approved by the Lieutenant Governor in Council.

[am. B.C. Regs. 313/2004, s. 1; 300/2005; 155/2007, s. 1; 229/2009, ss. (b) and (c); 108/2010, s. 2; 116/2012, ss. (a) and (b); 115/2013, s. 3; 20/2014; 192/2015, s. 3; 215/2016, s. 4; 288/2016; 319/2016; 81/2017; 119/2017; 165/2017, ss. 1 and 2; 240/2017; 7/2018; 22/2018; 25/2018; 70/2018; 171/2018, ss. 3 to 5; 172/2018; 270/2018; 99/2019; 159/2019; 190/2019; 259/2019; 263/2019; 49/2020; 281/2020, ss. 2 to 4; 28/2021; 151/2021; 70/2022.]

3.1 Repealed. [B.C. Reg. 281/2020, s. 5.]

Directions relating to the 2020 policy year

3.2 (1) Despite section 3, the commission must do all of the following by February 14, 2020:

(a) exempt the corporation from the requirements to

(i) apply for a general rate change order for the 2020 policy year by February 16, 2020,

(ii) file with the commission any reports and information that, but for the exemption, the corporation would have been required to file with the application for a general rate change order described in subparagraph (i),

(iii) make the following reports for the corporation's 2019/2020 fiscal year:

(A) an annual road safety report;

(B) an annual report on performance statistics;

(C) an annual information technology capital expenditure plan, and

(iv) file with the commission a report on the corporation's data and analytics platform project that, but for the exemption, the corporation would have been required to file by March 31, 2020;

(b) issue a final general rate change order for the 2020 policy year fixing the percentage number of the rate change at 0.

(2) The commission must require the corporation to file the report described in subsection (1) (a) (iv) as part of the corporation's application for a general rate change order for the 2021 policy year.

(3) The rate change order referred to in subsection (1) (b) is deemed to apply to the 2020 policy year as defined in paragraph (b.1) of the definition of "policy year" in section 1 (1).

[en. B.C. Reg. 16/2020, s. 2; am. B.C. Reg. 281/2020, s. 6.]

Directions relating to 2022

3.3 Despite section 3, the commission must, by January 15, 2021, exempt the corporation from the requirements to

(a) apply for a general rate change order by December 15, 2021, and

(b) file with the commission any reports and information that, but for the exemption, the corporation would have been required to file with the application in support of a general rate change order described in paragraph (a).

[en. B.C. Reg. 281/2020, s. 7.]

Directions relating to the corporation's optional vehicle insurance business

4 (1) With respect to the exercise of its powers and functions under the Act in relation to the corporation's optional vehicle insurance business, the commission must not fix rates applicable to optional insurance.

(2) In determining, under section 12 of the *Utilities Commission Act*, whether disclosure of information with respect to the corporation's optional vehicle insurance business is necessary for the administration of the *Utilities Commission Act* as it applies to the corporation, the commission must consider the effect of disclosure of the information on the corporation's ability to compete in the optional vehicle insurance market on a basis similar to its competitors and the harm to the corporation's competitive position that may result from the disclosure of the information.

[am. B.C. Regs. 313/2004, s. 2; 155/2007, s. 2; 108/2010, s. 3.]

APPENDIX 2C

INTERNATIONAL FINANCIAL REPORTING STANDARDS TIMELINE AND IMPLEMENTATION

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A INTRODUCTION

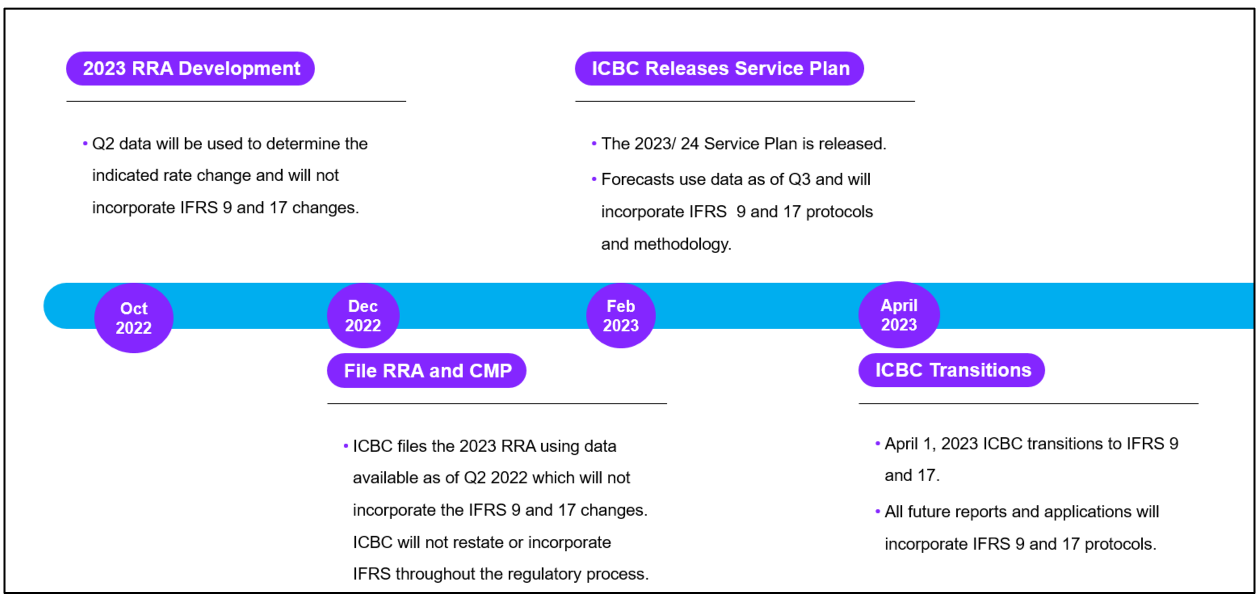
1. As explained in Chapter 2, Legislative and Regulatory Framework, Section G, ICBC will be transitioning to IFRS 9 and IFRS 17 effective April 1, 2023. The transition will affect information delivered throughout this regulatory process and is explained in greater detail in this Appendix 2C.

B APPLICATION AND IFRS 9 AND 17 TIMELINE

2. IFRS 9 and IFRS 17 come into effect on January 1, 2023, after which mandatory annual reporting will be required to comply with the new protocols. In order to align with its fiscal year, ICBC will implement the new standards on April 1, 2023.

3. The regulatory process encompasses pre-IFRS implementation and post-IFRS implementation. The below timeline shows how the IFRS implementation affects information contained in this Application, ICBC publications and the regulatory process.

Figure 2C.1 – Timeline of IFRS 9 and 17 Implementation



4. ICBC's actuaries use information available at the time of developing the application relating to all relevant circumstances, both favourable and unfavourable, in the selection of appropriate models and assumptions and in establishing assumptions that are on a best estimate basis. This information will be pre-IFRS 9 and IFRS 17 implementation.

5. In accordance with *Special Direction IC2*, ICBC is to calculate the Minimum Capital Test "using data available from the most recently completed quarter at the time the corporation files an application for a general rate change order". For clarification, this mandates that the data used is from the second quarter covering the period of April to September 2022 and is pre-IFRS 9 and IFRS 17 implementation.

6. The BCUC-approved performance measures contained in Appendix 8A, Performance Measures, are set to align with the current fiscal year that the Application is filed. The targets and outlooks for the 2023 RRA will be for fiscal year 2022/23, before the effective date of the new IFRS protocols. Future performance measure targets are established in conjunction with the budget process for 2023/24 using data from the third quarter that will incorporate the new IFRS standards.

C IMPLEMENTATION

7. ICBC will apply the new accounting standards retrospectively with prior year comparatives (for fiscal year 2022/23) restated in the 2023/24 Annual Service Plan Report for continuity in presentation of financial information. The quarterly 2023/24 statements published on icbc.com in fiscal 2023/24 will have restated 2022/23 comparatives.

8. Forecasts contained in this Application do not include any changes as a result of IFRS 9 and IFRS 17 that will be effective on April 1, 2023.

9. IFRS 9 will result in changes to the accounting and disclosures of ICBC's financial instruments (i.e., primarily financial investments such as fixed income and equities). As most of ICBC's financial instruments are carried at fair value already, IFRS 9 will have minimal impact to the measurement of financial instruments. IFRS 9 will not materially impact financial statement presentation. However, all changes in fair value of financial investments will now be presented in net income instead of other comprehensive income.

10. IFRS 17 will result in changes to the accounting and disclosures of ICBC's insurance contracts (i.e., primarily premiums, claims costs, broker commissions and premium taxes) and will have significant impact on the financial statements presentation.

11. ICBC brought in EY to assess the impacts and effort required to transition to the new IFRS 9 and 17 accounting standards. A summary of the expected key impacts to ICBC's equity, MCT, and net income and related performance measures is provided in Figure 2C.2 below.

Figure 2C.2 – Overview of IFRS 9 and 17 Impacts

	Current Practice IFRS 4	Future State IFRS 17	Impact
Discount Rate Adjustment	ICBC employs a single discount rate to present value the future claims payments based on the weighted yield of ICBC's investment portfolio.	Uses a discount rate reflecting characteristics of the insurance liability (e.g., independent of each company's investment portfolio), using a bottom up approach based on risk-free rate and illiquidity premium for the liabilities. The Canadian Institute of Actuaries has published a set of risk free rates and illiquidity premium reference curves.	IFRS 17 methodology is expected to result in a higher discount rate, given the current circumstances and economic environment. However, the exact result may differ at the time of transition and will impact the opening equity.
Risk Adjustment (RA)	Provision for Adverse Deviation (PfAD)	Adjusts the estimate of the present value of the future cash flows to reflect the compensation that the entity requires for bearing the uncertainty about the amount and timing of the cash flows that arises from non-financial risk (i.e., insurance risk). The adjustment is based on the company's risk appetite, and must be expressed as a confidence level in the financial statement notes.	The RA concept is similar in some respects to PfAD. Under IFRS 17, RA with a 95% confidence level is approximately equivalent to PfAD under current practice. ICBC will monitor industry norms and propose the final confidence level accordingly. A RA that is lower than PfAD will reduce claims liabilities and increase equity or capital. Contrary, a RA that is higher than PfAD will increase claims liabilities and decrease equity or capital.
Premium Acquisition Costs	Commissions and premium taxes are deferred and charged against income when the related premiums are earned over the course of the policy.	ICBC's policy choice is to expense premium acquisition costs and not defer.	There is a one-time material impact when the Deferred Premium Acquisition (DPAC) balance, as at the date of transition, is expensed which will impact the opening equity.
Financial Statement Presentation	Premium receivable, deferred premium acquisition costs, unearned premium are disclosed separately. Provision for unpaid claims	Premium receivable, deferred premium acquisition costs, unearned premium will be netted and replaced with a single line item called liability for remaining coverage.	Presentation change to the balance sheet and the statement of comprehensive income.

	Current Practice IFRS 4	Future State IFRS 17	Impact
	Claims costs, operating expenses and premium acquisition costs are shown separately on the statement of comprehensive income.	Provision for unpaid claims will be renamed to liability for incurred claims. Claims costs, insurance operating expenses, and premium acquisition costs will be reflected as insurance expenses on the statement of comprehensive income.	
Key Performance Indicators	The BCUC-approved Performance Measures as stated in Appendix 8A follow Industry standard metrics.	The BCUC-approved Performance Measures may incorporate some of the changes discussed in this table and Industry may introduce new metrics.	Results will reflect changes and will be restated for continuity.
	Current Practice IAS 39	**Future State IFRS 9**	**Impact**
Classification of Debt Instruments	Bonds and most pooled fund investments are classified as Available for Sale with valuation changes recorded through other comprehensive income (OCI) (i.e., excluded from net income)	All financial investments will be classified as fair value through profit and loss with valuation changes recorded in net income. Should be noted there is no impact to overall equity/capital from this change.	Changes in the recognition of investment income will impact net income but not overall capital or MCT.
	Current Practice IFRS 4/ IAS 39	**Future State IFRS 17/ IFRS 9**	**Impact**
Financial Statement Note Disclosures	Less granular information required from both standards.	IFRS 17 and 9 set out a number of disclosure requirements, which are more granular compared to reporting requirements under IFRS 4 and IAS 39.	Various additional financial statement note disclosures will be required, such as a specific continuity schedule for insurance liabilities, rationale behind policy choices and transitional disclosure requirements. The allocation of Basic and Optional amounts will be presented as supplementary financial information as opposed to a financial statement note.

12. The specific financial impacts of these accounting standard amendments on ICBC's financial results are currently not available. Future filings will contain details of any changes.

13. ICBC does not anticipate any material change to the BCUC-approved financial allocation methodology currently in place. Any future changes and impacts will be addressed during the financial allocation review to be filed with the BCUC in December 2023.

CHAPTER 3

ACTUARIAL INDICATED RATE CHANGE ANALYSIS

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A EXECUTIVE SUMMARY OF ACTUARIAL INDICATED RATE CHANGE

A.1 INTRODUCTION

1. This Application presents a proposed rate change of 0% for Policy Year (PY) 2023, which *Special Direction IC2* as amended by Order in Council 666/2022, December, 12, 2022 (B.C. Reg. 269/2022) defines as encompassing Basic insurance policies sold during the 24-month period from April 1, 2023 to March 31, 2025. The proposed rate change represents the change to Basic insurance revenue that ICBC requires to be in accordance with accepted actuarial practice in Canada, modified to comply with applicable legislation[1]. Accepted actuarial practice requires, in essence, that Basic insurance rates provide for the best estimate of costs of Basic insurance and a provision for profit (in the case of Basic insurance it is a provision for capital, not a provision for profit). As in prior applications, the Filing and Reviewing Actuaries have attested that the actuarial indicated rate change analysis follows accepted actuarial practice in Canada (Section E).

2. *Special Direction IC2* sets a rate change floor of 0%[2], therefore, ICBC is seeking a 0% Basic rate change over the 24-month policy period. The rate change floor aligns with Government and ICBC's desire to maintain rate affordability. This Chapter focuses on the analysis supporting the actuarial indicated rate change of -6.5%, however for clarity, Figure 3.2 and Figure 3.3 provided below also include the impact of the rate change floor. Since the effect of the rate change floor affects ICBC's Basic capital level, its impact is discussed in Chapter 4, Capital Management Plan.

3. At a high level, the actuarial indicated rate change of -6.5% is the percent difference between the amount of premium that needs to be collected to cover PY 2023 costs including a capital provision, compared to the premiums customers would have paid in PY 2023 assuming no change to rates. This includes costs that may be paid for several years into the future for a motor vehicle crash associated with these policies (i.e., medical payments, income replacement, etc.). The analytical framework that ICBC's actuaries have employed to determine the actuarial indicated rate change, including its components, largely tracks that employed in revenue requirements applications (RRA) for many years. The key point of differentiation (as was the case in the 2021 RRA) is in the data used to support the forecasted claims for the Enhanced Accident Benefits coverage. Even though Enhanced Care was implemented in May 2021, ICBC

[1] The terms "accepted actuarial practice in Canada" and "accepted actuarial practice" have the same meaning in the context of this Application. More information on accepted actuarial practice is provided in Appendix 3A.
[2] *Special Direction IC2* states that the "for each policy year for which the commission fixes universal compulsory vehicle insurance rates, other than the 2021 policy year, the commission must not decrease existing rates".

does not have enough paid loss and allocated loss adjustment expenses (ALAE) data under the new product to produce a credible estimate of the actuarial rate indication if relied upon alone. Therefore, similar to the prior application, ICBC actuaries have continued to rely on both internal and external data in its actuarial analysis. All analysis reflects their best estimates and is in accordance with accepted actuarial practice in Canada.

4. The other significant point of difference from prior RRAs is how the capital provision in the actuarial indicated rate change is determined. The recent amendments to *Special Direction IC2* replace the capital build or release and maintenance provisions with a capital provision equal to an amount of 7.0 percent of required premium. The capital provision allows ICBC to continue to rebuild its depleted level of capital and enables ICBC to continue to build towards its capital management target to support financial stability.

5. As described in this Chapter, the actuarial indicated rate change is negative, largely due to an increase in projected investment income on new premiums collected and a decrease in the overall capital provision. These impacts are slightly offset by inflationary pressure on claims costs across all coverages. There is still uncertainty around ICBC's estimates as forecast risk remains high under the new Enhanced Care product as well as uncertainty in future crash frequency and the current economic environment. The rate change floor helps to build capital which serves as a buffer over the 24-month policy period to absorb some or all of the impact of unexpected costs, and to support financial stability.

6. The remainder of Section A of this Chapter provides an outline of the calculations leading to the Basic insurance actuarial indicated rate change and a summary of the impacts from each of its major components. Section B provides more detail on the factors influencing the largest component of a customer's premium, the PY 2023 loss and ALAE costs. Section C provides an overview of forecast risks including ICBC's sensitivity analysis and materiality standard. The appendices following this Chapter provide more explanatory details of the actuarial indicated rate change analysis.[3]

[3] See Appendix 3A for more information on Accepted Actuarial Practice and Appendix 3B for more information on basic concepts relevant to understanding the actuarial analysis, the outline of the actuarial appendices and technical appendices, and major revisions to the actuarial analysis.

A.2 OVERVIEW OF PY 2023 ACTUARIAL INDICATED RATE CHANGE CALCULATION

7. The PY 2023 actuarial indicated rate change covers the 24-month period between April 1, 2023 and March 31, 2025. Unless stated otherwise, the figures and exhibits in the current Application summarize results for this 24-month period. In the 2021 RRA, results were presented separately for the first 11-month and second 12-month periods, and at times in aggregate for the entire 23-month period of PY 2021.

8. As in prior RRAs, ICBC's actuaries calculate the PY 2023 actuarial indicated rate change in two steps, each of which is summarized below. In essence, the exercise is to estimate the amount of premium that needs to be collected to cover PY 2023 costs, inclusive of the capital provision, and compare that to the amount of premiums customers would have paid in PY 2023 assuming no change to existing rates. The percent difference between these two amounts is the actuarial indicated rate change.

9. The first step is the calculation of "PY 2023 Required Premium".[4] In Figure 3.1 below, the components that comprise the required premium represent the full value of all expected loss and loss adjustment expense, general expense, road safety and loss management costs, broker fees, premium tax, and capital provision, offsets for income attributable to both miscellaneous revenue and investment income, and an adjustment (to recognize income earned from policyholder supplied funds) to reflect the present value of these components. The estimation of required premium encompasses the majority of the actuarial analysis in this Chapter.

[4] *Special Direction IC2*, section 1 (1)(c): "required premium" means, in relation to a policy year, the total present value of the projected amount of each of the following for that policy year: loss and loss adjustment expense, general expenses, road safety costs and loss management costs, broker fees, tax payable by the corporation under the *Insurance Premium Tax Act*, income from miscellaneous revenue, income from investment returns on capital available for rate setting, allowance required to build and maintain capital.

Figure 3.1 – Summary of the Components of Required Premium ($000's)

	Description	PY 2023
A.	Claims and Related Costs	
(a)	Loss and Allocated Loss Adjustment Expenses	5,919,708
(b)	Unallocated Loss Adjustment Expenses	565,224
(c)	Road Safety and Loss Management	94,038
(d)	Total Claims and Related Costs	6,578,969
B.	Expenses	
(e)	General Expenses - Administrative & Other	150,932
(f)	General Expenses - Insurance Services	165,134
(g)	General Expenses - Non-Insurance	277,711
(h)	Broker Fees	251,381
(i)	Premium Tax	266,786
(j)	Total Expenses	1,111,944
(k)	Capital Provision	424,433
(l)	**Total Projected Costs [(d) + (j) + (k)]**	**8,115,346**
C.	Miscellaneous Revenue and Investment Income	
(m)	Miscellaneous Revenue - Payment Plan Finance Fees	210,404
(n)	Miscellaneous Revenue - Surcharge for Short-Term Policies	25,320
(o)	Miscellaneous Revenue - Driver Penalty Point and Driver Risk Premium	37,022
(p)	Miscellaneous Revenue - Unlisted Driver Accident Premium	7,241
(q)	Miscellaneous Revenue - Graduated Licensing Program Road Test Fees and Other	15,672
(r)	Investment Income on Policyholder Supplied Funds	1,563,825
(s)	Investment Income on Capital Available for Rate Setting	192,537
(t)	**Total Miscellaneous Revenue and Investment Income**	**2,052,021**
(u)	**Required Premium [(l) – (t)]**	**6,063,325**

10. The second step in the actuarial indicated rate change calculation is the calculation of the "PY 2023 Projected Premium at Current Rate Level". This is the total Basic insurance premium ICBC would collect for PY 2023 if the current Basic insurance premium rates were charged in PY 2023. The projected premium at current rate level is calculated as the product of the expected number of policies to be written in PY 2023 and the PY 2023 trended average premium at current rate level.[5] Average premium can be impacted by shifts in the mix of business by rate class, territory, and level of discount; therefore, any expected changes in the mix need to be captured in the average premium forecast. These forecasts are based on historical data, actuarial models, and professional judgment. The full analysis and the results of applying the actuarial models to estimate the PY 2023 projected premium at current rate level are provided in Appendix Set B.[6]

11. Figure 3.2 below compares required premium with projected premium at current rate level. Before applying the proposed rate change, there is a surplus of $421.4 million between projected premium and required premium, leading to an actuarial indicated rate change of -6.5%. Applying the rate change floor of *Special Direction IC2* leads to a 0% proposed rate change and the resulting surplus, net of premium tax, will flow into ICBC's Basic capital over the policy period.

[5] The term "policies written" is also referred to as "written risk exposures" in Appendix Set B. These terms are used interchangeably throughout the Application.

[6] For ease of reference, the term "Appendix Set" will be used to refer to all appendices identified with a given letter. For example, "Appendix Set B" collectively refers to all the appendices used to calculate projected premium (i.e., Appendices B.0 through B.4) and "Technical Appendix Set B" refers to all the technical appendices used to calculate projected premium (Technical Appendices B.0 and B.1).

Figure 3.2 – PY 2023 Basic Insurance Surplus / (Deficiency)

Formula	Item	Total Basic[1]	Average per Policy[2]
(1)	PY 2023 Projected Premium at Current Rate Level ($ 000's)	6,484,731	$864
(2)	PY 2023 Required Premium ($ 000's)	6,063,325	$808
(1) – (2)	Surplus / (Deficiency) ($ 000's)	421,406	$56
(3) = [(2) / (1)] - 1	**Actuarial Indicated Rate Change**	**-6.5%**	
(4) = Max[(1),(2)]	PY 2023 Proposed Premium (Including Rate Change Floor) ($ 000's)	6,484,731	$864
(4) – (2)	Impact from Rate Change Floor ($ 000's)	421,406	$56
(5) = [(4) / (1)] - 1	**Proposed Rate Change**	**0%**	

[1] Manual Basic is no longer shown in this exhibit because it has been merged with Plate Owner and allocated to other Basic sub-coverages for required premium.
[2] Average per policy premiums are calculated as Total Basic premiums in the table divided by the number of policies to be written in PY 2023. The number of PY 2023 policies (also referred to as "written risk exposures"), excluding Trailers and Off-Road Vehicles, is 7,502,336 as shown in Appendix B.0.1.

A.3 REQUIRED PREMIUM PER POLICY

12. Figure 3.3 below provides the average PY 2023 required premium per policy along with each of its components. This presentation removes the impact of policy growth and represents the average required premium customers would need to pay, separated by cost component. The prior policy year is also provided to show how each of the components have changed.[7] The components in Figure 3.3 are presented on a per policy basis so each item is directly comparable. On average, a customer pays the proposed premium per policy, which is the summation of each component of required premium, as well as the impact of the rate change floor. The paragraphs that follow provide an overview of each required premium component and a brief explanation of any significant changes that have impacted the component.

[7] This table provides PY 2021 for comparison purposes only, as both policy periods reflect the current Enhanced Care product that was implemented on May 1, 2021.

Figure 3.3 – Components of Required Premium per Policy

Component of Required Premium	Required Premium per Policy[1]	
	PY 2023	PY 2021[2, 3]
[1] Loss and Allocated Loss Adjustment Expenses	$789	$702
[2] Unallocated Loss Adjustment Expenses	$75	$64
[3] Road Safety and Loss Management and General Expenses	$92	$89
[4] Broker Fees and Premium Tax	$69	$70
[5] Capital Provision	$57	$137
[6] Miscellaneous Revenue	($39)	($31)
[7] Investment Income on Policyholder Supplied Funds	($208)	($146)
[8] Investment Income on Capital Available for Rate Setting	($26)	($5)
Total - Required Premium per Policy	**$808**	**$879**
[9] Impact of Rate Change Floor[4]	$56	$0
Total - Proposed Premium per Policy	$864	$879

[1] Average per policy premiums are calculated from the values provided in Figure 3.1 divided by the number of policies to be written in PY 2023. The number of PY 2023 policies (also referred to as “written risk exposures”), excluding Trailers and Off-Road Vehicles, is 7,502,336 as shown in Appendix B.0.1.
[2] PY 2021 figures are before the errata.
[3] [7] and [8] were combined as “Investment Income” in 2021 RRA. They are separately itemized out in this Application to provide additional detail on their impacts.
[4] Impact of the rate change floor is a component of proposed premium, not required premium, but is included for completeness.

Line 1 – Loss and Allocated Loss Adjustment Expenses: $789

13. Loss and allocated loss adjustment expenses (ALAE) represent claim payments to customers (loss) and loss adjustment expenses that are assigned directly to specific claims (i.e., medical exams, police reports, towing and storage). The PY 2023 loss and ALAE component contributes $789 to the required premium per policy, which is $87 higher than PY 2021 ($702). PY 2023 loss and ALAE costs are higher than expected due to increases in the rate of inflation which has a direct impact on claims costs, partially offset by better than expected claim count emergence with fewer injury claims being reported. Loss and ALAE is discussed in more detail in Section B and in Appendix C.0.

Line 2 – Unallocated Loss Adjustment Expenses: $75

14. Unallocated loss adjustment expenses (ULAE) represent loss adjustment expenses that are not assigned directly to specific claims, and they are also known as internal claims servicing

costs (i.e., internal claims staff salaries). The PY 2023 ULAE component contributes $75 to the required premium per policy, which is $11 higher than PY 2021 ($64). The increase is primarily caused by higher projected average costs in future years. The details of this required premium component calculation are presented in Appendix C.6.

Line 3 – Road Safety and Loss Management (RSLM) and General Expense: $92

15. This component includes the RSLM, Administration and Other, Insurance Services, and Non-Insurance Expense lines from Figure 3.1. The PY 2023 forecast of these items is based on the financial forecast for fiscal years (FY) 2023/24 and 2024/25, which is shown in Chapter 6, Operating Expenses and Allocation Information, Section B. This component contributes $92 to the required premium per policy, which is $3 higher than PY 2021 ($89). The increase in expenses reflects increased staffing to maintain adequate service levels in contact centres and driver licensing offices, as well as anticipated general wage increases to be negotiated under the Collective Agreement as further discussed in Chapter 6, Section D. The details of this required premium component calculation are presented in Appendix Set D – Expense and Miscellaneous Revenue.

Line 4 – Broker Fees and Premium Tax: $69

16. This component includes the broker fees and premium tax lines from Figure 3.1. This component contributes $69 to the required premium per policy, which is roughly equivalent to PY 2021 ($70). Premium tax is calculated in Appendix Set A, and the details of the broker fees component are presented in Appendix Set D.

Line 5 – Capital Provision: $57

17. The capital provision is included in the required premium to build and maintain capital levels (as measured by the MCT ratio). Capital becomes depleted when there are unexpected changes that increase costs or decrease revenues that were not provided for in premiums collected. For instance, if Enhanced Care costs emerge higher than expected, or the frequency of claims is higher than expected.

18. The PY 2023 capital provision is determined in accordance with *Special Direction IC2*, which specifies that the capital provision be an amount equal to 7% of the required premium. This contributes $57 to the required premium per policy which is lower compared to PY 2021 ($137). The PY 2021 capital provision was also determined in accordance with *Special Direction IC2* that

was in effect at that time[8] and is comprised of a $116 capital build provision and a $21 capital maintenance provision.

Line 6 – Miscellaneous Revenue: ($39)

19. This component includes lines (m) through (q) in Figure 3.1 above, which reduces the PY 2023 required premium per policy by $39. This is larger (more favourable) compared to PY 2021 ($31) mainly due to a change in how the payment plan finance fees are reflected in this analysis. In the prior application, payment plan finance fees included the interest charged to ICBC on the money borrowed on behalf of payment plan participants, while in the current Application, ICBC's cost of financing is included in the calculation of the New Money Rate as portfolio leverage (see Chapter 5 Investments, Section B for more detail on portfolio leverage). As a result of this change, this component is slightly higher as compared to the prior policy year. Details of the miscellaneous revenue calculations are presented in Appendix Set D.

Line 7 – Investment Income on Policyholder Funds: ($208)

20. Investment income on policyholder supplied funds (i.e., customer's premium) reduces the PY 2023 required premium per policy by $208. This is larger (more favourable) compared to PY 2021 ($146) mainly due to an increase in the New Money Rate. The higher the New Money Rate, the more investment income is generated on policyholder supplied funds. As described in Chapter 5, Investments, the increase in New Money Rate is largely attributable to higher expected returns from individual asset classes as well as a shift in the target asset allocation. The details of the calculation of this required premium component are presented in Appendix Set A.

Line 8 – Investment Income on Capital Available for Rate Setting: ($26)

21. ICBC has renamed Basic equity as "capital available for rate setting", so as to be clearer about its role in the determination of the actuarial indicated rate change. This capital provides protection for policyholders against unexpected increases in costs or decreases in revenues that were not provided for in premiums collected. Investment income on capital available for rate setting reduces the required premium for PY 2023 by $26. This is larger (more favourable) compared to PY 2021 ($5) mainly due to higher capital levels, as well as an increase in the yield on capital available for rate setting as described in Chapter 5. The higher the yield on capital available for rate setting, the more investment income is generated. The details of this required premium component calculation are presented in Appendix Set F.

[8] *Special Direction IC2* as amended by Order in Council 633/2020, December 14, 2020 (B.C. Reg. 281/2020).

Line 9 – Impact of Rate Change Floor: $56

22. *Special Direction IC2* states that "for each policy year for which the commission fixes universal compulsory vehicle insurance rates, other than the 2021 policy year, the commission must not decrease rates." In order to apply the rate change floor of 0%, the required premium per policy is increased by $56 to produce the proposed premium per policy. The additional premium per policy collected, net of premium tax, will flow into ICBC's Basic capital over the policy period which will enable ICBC to continue to build towards its capital management target and to support financial stability. Please see Chapter 4 Capital Management Plan for additional discussion.

A.4 CERTIFICATION

23. The actuarial analysis supporting the actuarial indicated rate change of -6.5% was performed, and reviewed, in accordance with accepted actuarial practice in Canada. This includes adherence to the Standards of Practice of the Canadian Institute of Actuaries. For additional information on accepted actuarial practice, please refer to Appendix 3A. Certifications by ICBC's Filing Actuary and a Reviewing Actuary are included at the end of this Chapter.

B MAJOR FACTORS INFLUENCING THE REQUIRED PREMIUM

24. There are three major factors that have influenced the required premium for PY 2023: changes to the capital provision, additional investment income on new premiums due to a higher New Money Rate, and an increase in loss and ALAE costs. The change to the capital provision is discussed above in paragraphs 17 and 18 as well as Chapter 4, and the change in New Money Rate is discussed above in paragraph 20 as well as Chapter 5. PY 2023 loss and ALAE payments represents the largest component of a customer's required premium ($789 of the $808 PY 2023 required premium per policy). Given that this is the largest contributor to the overall required premium and comprises most of the actuarial indicated rate change analysis documented in this Chapter, this section will focus on major changes to loss and ALAE costs.

25. Overall loss and ALAE costs have increased since the last policy period at a higher trend than expected. The majority of the higher increases are due to unexpected increases in rates of inflation that have put upward pressure on claims costs across all coverages as well as expenses. The higher than previously expected costs are partially offset by a lower forecast of the frequency of injury claims based on the experience observed under the Enhanced Care product that was introduced on May 1, 2021. ICBC still has insufficient data to estimate the full severity of

Enhanced Accident Benefits (EAB) claims, and therefore continues to rely on related information, similar to the 2021 RRA.

26. There is still considerable risk within ICBC's loss and ALAE forecasts mainly around crash frequency with the uncertainty as to where and when the frequency of crash claims will stabilize, as well as how EAB costs will mature over time. Please refer to Section C for further discussion on forecast risks.

27. At a high level, the loss and ALAE component is analyzed separately for each sub-coverage, split by its cost components: frequency (number of claim exposures per policy) and severity (average cost per claim exposure) for each historical fiscal loss year.[9] Since many claims are still open and accruing costs, the ultimate frequency and severity are not known until many years later. As a result, historical data, external data, actuarial methods, assumptions and professional judgment are used to develop each of these cost components (please refer to Technical Appendix Set C for more details).

28. Once historical frequencies and severities are estimated, they are then used to develop trends to estimate the loss and ALAE for PY 2023 (please refer to Appendix C). Figure 3.4 below provides a summary of each of the sub-coverages and the split of their frequency and severity components. The paragraphs that follow provide additional details describing how the forecasted frequency and severity components were developed for the two largest sub-coverages: Basic Vehicle Damage Coverage (BVDC) and Enhanced Accident Benefits – Medical Rehabilitation (EAB-MR).

[9] See Appendix 3B, Section B for details about the sub-coverages.

Figure 3.4 – Loss and ALAE per Policy by Sub-Coverage

2023 RRA Sub-Coverage	PY 2023			PY 2021
	Frequency	Severity ($)	Loss and ALAE per policy ($)[1]	Loss and ALAE per policy ($)[2]
Enhanced Accident Benefits (EAB)				
Medical and Rehabilitation (EAB-MR)	1.65%	15,287	253	266
Enhanced Disability (EAB-ED)	0.25%	77,765	194	165
Permanent Impairment (EAB-PI)	0.17%	24,505	41	47[3]
Death Benefits (EAB-DB)	0.02%	61,940	12	
Basic Vehicle Damage Coverage (BVDC)	3.69%	6,672	247	187
Third Party Liability (TPL)				
TPL-Property Damage (TPL-PD)	0.25%	7,935	20	19
TPL-Out-of-Province Bodily Injury (TPL-OOP BI)[4]	0.021%	98,184	21	19
Total			**789**	**702**

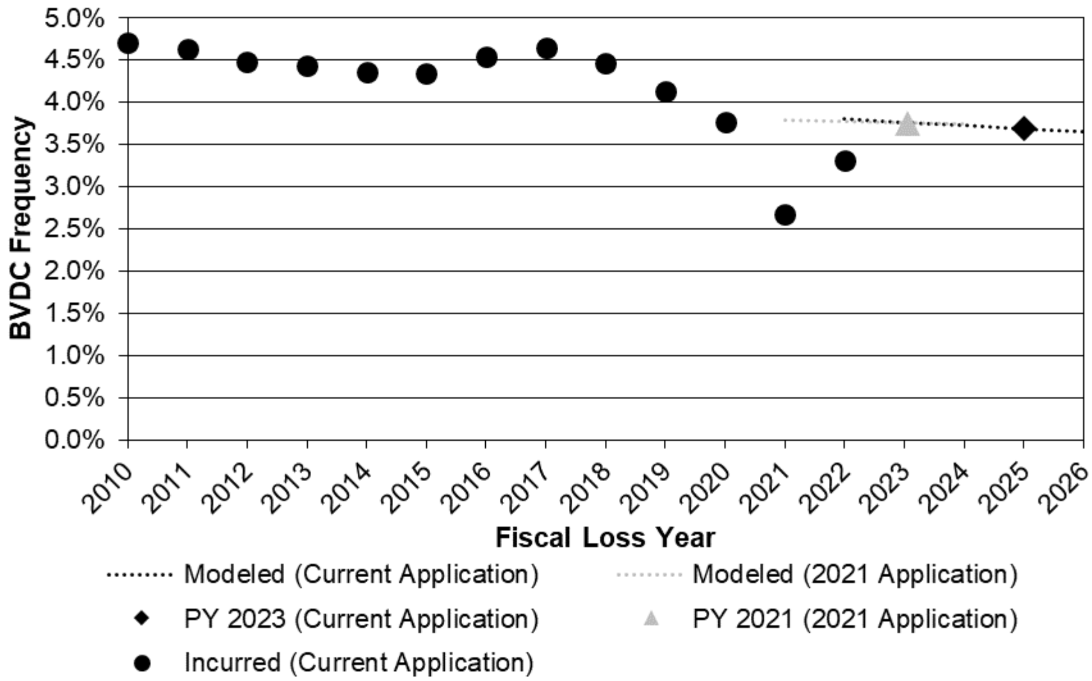
[1] PY 2023 Loss and ALAE per policy amounts include an expectation for large losses and include Bulk claims costs. Please see Appendices A.3 to A.5 for more information.
[2] The PY 2021 Loss and ALAE per policy total of $702 is the forecast from the 2021 RRA. In the 2021 RRA, claims under Manual Basic policies were analyzed separately, and contributed $14 per policy. The analysis for PY 2023 in this Application has merged these costs directly into the separate sub-coverages. For comparison purposes, the PY 2021 amounts have been recalculated to include Manual Basic in each sub-coverage.
[3] Permanent Impairment and Death Benefits were combined in the PY 2021 analysis since data was not available for each component at the time of the application. PY 2023 has the components separated.
[4] TPL-OOP BI was called TPL-BI in the PY 2021 analysis. This is a naming change only with no change in the coverage definition or benefits provided.

B.1 BASIC VEHICLE DAMAGE COVERAGE (BVDC): $247

29. Under Enhanced Care, BVDC provides for the recovery of most vehicle damage costs, to the extent the driver is not at-fault in an accident. BVDC is a first party coverage for vehicle damages up to $200,000. To estimate the PY 2023 loss and ALAE, ICBC's historical in-province vehicle damage claims data was used to supplement the actual BVDC claims data used for both frequency and severity analyses.

30. Figure 3.5 below shows the BVDC frequency and its forecast, with comparison to the corresponding forecast from the 2021 RRA. The black dots represent historical data points, with the black diamond representing the projected PY 2023 period based on the trend selections outlined in Appendix C.2.0. Figure 3.5 demonstrates that the current forecast is slightly lower than the forecast at the time of the 2021 RRA (shown as the grey line with a grey triangle for PY 2021).

Figure 3.5 – BVDC Frequency



31. As discussed in the 2021 RRA, there are many factors that can impact crash frequency (including weather, congestion, driving behaviour, crash avoidance technology, public transit ridership, distracted driving, etc.). However, crash frequency has been declining over the long-term, likely influenced by the continued improvements in crash avoidance technology embedded in new vehicles and improvements in road safety, including those supported by ICBC's Road Improvement Program.

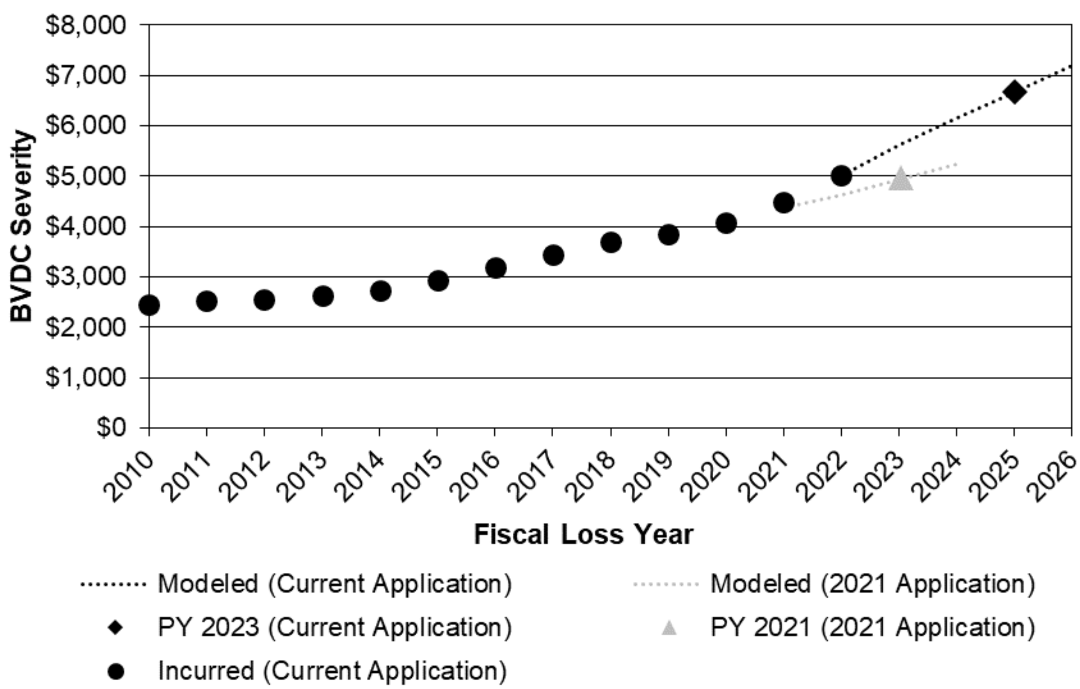
32. As seen in Figure 3.5, during the COVID-19 pandemic (fiscal loss year 2020 through 2022), crash frequency decreased significantly followed by a rebound once restrictions were lifted in the summer of 2021 (partway through fiscal loss year 2022).[10] While there has been a significant rebound since the pandemic, the current environment has made it difficult to assess where crash frequency will stabilize. Figure 3.5 shows that the forecast is higher than the most recent frequency point for fiscal loss year 2022, in which frequency remained relatively low and was affected by a number of factors that are not expected to re-occur, including: public health restrictions related to the Omicron variant of COVID-19, substantial flooding impacting travel through the Fraser Valley, and economic volatility following Russia's invasion of the Ukraine.

[10] Fiscal loss year (FLY) is used in this Application for grouping all claims for accidents occurring during the fiscal year. The costs for these claims will be incurred from the year in which the accident occurs and for several years into the future. For example, FLY 2020 includes all claims for accidents that occur from April 1, 2019 to March 31, 2020.

33. Since the onset of the COVID-19 pandemic, new influences have impacted crash frequency including sudden changes in gas prices, changes in mix of drivers (i.e., inexperienced versus experienced drivers), and the evolution of where and how people work. Since there is not enough stability in the information available to develop a change in forecast at this time, ICBC deems it reasonable to assume that the pre-COVID-19 pandemic long-term downward trend will continue through PY 2023. As shown in the Figure 3.5, ICBC has selected a slight downward trend of -1.0% per year based on the historical long-term downward trend.

34. Figure 3.6 below shows the BVDC severity and its forecast, in comparison to the corresponding forecast from the 2021 RRA. The PY 2023 BVDC severity reflects a higher severity trend than what was forecast at the time of the 2021 RRA (shown as the grey line with a grey triangle for PY 2021).

Figure 3.6 – BVDC Severity



35. The selected forecast considers the steeper trend rates observed in recent years and includes an additional adjustment to capture the high cost of BVDC claim payments seen in the most recent two years. In the most recent two years, ICBC has observed very high inflation in parts costs and vehicle prices, accentuated by increased cycle times for vehicle repairs, which are affected by capacity issues in the vehicle repair industry and parts shortages affected by disruption in supply chains. In addition, in an effort to help address ongoing inflationary cost

pressures and to better support the material damage suppliers, ICBC has increased material damage supplier rates effective July 1, 2022 and is providing annual supplier rate increases over the next three years (see Chapter 7, Appendix 7B Claims Costs Management Initiatives for more details). The PY 2023 forecast reflects an annualized trend of 7.9% plus an adjustment for elevated inflationary levels over the next few years, which are discussed in more detail in Appendix C.2.0.

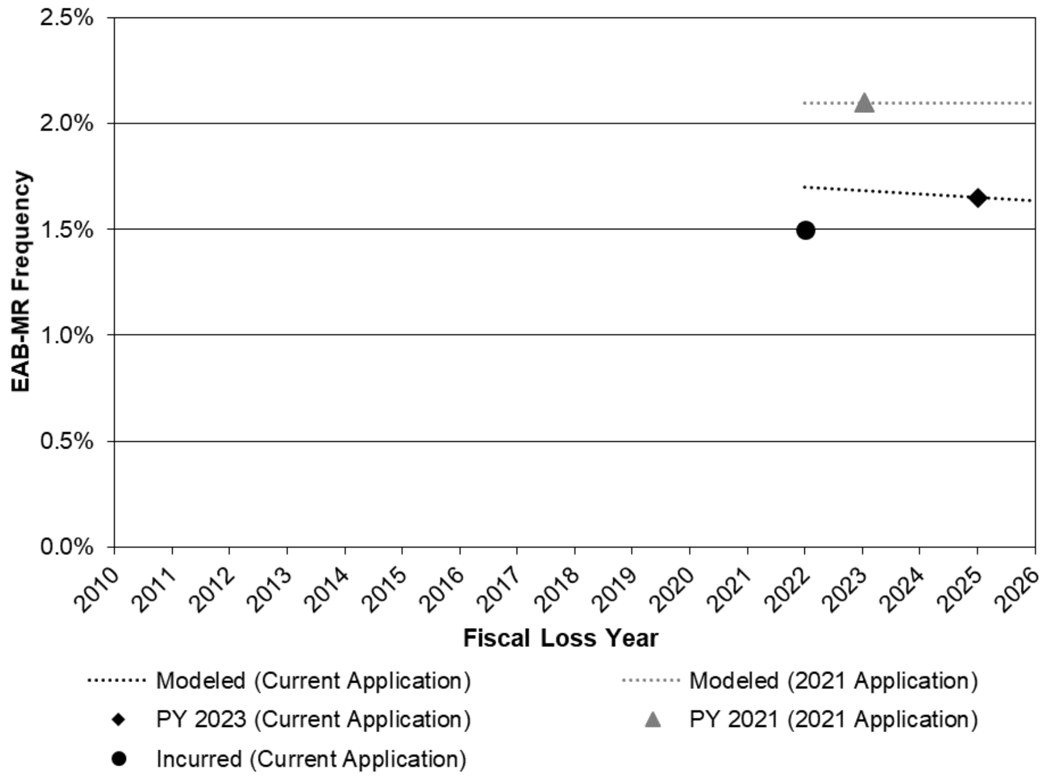
B.2 ENHANCED ACCIDENT BENEFITS (EAB): $500

36. Enhanced Accident Benefits is comprised of Medical Rehabilitation (EAB-MR), Enhanced Disability (EAB-EB), Permanent Impairment (EAB-PI), and Death Benefits (EAB-DB) sub-coverages. EAB, which significantly expands the amount and type of coverage available to injured customers, was introduced on May 1, 2021; therefore, ICBC has limited experience available to rely on for its claims cost estimates and PY 2023 forecasts. ICBC has supplemented this experience with data for accident benefits claims under the legal-based product for estimation of claim frequency, and continues to rely on relevant information, in particular severity data from Manitoba Public Insurance (MPI), to estimate claim severity (similar to the methodology used in the December 2020 Ernst & Young Enhanced Accident Benefits Costing Report that was included in the 2021 RRA, Chapter 3, Appendix C.4.0). Details of these estimates along with the assumptions, methods and data used to estimate the PY 2023 frequencies and severities for each of the sub-coverages are further discussed in Appendix C.1.0 and Technical Appendix C.1.0. The commentary in this section provides additional information on EAB-MR, which is the largest sub-coverage within EAB. See Appendix C.1.0 for additional details on the other segments.

B.2.1 EAB-MR: $253

37. EAB-MR provides medical and rehabilitation benefits for the care and support needed by injured parties for their recovery. Figure 3.7 below shows the EAB-MR frequency (black dot) and its forecast (black line), in comparison to the corresponding forecast from the 2021 RRA (grey line).

Figure 3.7 – EAB-MR Frequency



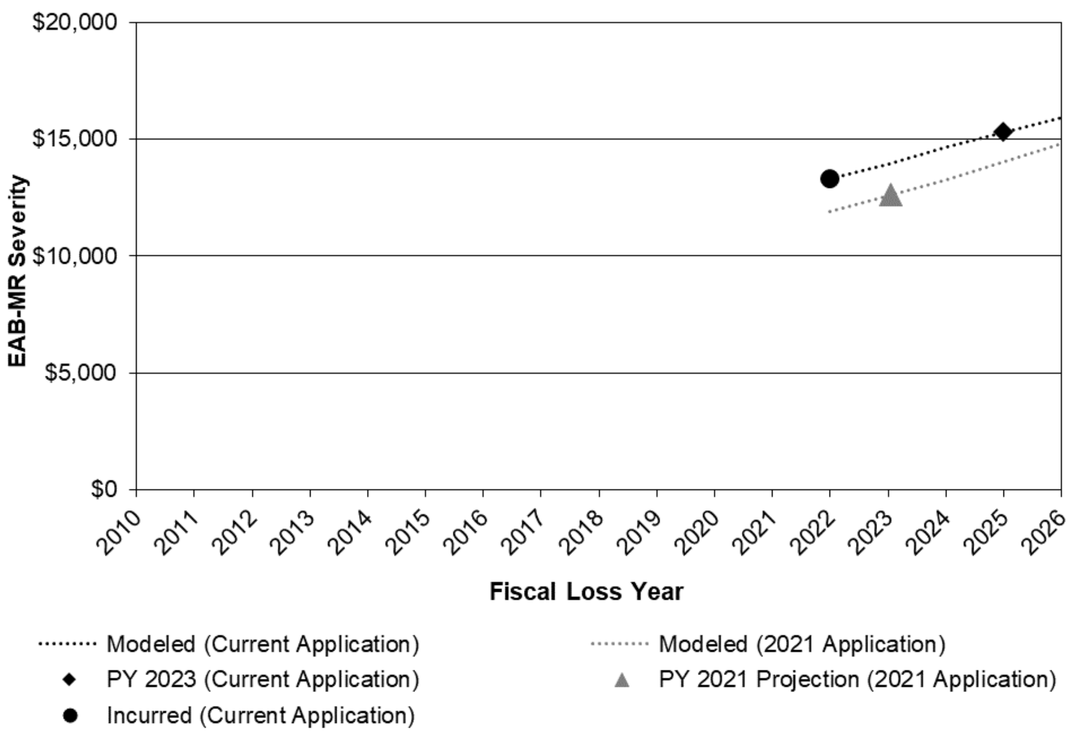
38. The largest factor affecting the change in the forecast of claim frequencies is that fewer injuries have occurred than expected, leading to a reduction in the future expected injuries under Enhanced Care. Based on historical patterns for injury claims, ICBC expects that most of the injury claims occurring through March 2022 will have been reported to ICBC by August 31, 2022, and so at that point the EAB-MR frequency for fiscal loss year 2022 can be estimated with relative confidence. With the significant changes in coverage from the introduction of Enhanced Care, which could affect both claimant behaviour and claims processing, it is appropriate to rely on this experience under the new product, adjusting for expected changes in the occurrence of crashes. As a result, the EAB-MR frequency forecast reflects a lower level compared to the trajectory that was expected in the 2021 RRA.

39. Figure 3.7 shows that the forecast for PY 2023 is lower than PY 2021, both in terms of the level of EAB-MR frequency and the ongoing trend. This represents an assumption that the propensity to incur an injury claim, in the event of a crash, will be relatively stable over time. Since the frequency of crashes, as represented by the BVDC claims frequency, is forecast to follow a

downward trend of -1.0% over time, that same trend is now being applied for the EAB-MR frequency forecast. A corresponding assumption, and selection of a downward frequency trend, has also been made for most of the EAB sub-coverages, in addition to EAB-MR as shown here.

40. Figure 3.8 below shows the EAB-MR severity and its forecast, with comparison to the corresponding forecast from the 2021 RRA. The fiscal loss year (FLY) 2022 point reflects a higher severity trend than what was forecast at the time of the 2021 RRA (shown as the grey line). Both the FLY 2022 claims and the forecast reflect higher rates of inflation than were anticipated at the time of the 2021 RRA. A high level discussion follows, outlining the major changes in the forecast.

Figure 3.8 – EAB-MR Severity



41. To determine EAB-MR claim severity, ICBC relies on historical data from MPI, adjusting it for significant differences that will affect claims costs in BC, and accounting for current and forecast inflation as it will affect EAB-MR. ICBC actuaries consider MPI's MR severity data to be related information to ICBC's EAB-MR claim severity data which is immature as previously noted. The forecast of the trend rates for EAB-MR severity combines the expected increase due to BC consumer price index (CPI) inflation with a trend assumption to encompass factors other than inflation. This produces future trend rates that are relatively similar to the trajectory that was forecast in the 2021 RRA.

42. Adjustments are applied to the MPI severities to encompass enhancements to their product that make them more similar to the EAB coverage, to account for payments to provincial health services for injured customers, and to bring historical costs to the current level.

43. Under EAB-MR, the treatment fees paid to medical service providers are subject to annual increases based on the rate of inflation as reflected in the BC CPI (capped at 6.0%). Consistent with this, the EAB-MR severity forecast relies on known and forecast BC CPI changes to capture the impact of inflation. This affects not only the forecast years, but also the severity of EAB-MR claims for the current year, since claims involving significant injuries will require ongoing treatments over multiple years. Since the latest BC CPI inflation forecasts are high for the current year and moderating for future years, the EAB-MR severity trend also becomes gradually less steep over the next three years, as shown in Figure 3.8. The majority of the larger increases for EAB–MR are due to the unexpected increases in the BC CPI forecast. Factors other than inflation are also assumed to contribute to the EAB-MR severity trend, as has been observed for historical claims. This is discussed in further detail in Appendix C.1.0 and Technical Appendix C.1.0.

C FORECAST RISKS

44. The forecasts described above are ICBC’s best estimates according to accepted actuarial practice. However, there is volatility inherent in such forecasts. In this section, this variability is explored by discussing how it is impacted by the length of the policy period and selected sensitivities for key input assumptions.

C.1 LENGTH OF POLICY PERIOD

45. Typically, the policy period for the actuarial indicated rate change analysis is 12 months, aligning with the length of a typical automobile policy. In this Application, as directed by *Special Direction IC2,* PY 2023 encompasses a longer, 24-month policy period. A longer forecast period comes with increased risk that actual experience will differ from the forecast level due to unexpected events, changes in the environment, or changes in customer behaviour over this longer than usual forecast period. As a result of these risks, the true value of required premiums may differ from the best estimate.

46. At the time of the PY 2023 analysis, there is increased uncertainty around inflationary forecasts and post-pandemic crash rates. Therefore, a longer policy period contributes to higher levels of estimation risk. This means that premiums charged for PY 2023 could be inadequate to

cover costs. However, the potential impact of these risks on the required premium is mitigated to some extent by the difference between the actuarial indicated rate change of -6.5%, and the application of the rate change floor of 0%. The application of the rate change floor of 0% allows ICBC to collect additional premium than required to cover costs, thus building capital at a time where capital is below its management target. It also provides room for ICBC to absorb, to some extent, unexpected adverse emergence over the 24-month policy period until such time as ICBC can file its next rate change.

47. While a longer forecast period comes with some increased risk, it also provides benefits. A 24-month policy period provides greater stability in customer premiums during a time of inflation uncertainty. The next section, C.2 Sensitivity Analysis, quantifies some of the uncertainties around key input assumptions.

C.2 SENSITIVITY ANALYSIS

48. In the August 19, 2019 Decision on the 2019 Revenue Requirements Application (Order G-192-19), the BCUC commented that they found the sensitivity analysis useful for highlighting to stakeholders that there is a range of variability in the actuarial indicated rate change that may arise from one or more changes to various assumptions. [11]

49. The actuaries examined several scenarios to evaluate the sensitivity of the actuarial indicated rate change to certain assumptions, with all other assumptions being held unchanged. Each row of Figure 3.9 below identifies an assumption that was tested, the degree of change to that assumption, and the extent to which that degree of change would impact the actuarial indicated rate change.

50. ICBC cautions that these sensitivities are provided for informational purposes only. The scope of professional judgment that goes into the determination of the actuarial indicated rate change is constrained by the principles of accepted actuarial practice. While substituting that judgment with different (and sometimes arbitrary) assumptions in the manner set out in Figure 3.9 might be informative for stakeholders; the alternative assumptions posed are not necessarily reasonable for use in the actuarial indicated rate change analysis based on known facts. Importantly, they would not necessarily result in an updated actuarial indicated rate change that

[11] BCUC Order G-192-19, p. 23.

accords with accepted actuarial practice as the BCUC recognized in Order G-192-19.[12] In addition, ICBC's actuaries and the external actuary cannot foresee any change in assumption that would accord with accepted actuarial practice and that would result in a change to the actuarial indicated rate change such that it would be greater than the proposed rate change of 0%, given the magnitude of the differential between the rate change floor and the actuarial indicated rate change.

Figure 3.9 – Sensitivity Analysis

Line	Scenario	Percentage Point Impact on Actuarial Indicated Rate Change
1	Change in New Money Rate from 5.72% to 4.72%	3.0%
2	Change in New Money Rate from 5.72% to 6.72%	-2.7%
3	Decrease in inflation assumptions[1, 2]	-6.8%
4	Increase in inflation assumptions[1, 3]	6.2%
5	Decrease in EAB loss and ALAE by 1%	-0.4%
6	Increase in EAB loss and ALAE by 1%	0.4%
7	Decrease in non-EAB loss and ALAE by 1%	-0.4%
8	Increase in non-EAB loss and ALAE by 1%	0.4%

[1] Inflation rates for the best estimate are 7.0%, 3.9%, 2.4%, 2.2%, and 2.0% for fiscal years 2023 through 2027+, respectively.
[2] In this scenario, inflation rates were decreased from the best estimate. The inflation rates used here are 5.2%, 1.9%, 0.8%, 0.7%, and 1.2% for fiscal years 2023 through 2027+, respectively.
[3] In this scenario, inflation rates were increased from the best estimate. The inflation rates used here are 8.8%, 6.3%, 4.4%, 4.2%, and 2.9% for fiscal years 2023 through 2027+, respectively.

Notes:
Items 1 and 2 examine the impact of changing the New Money Rate used to calculate investment income on policyholder supplied funds (see Technical Appendix A.1.0) by ±1 ppt.
Items 3 and 4 examine the effects of higher and lower inflation for claims payments.
Items 5 and 6 examine the impact of changing the EAB PY 2023 claims costs by ± 1%. PY 2023 EAB loss and ALAE totals $3.8 billion (for the 24-month period); therefore, these items examine the impacts on the indicated rate change of increasing EAB Loss and ALAE by $38 million (or decreasing them by $38 million). The rate impact also accounts for the change in investment income as a result of higher (or lower) EAB loss and ALAE.
Items 7 and 8 examine the impact of changing PY 2023 loss and ALAE of all coverages except EAB by ± 1%, including impacts from investment income as a result of changes in PY 2023 loss and ALAE.

C.3 MATERIALITY STANDARD

51. The actuarial Standards of Practice (SOP) in Canada require the actuary to set a standard for materiality. The use of the materiality standard is set out in Section 1240 of the SOP, which says, "…an omission, understatement, or overstatement is material if the actuary expects it to

[12] Ibid. p. 23 "The panel agrees with ICBC and finds that sensitivity analyses may produce rate indications that are not in accordance with AAP."

affect either the user's decision-making or the user's reasonable expectations." The actuaries have determined a materiality standard for the purposes of the work that is conducted in this revenue requirements analysis and the calculation of the -6.5% actuarial indicated rate change.

52. The significance of the application of a materiality standard is two-fold. It relates to both the approximation used in the course of the work, and to errors or omissions that are found after the completion of the work. First, in relation to approximations used in the course of the work, the materiality standard provides guidance to the actuary regarding an appropriate level of approximation. Approximation includes simplification of a complex reality into a simpler mode, but does not include omission of assumptions or elements of the methodology. Second, in relation to errors or omissions that are found subsequent to the completion of the work, the materiality standard provides guidance to the actuary regarding the appropriate response.

53. The materiality standard is judged by the actuary from the point of view of the user. Based on the considerations discussed above, an annual amount of $30.3 million, or $60.6 million for the 24-month policy period (equivalent to approximately 1% of the annualized required premium) was selected as the materiality standard for the actuarial indicated rate change analysis in this Application. This is similar to the $30 million annual amount, or $57.5 million for the 23-month policy period used in the 2021 RRA.

D CONCLUSION

54. This Chapter provides the analysis and details supporting the actuarial indicated rate change of -6.5% including the prescribed capital provision of 7% of required premium. The proposed rate change is 0% because of the prescribed rate change floor in *Special Direction IC2* which provides that the commission must not decrease rates.

55. The actuarial indicated rate change is negative, largely due to a higher New Money Rate combined with a decrease in the overall capital provision. These impacts are slightly offset by higher than expected loss and ALAE costs largely due to the recent increases in inflation putting upward pressure on claim costs across all coverages. There is still uncertainty around ICBC's estimates as forecast risk remains high under the new Enhanced Care product as well as uncertainty in future crash frequency and the current economic environment. The rate change floor helps to build capital which serves as a buffer over the 24-month policy period to absorb some or all of the impact of unexpected costs, and to support financial stability.

E ACTUARY OPINIONS

E.1 FILING ACTUARY'S OPINION

56. I, Kelly Aimers, am an Associate of the Casualty Actuarial Society and a Fellow of the Canadian Institute of Actuaries and have derived the actuarial indicated rate change of -6.5% in accordance with accepted actuarial practice in Canada, on behalf of the Insurance Corporation of British Columbia, for Basic coverage in respect of all rate class categories of automobile insurance, to be effective April 1, 2023 for both new and renewal business.

57. I have reviewed the data, methods, and assumptions underlying this actuarial indicated rate change for reasonableness and consistency, and I believe the data, methods, and assumptions are reliable and sufficient for the determination of the actuarial indicated changes in average rate level.

Kelly Aimers

Signature of Filing Actuary	December 15, 2022 Date

E.2 REVIEWING ACTUARY'S OPINION

58. I, William T. Weiland, am a Fellow of the Casualty Actuarial Society and a Fellow of the Canadian Institute of Actuaries. I have reviewed the actuarial indicated rate change requirements for Basic coverage prepared by Kelly Aimers for the Insurance Corporation of British Columbia as set out in the document "Actuarial Indicated Rate Change Analysis", dated 15 December, 2022.

59. In my opinion, the actuarial indicated changes in average rate level presented in this Chapter have been calculated in accordance with accepted actuarial practice in Canada.

W. T. Weiland

Signature of Reviewing Actuary	December 15, 2022 Date

APPENDIX 3A

ACCEPTED ACTUARIAL PRACTICE

Table of Contents

A INTRODUCTION

1. To conform with *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004*, as amended (*Special Direction IC2*), the actuarial indicated rate change analysis in a revenue requirements application (RRA) filed with the British Columbia Utilities Commission (BCUC) is performed in accordance with accepted actuarial practice in Canada (AAP). ICBC's Filing Actuary and ICBC's Reviewing Actuary (ICBC's actuaries) certify that the actuarial indicated rate change discussed in this Application has been calculated in accordance with AAP.

2. AAP is the manner of performing work in Canada in accordance to the Rules of Professional Conduct (Rules)[1] and the Standards of Practice (SOP)[2] of the Canadian Institute of Actuaries, as well as the appropriate Guidance Materials.[3] The Rules provide the Canadian Institute of Actuaries' highest order of guidance, and deviation from them is typically considered to represent professional misconduct, unless there is objective evidence to the contrary. Any and all deviations from the standards require disclosure and justification from the actuary.

3. AAP applies to all aspects of actuarial work, specifically by defining the constraints of judgment actuaries employ. Section 1140 of the SOP describes how actuarial judgment is a necessary part of the application of the standards, and that judgment is required to be exercised in a reasonable fashion. Actuarial judgment is considered reasonable if the judgment is objective and takes account of such matters as the Rules, the spirit and intent of the standards, the duty of the profession to the public, information relevant to the circumstances of the case, and common sense.

4. The actuarial indicated rate change analysis described in this Application filed with the BCUC is performed in accordance with AAP. The proposed rate change of 0% represents the change to Basic insurance revenue that ICBC requires, and is equal to the actuarial indicated rate change adjusted according to the rate smoothing framework as set out in *Special Direction IC2*.

[1] Canadian Institute of Actuaries, (2020), *Rules of Professional Conduct.* Retrieved from https://www.cia-ica.ca/publications/rules-of-professional-conduct.
[2] Canadian Institute of Actuaries, (2022), *Standards of Practice.* Retrieved from https://www.cia-ica.ca/publications/standards-of-practice.
[3] Canadian Institute of Actuaries, (n.d.), *Guidance Material.* Retrieved from https://www.cia-ica.ca/publications/guidance.

5. In this Application, there is no longer a Government Directive to use Manitoba Public Insurance (MPI) historical claims data to estimate the future Enhanced Accident Benefits (EAB) claims costs. However, even though Enhanced Care was implemented in May 2021, ICBC does not have enough paid loss and allocated loss adjustment expense (ALAE) data under the new product to produce credible estimates using only that information. Therefore, similar to the prior application, ICBC actuaries have continued to rely on both internal and external data in its actuarial analysis.

6. The following components of AAP have particular relevance for purposes of this Application and are discussed in the following sections:

- Section B: Basic insurance rates should cover the costs of providing Basic insurance and include a specified capital provision.
- Section C: The estimate of claims costs must be an unbiased best estimate based on all of the information available to the actuary at the time the estimate is prepared.
- Section D: It is appropriate for ICBC to use reliable publicly available data from external sources (i.e., related experience from external data) where ICBC equivalents (i.e., subject experience) are not available.
- Section E: The materiality standard is required to be set by the actuary from the point of view of the user of the work.
- Section F: Each assumption that is material to the results should be disclosed and described in the Application.
- Section G: Subsequent events are handled in compliance with AAP and any impacts will be eventually captured in the following RRA.[4]
- Section H: The actuarial indicated rate change should be prepared based on assumptions that are not only independently reasonable, but appropriate in aggregate.

B BASIC INSURANCE RATES SHOULD COVER COSTS AND A SPECIFIED CAPITAL PROVISION

7. The application of AAP in the context of this Application requires that the actuarial indicated rate change should provide for all costs, without exclusion. This principle is reflected in Section 2620.01 of the SOP, which states:

[4] Subsequent events are defined under subsection 1430 of the SOP, as "an event of which an actuary first becomes aware after a calculation date but before the corresponding report date".

> The best estimate present value of cash flows relating to the revenue at the indicated rate should equal the best estimate present value of cash flows relating to the corresponding claim costs and expense costs, plus the present value of a provision for profit, over a specified period of time.

8. As stated in 2620.01, the actuarial indicated rate change includes a provision for profit. This profit provision is referred to as a capital provision by ICBC because Basic insurance operates as a closed system where all profits flow directly into capital. Capital is beneficial to policyholders because it provides protection against unexpected unfavourable changes in costs or revenues. Section 2620.14 of the SOP states that the provision for profit (capital provision) included in the actuarial indicated rate change may be specified to the actuary,[5] which is the case for this Application.[6]

C UNBIASED BEST ESTIMATES ARE BASED ON PERTINENT INFORMATION

9. In forecasting future claims costs, ICBC's actuaries have considered information available at the time relating to all relevant circumstances, both favourable and unfavourable, in selecting appropriate models and assumptions and in establishing assumptions that are on a best estimate basis. Nevertheless, when forecasting, different and acceptable professional judgments will produce a range of outcomes that are consistent with accepted actuarial practice.

10. Section 2620.02 of the SOP states that:

> The actuary should select appropriate methods, techniques, and assumptions recognizing that such elements depend on the circumstances affecting the work and that a variety of actuarial methods may be appropriate to derive an indicated rate.

11. Because it is necessary to apply judgment in the process of developing rate indications, two actuaries may develop different, but equally valid models that accord with AAP. However, because an actuary tasked with estimating the actuarial indicated rate change would use the Standards of Practice, the actuary would be focused on producing a best estimate of the present value of cash flows.

[5] Section 2620.14 of the SOP states "The provision for profit, or other assumptions that are pertinent to its derivation, may be specified to the actuary under the terms of an appropriate engagement." In this context, ICBC has used capital provision, which may be positive or negative, as a "provision for profit".

[6] *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004,* (*Special Direction IC2*) as amended by Order in Council 666/2022, December 12, 2022 (B.C. Reg. 269/2022).

D IT IS APPROPRIATE FOR ICBC TO RELY ON EXTERNAL DATA

12. Even though Enhanced Care was implemented on May 1, 2021, ICBC does not have enough paid loss and ALAE data under the new product to produce credible estimates. Therefore, ICBC has supplemented this experience with data for accident benefits claims under the legal-based product for estimating claim frequency, and continues to rely on relevant external data, in particular severity data from Manitoba Public Insurance (MPI), for the estimation of claim severity. This is similar to the methodology used in the December 2020 Ernst & Young Enhanced Accident Benefits Costing Report that was included in the 2021 RRA (2020 EY EAB Report).[7,8]

13. Section 1440.03 of the SOP states that:

> Where data specific to the client are not available or not relevant, the actuary would consider using industry data, population data, or other published data with suitable adjustments where relevant and appropriate.

14. ICBC is not able to test the sufficiency and reliability of the external data, but rather relies on the work of MPI's actuaries in putting appropriate procedures in place to establish sufficiency and reliability of the data. In accordance with Section 1440.11 of the SOP.

> The actuary usually uses data prepared by another party such as the client, an independent administrator, an auditor, a government body, or an external association. When placing reliance on such data, the actuary would consider the qualifications, competence, integrity, and objectivity of the party providing the data.

15. In deciding to place reliance on the data from the MPI rate filing, ICBC has considered that the data was used by qualified actuaries at MPI for the purpose of a rate filing with their external regulator, subject to the reviews of the regulator as well as MPI's external actuary who is a Fellow of the Canadian Institute of Actuaries.

E ICBC CONFORMS TO MATERIALITY STANDARD

16. AAP requires the actuary to set a standard for materiality. The use of the materiality standard is set out in Section 1240.02 of the SOP,

> "Material" has its ordinary meaning, but is judged from the point of view of a user, having regard for the purpose of the work. Thus, an omission, understatement, or overstatement is material if the actuary expects it to affect either the user's decision-making or the user's

[7] 2021 RRA, Chapter 3, Appendix C.4.0 December 2020 EY Enhanced Accident Benefits Costing Report.
[8] https://apps.mpi.mb.ca/Rate-Application/2023/2023_GRA.pdf.

reasonable expectations. When the user does not specify a standard of materiality, judgment falls to the actuary.

17. The significance of the application of a materiality standard is two-fold. It relates to both the approximation used in the course of the work, and to errors or omissions that are found after the completion of the work. First, in relation to approximations used in the course of the work, the materiality standard provides guidance to the actuary regarding an appropriate level of approximation. Approximation includes simplification of a complex methodology into a simpler mode, but does not include omission of assumptions or elements of the methodology. Second, in relation to errors or omissions that are found subsequent to the completion of the work, the materiality standard provides guidance to the actuary regarding the appropriate response.

18. The materiality standard is judged by the actuary from the point of view of the user. Based on the considerations discussed above, the materiality standard is selected and reported in Chapter 3, Actuarial Indicated Rate Change Analysis, Section C.3.

F ICBC'S DISCLOSURES ARE COMPLIANT WITH AAP

19. ICBC considers the disclosures, descriptions and rationale contained within this Application to be in compliance with Section 1710.01 of the SOP, which specifies the level of details which is required to be included in an external actuarial report such as, for example:

- Say whether or not the work is in accordance with AAP in Canada and, if not, disclose the deviation from that practice;
- Describe each assumption used for the work that is material to the results of the work;
- Provide the rationale for each such assumption that is material to the results of the work;
- For matters requiring an assumption other than a model or data assumption, disclose any assumption that is different from assumption of continuance of the status quo and, if practical, useful, and appropriate under the terms of the engagement, disclose the effect of alternative assumptions;
- Describe the methods used for the work;

- In the case of a periodic report, disclose any inconsistency between the assumptions and methods of the current and prior reports and the rationale for such inconsistency;
- Describe any subsequent event that is not taken into account in the work.

20. This Application includes detailed information about the basis of selection of many of the assumptions used in the actuarial analysis. ICBC has included a discussion of those assumptions that are considered to be of greatest relevance to the intended users of this Application, and has identified any significant changes in the basis of selection of assumptions. ICBC believes this disclosure complies with the spirit and intent of Section 1710.01. Although ICBC has not described or provided a rationale for every assumption that may be deemed to be material to the results of this Application, ICBC considers the disclosures pertaining to the assumptions in this Application to be reasonable and appropriate to the circumstances.

21. ICBC's approach to the selection of analysis assumptions (e.g., development factors or trend selections) for the other coverages is consistent with prior RRAs. Although the basis of selection may change from year to year (e.g., moving from a four-year average to a three-year average), ICBC continues to make every reasonable effort to be consistent in the considerations brought to bear in making those decisions, including the degree of responsiveness versus stability, and the identification and treatment of outliers. Furthermore, ICBC's approach to the selection of methods to produce the claim costs estimates for these coverages remains consistent with prior RRAs.

22. As has been the practice over several RRAs, the actuaries have evaluated the sensitivity of the rate indication to a change in certain assumptions, leaving all other assumptions unchanged. Please see Chapter 3, Figure 3.9 which provides these sensitivities. ICBC cautions that these sensitivities are provided for informational purposes only, since the scope of professional judgment that goes into the determination of the actuarial indicated rate change is constrained by the principles of AAP. Substituting that judgment with different (and sometimes arbitrary) assumptions in the manner set out in Figure 3.9 might be informative from the perspective of understanding how sensitive the actuarial indicated rate change is to changes in assumptions; however, the alternative assumptions posed are not necessarily reasonable for use

in the actuarial analysis based on known facts. Importantly, they would not result in an updated actuarial indicated rate change that accords with AAP.[9]

G TREATMENT OF SUBSEQUENT EVENTS COMPLIES WITH AAP

23. ICBC's revenue requirements analysis process normally selects assumptions at a point in time and is reflective of all known facts of the organization at the time of calculation. The results of which form the basis of the actuarial indicated rate change.

24. Section 1430.04 of the SOP states that:

> A subsequent event is relevant to the recommendation if it reveals an error, provides information about the entity, or is a decision that makes the entity different.

25. If a subsequent event occurs, the actuary would follow a decision tree matrix set forth in the Canadian Institute of Actuaries Revised Education Note, Subsequent Events dated October 2015 to determine if the actuary needs to take the event into account or report the event, but not take it into account.[10]

26. It is ICBC's position that any update to actuarial estimates for subsequent events would require ICBC to revisit all assumptions within its analysis to determine an updated actuarial indicated rate change that accords with AAP.

H SELECTED ASSUMPTIONS ARE REASONABLE, BOTH INDIVIDUALLY AND IN AGGREGATE

27. AAP in Canada requires that the rate indication should be prepared based on assumptions that are not only independently reasonable, but also appropriate in aggregate. ICBC submits that the actuarial indicated rate change analysis included in this Application, should be considered without updating information in a piecemeal manner. ICBC has considered all information together and ensures that assumptions used are appropriate both individually and in aggregate. Section 1620.29 of the SOP states:

> The assumptions that the actuary selects or for which the actuary takes responsibility, other than alternative assumptions selected for the purpose of sensitivity testing, would be independently reasonable and appropriate in the aggregate.

[9] BCUC Order G-192-19, p. 23 "The panel agrees with ICBC and finds that sensitivity analyses may produce rate indications that are not in accordance with AAP."
[10] https://www.cia-ica.ca/docs/default-source/2015/215083e.pdf

APPENDIX 3B

OVERVIEW OF ACTUARIAL APPENDICES AND TECHNICAL APPENDICES

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A INTRODUCTION

1. This Appendix provides an overview to the actuarial indicated rate change analysis and documentation in Chapter 3. Chapter 3 provides the details of the calculation of the Policy Year (PY) 2023 required premium and the projected PY 2023 premium at the current rate level.

2. This appendix is organized as follows:

- Section B of this appendix provides an overview of Basic sub-coverages, and the abbreviations used to refer to them.
- Section C provides an overview of a policy year.
- Section D explains how to navigate the actuarial indicated rate change analysis and documentation (actuarial appendices and actuarial technical appendices).
- Section E provides an overview of significant changes to the methodology, data, and presentation of the actuarial indicated rate change analysis of this Application as compared to the 2021 Revenue Requirements Application (RRA). This is in accordance with Accepted Actuarial Practice (AAP) for an external periodic report where the actuary should disclose any inconsistency between the assumptions and methods of the current and prior reports and the rationale for such inconsistency.[1]

B OVERVIEW OF BASIC SUB-COVERAGES

3. Basic insurance represents the minimum amount of insurance that must be carried by BC motorists and must be purchased through ICBC. This Application does not encompass any of the Optional insurance coverages that are sold by ICBC.

4. In a typical year, the Plate Owner Basic insurance represents nearly all of the total premium volume for Basic insurance. The category “Manual Basic” consists of many different policy forms or vehicle types that have features requiring different processing than Plate Owner Basic insurance. In this Application, the premium experience for Plate Owner and Manual Basic policies are analyzed separately, whereas the claims experience for Plate Owner and Manual Basic policies is analyzed on a combined basis.

[1] Canadian Institute of Actuaries, (n.d.), Standards of Practice. Section 1710.01. Retrieved from https://www.cia-ica.ca/publications/standards-of-practice.

5. The claims experience is analyzed for the seven sub-coverages under Enhanced Care described briefly below. The Enhanced Accident Benefits coverage is comprised of the Medical Rehabilitation, Enhanced Disability, Permanent Impairment, and Death Benefits sub-coverages. Basic Vehicle Damage Coverage does not have additional sub-coverages. The Third Party Liability coverage is comprised of the Property Damage and Out-of-Province Bodily Injury sub-coverages.

- **Enhanced Accident Benefits - Medical Rehabilitation** provides medical and rehabilitation benefits for the care and support needed by injured parties for their recovery.

- **Enhanced Accident Benefits – Enhanced Disability** provides wage earners, including those who are self-employed, and non-earners (such as students and caregivers) benefits when they are unable to work, study, or perform regular duties due to injuries suffered in a crash. The income replacement benefit for wage earners provides 90 per cent of net income, calculated based on a maximum gross yearly employment income prescribed in the Enhanced Care regulations. Amounts provided for other benefits (i.e., non-earner benefits) are also prescribed in the *Insurance (Vehicle) Regulation.*

- **Enhanced Accident Benefits – Permanent Impairment** provides compensation for the most seriously injured claimants depending on the nature and the level of their permanent impairment.

- **Enhanced Accident Benefits – Death Benefits** provides benefits payable to the deceased's spouse and/or dependents, and may be paid to the non-dependent children or parents of the deceased if there are no dependents and no spouse. Grief counseling is also available for grieving family members.

- **Basic Vehicle Damage Coverage** provides for the recovery of most vehicle damage costs, to the extent the driver is not at-fault in an accident. Basic Vehicle Damage Coverage is a first party coverage for vehicle damages up to $200,000.

- **Third Party Liability – Property Damage.** Under the legal-based model, material damage costs that were indemnified by the at-fault vehicle owner's third party liability policy were referred to as Property Damage (PD) costs. Under Enhanced Care, most of these costs are now covered by Basic Vehicle Damage Coverage. The remaining costs are covered under Third Party Liability – Property Damage and include PD claims that occur outside of British Columbia, claims for non-vehicle PD, and claims for customer vehicles under garage service operator care.

- **Third Party Liability – Out-of-Province Bodily Injury** provides coverage for bodily injury claims where the legislated limitation on lawsuits is not applied.

6. Figure 3B.1 lists the abbreviations for Enhanced Care and legal-based coverages that are referred to broadly in this Chapter. For legal-based coverages, the list is not exhaustive as other historical coverages may be referred to in select areas, or not referred to at all.

Figure 3B.1 – Abbreviations for Enhanced Care and Legal-Based Coverages

Abbreviation	Enhanced Care
EAB	Enhanced Accident Benefits
EAB-MR	EAB-Medical Rehabilitation
EAB-ED	EAB-Enhanced Disability
EAB-PI	EAB-Permanent Impairment
EAB-DB	EAB-Death Benefits
BVDC	Basic Vehicle Damage Coverage
TPL	Third Party Liability
TPL-PD	TPL-Property Damage
TPL-OOP BI	TPL-Out-of-Province Bodily Injury

Abbreviation	Legal-Based
AB	Accident Benefits
AB-MR	AB-Medical Rehabilitation
AB-WB	AB-Weekly Benefits
AB-DB	AB-Death Benefits

C OVERVIEW OF A POLICY YEAR

7. The Basic insurance rates set by the BCUC are normally charged at the time a policy is sold, or written, and changes to rates become effective for new policies (or renewals) as they are sold. Since the rates set by the BCUC are expected to remain in force for a period of time between rate changes, all policies written in that period are subject to the same rate level, and collectively provide the total premium revenue for that policy year. The insurance rates must therefore be set

such that this revenue is expected to be sufficient to cover the costs associated with providing insurance coverage for the policies written in that policy year. In consequence, the future costs and related investment income in a RRA must be estimated on the policy year (written) basis, in order to determine the required rate change. In this Application, as directed by *Special Direction IC2* (OIC 666/2022), PY 2023 is a 24-month policy period.

D ACTUARIAL APPENDICES AND TECHNICAL APPENDICES

8. As discussed in Chapter 3, the actuarial indicated rate change is calculated as the percent difference between the amount of premium that needs to be collected to cover PY 2023 costs including a capital provision (required premium), compared to the premiums customers would have paid in PY 2023 assuming no change to rates (projected premium at current rate level). The calculations for the required premium are included in Appendix Set A and Technical Appendix Set A and the calculations for the projected premium at current rate level are included in Appendix Set B and Technical Appendix Set B. The actuarial analyses for the components of the required premium are presented in Appendix Sets C to F and Technical Appendix Sets C to F.

9. PY 2023 loss and allocated loss adjustment expense costs are the largest component of required premium and are calculated from a relatively complex actuarial analysis. Claims forecasting and the reserving analysis are discussed in Appendix Set C and Technical Appendix Set C, which are organized in more detail by coverage (Enhanced Accident Benefits, Basic Vehicle Damage Coverage, and Third Party Liability).

10. Figure 3B.2 lists the actuarial appendix sets and the actuarial technical appendix sets where more detailed analysis can be found. The numbering for the appendix and technical appendix sets in this Application were streamlined in comparison to the 2021 RRA, in order to improve the flow of information.

Figure 3B.2- Actuarial Appendix and Technical Appendix List, 2023 RRA vs. 2021 RRA

Topic	2023 RRA		2021 RRA	
	Appendix	Technical Appendix	Appendix	Technical Appendix
Required Premium	A	A	A	A
Projected Premium at Current Rate Level	B	B	B	B
Claims Forecast and Reserving Analysis	C	C	C, D, and E	C and D
Expense and Miscellaneous Revenue	D	none	H	none
Payment Patterns	E	E	F	F
Investment Income on Capital Available for Rate Setting*	F	none	G	none

*This appendix was called "Capital Provision and Income on Basic Equity" in the 2021 RRA. The calculation of the capital provision is now provided in Appendix A. Basic Equity is now called Capital Available for Rate Setting as prescribed by *Special Direction IC2*.

11. Each appendix set is introduced with an explanatory note that is numbered zero (i.e., Appendix A.0), which outlines the purpose of the appendix set, explains the methods used, and provides a summary of the results. Each appendix set also includes numerical tables to show the actuarial analysis and results.

12. Technical appendices are provided for some of the appendix sets to provide technical details on the actuarial methods and assumptions. The intent is to have detailed technical information available as it could be useful to readers that are familiar with the more technical aspects of the actuarial methods and assumptions. When required, a technical appendix set is introduced with an explanatory technical appendix note that is numbered zero (i.e., Technical Appendix A.0). When required, a technical appendix set also includes numerical tables in Excel format that are not included in the main section of this Application, but are provided in electronic format only.

E REVISIONS TO THE ACTUARIAL INDICATED RATE CHANGE ANALYSIS

13. This section gives a synopsis of the significant changes to the presentation, data, and methodology of the actuarial indicated rate change analysis of this Application as compared to the 2021 RRA. The changes are intended to improve the analysis, simplify content, improve clarity of explanations, and better align with the summaries of results provided in Chapter 3.

14. Figure 3B.3 summarizes the changes in data, presentation and methodology including impacts on the actuarial indicated rate change, if any, with more details provided in the relevant appendices or technical appendices as indicated. A change that should have no impact on the actuarial indicated rate change but has not been formally tested is given an impact of “N/A”.

Figure 3B.3– Revisions to the Actuarial Indicated Rate Change Analysis

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
B. Projected Premium at Current Rate Level	Temporary Operation Permit (TOP)	Presentation	• TOP written risk exposure and trended average premium at current rate level amounts are grouped with Personal. • In the 2021 RRA, TOP written risk exposure amounts were incorrectly grouped with Manual Basic. This error was addressed, including the impact on the PY 2021 indicated rate change in the February 26, 2021 Errata to ICBC's 2021 Revenue Requirements Application, Attachment A.	Not Material
	Data Source for Written Risk Exposures	Data	• The data source for written risk exposure data has been improved vs. the PY 2021 RRA analysis, to more accurately capture complex transactions.	Not Material
	Fleet Retrospective Rating Program	Data	• The data source for fleet retrospective program premium data has been improved versus the PY 2021 RRA analysis, more accurately identifying and categorizing all eligible products.	Not Material
	Fleet Retrospective Rating program	Data	• One large fleet that was incorrectly identified as a Garage policy in prior RRAs is now correctly identified as Fleet Reporting policy. • This affects the percent of Garage fleets that participate in the Fleet Retrospective Rating plan. In the 2021 RRA it was too high, but the resulting impact was not material given the small size of the Garage fleet retrospective adjustment. This also affected the percent of Fleet Reporting fleets that participate in the Fleet Retrospective Rate plan, but to a lesser extent.	Not Material

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
C. Claims Forecast and Reserving Analysis	Claims Forecast Analysis by Coverages	Presentation	• The claims forecast analysis is now presented at the coverage level (EAB, BVDC, and TPL) with sub-coverage detail provided in Appendices C.1.0, C.2.0, and C.3.0 respectively. • In the 2021 RRA, the organization of Appendix set C was more linear, and needed to accommodate the December 2020 Ernst & Young Enhanced Accident Benefits Costing Report that was included in the 2021 RRA (2020 EY EAB Report)	N/A
	Combining Manual Basic with Plate Owner	Data and Method	• Manual Basic claims and Plate Owner claims are analyzed together on a combined basis. • In previous RRAs, loss costs were analyzed separately for Plate Owner and Manual Basic policies. • Since the vast majority of Basic claims are Plate Owner claims, combining the two policy types in the analysis created efficiencies and streamlined the actuarial analysis. • For more information see Technical Appendix C.0 Sub-section C.3.	Not Material
	Grouping of Claims Sub-coverages	Data	• Sub-coverages are now organized as described in Section B above. EAB-PI and EAB-DB are now analyzed and presented separately. Out-of-province PD claims, non-vehicle PD, and customer vehicles under garage service operator care claims are analyzed and presented on a combined basis as TPL-PD. • In the 2021 RRA EAB-PI and EAB-DB were analyzed on a combined basis and TPL-PD claims were separated into multiple groups. • For more information see Appendix C.0 Section B.	N/A

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
C. **Claims Forecast and Reserving Analysis**	Triangle Data	Data	• The claims data used in the actuarial reserving analysis is aligned with the fiscal year (ending March 31 of each year). This includes a projection of the claims data from August 31, 2022 to March 31, 2023. • In the 2021 RRA, the historical claims data was organized into periods ending June 30 or August 31 of each year. • For more information see Technical Appendix C.0 Sub-section C.5.	Not Material
	Large Claims Adjustments in Reserving Analysis	Method	• Claims reserving analysis now applies a consistent determination of adjustments for large claims in all sub-coverages. • In the 2021 RRA, the potential impact of large claims was considered and adjusted more independently within the analysis of each sub-coverage. • For more information see Technical Appendix C.0 Sub-section B.4	Not Material
	EAB Claims Costs	Presentation	• Presented on a full value basis including the cost of expected future increases from CPI inflation (referred to as indexation). • In the 2021 RRA, the costs were presented at the current cost level (non-indexed). • For more information see Technical Appendix C.0 Sub-section B.5.	N/A

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
C. **Claims Forecast and Reserving Analysis**	Forecasted Bulk Claims Costs	Method and Presentation	• Basic bulk claims costs are now forecasted on an overall basis, based on exposure growth and BC Consumer Price Index inflation, and then allocated by sub-coverage. • In the 2021 RRA, the costs were allocated first, and then loss cost trends were applied. • For more information see Appendix C.4.0 Section B.	Not Material
	Claim Counts Used in the unallocated loss adjustment expense (ULAE) Analysis	Data	• Claim counts for all coverages are presented on a claim exposure basis to align the view of claims between the Reserving analysis and the ULAE analysis. • In the 2021 RRA, claims data was displayed on a claim exposure basis in most cases, however claim level counts were used in the presentation of the ULAE analysis (except for TPL-BI coverage).	N/A
	ULAE Analysis	Method	• Forecasts for EAB-PI and EAB-DB are now calculated separately, consistent with the related claims reserving analysis. Forecasts for BVDC and TPL-PD are now calculated separately, to be more consistent with the claims forecast. Separate duration assumptions are now applied for EAB sub-coverages from the legal-based AB sub-coverages in determination of weighted claim exposure counts, to reflect emerging information for EAB claims. • In the 2021 RRA, the ULAE analysis made use of more aggregated groupings and relied on legal-based AB patterns to a greater degree because less information specific to Enhanced Care claims was available.	-0.6%

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
D. Expense and Miscellaneous Revenue	Broker Fees	Method and Presentation	• Variable broker fees are now combined with fixed broker fees to simplify the analysis as variable broker fees are less than 0.2% of required premium. • In the 2021 RRA, variable broker fees were forecasted separately.	Not Material
	Payment Plan Finance Fees	Method	• The cost of financing ICBC's payment plan is included in the new money rate via portfolio leverage. Please see Chapter 5 Investments, Section B for more detail on portfolio leverage. • In the 2021 RRA, it was included in the payment plan financing fees within miscellaneous revenue.	N/A
E. Payment Patterns	Payment Patterns	Presentation	• Discussion and analysis of cash flows for the components of required premium is consolidated in Appendix E and Technical Appendix E to make it easier to locate this information. • In the 2021 RRA, this information was found in multiple appendices.	N/A
	Indexation	Presentation	• Payment pattern indexation for EAB-MR and EAB-ED sub-coverages is provided in Appendix E. • In the 2021 RRA, this information was found in Appendix A.	N/A

Reference	Subject of Revision	Type of Revision	Description of Change	Impact on Actuarial Indicated Rate Change
E. Payment Patterns	Quarterly Payment Patterns	Method and Presentation	• Payment patterns are split into quarters for the first three years to reflect a 24-month policy period. • In the 2021 RRA, payment patterns were split into quarters for only the first two years for each 12-month period. • For more information please see Technical Appendix E.0.	N/A
	Paid Development Method	Method	• A baseline selection has been established for each sub-coverage. This promotes consistency from one analysis to the next. • In the 2021 RRA, selections were based on the reserving analysis. • For more information, please see Technical Appendix E.0.	N/A

APPENDIX A.0

INDICATED RATE CHANGE AND REQUIRED PREMIUM

1. The Policy Year (PY) 2023 required premium is set such that ICBC is able to satisfy all expected cash flows associated with Basic insurance policies written over a 24-month period from April 1, 2023 to March 31, 2025. As in prior revenue requirements applications, required premium is calculated using the discounted cash flow method. Through this method, policyholders receive the benefit of a reduced required premium because they are credited with investment income earned on policyholder premiums associated with policies to be sold during PY 2023.[1]

2. Appendix A.1 is an expansion of Figure 3.1 from Chapter 3, which provides a summary of the components that make up required premium, in a format similar to an income statement. Appendix A.1 shows the components that make up the required premium at their full value, as well as the detailed line items for each of the components:

- Claims and Related Costs including: loss and allocated loss adjustment expense (ALAE), unallocated loss adjustment expense (ULAE), and Road Safety and Loss Management (RSLM) expenses;
- Expenses including: general expenses, broker fees, and premium tax;
- Capital provision (7% of required premium as directed in *Special Direction IC2*); and
- Miscellaneous Revenue and Investment Income including: miscellaneous revenue, investment income on policyholder supplied funds (PHSF), and investment income on capital available for rate setting (CARS).

3. Historical amounts for the two most recent policy years are also shown in Appendix A.1, but direct comparisons are difficult given each of the policy periods represent a different length of time (PY 2023 is 24 months, PY 2021 is 23 months and PY 2020 is 12 months). In order to provide a like-for-like comparison, an annualized view is provided in columns (4), (5), and (6) for each of the three policy periods.

4. Appendix A.2 provides a summary of the components of required premium before discounting (components at full value) and after discounting (components discounted). The impact of discounting is captured separately in the full value view through the investment income

[1] Since there is a meaningful amount of time between the collection of written premium and the payment of the associated costs, ICBC invests policyholder supplied funds (written premium) to earn investment income for the benefit of policyholders. This benefit is called investment income on PHSF because the funds (written premium) are supplied by the policyholders.

on PHSF, shown in column (9), whereas in the discounted view, the impact of discounting is captured directly within each component.

5. Appendices A.3, A.4, and A.5 provide summaries of the PY 2023 loss and ALAE and ULAE by coverage (Appendix A.3 for Enhanced Accident Benefits, Appendix A.4 for Basic Vehicle Damage Coverage, and Appendix A.5 for Third Party Liability) as determined from Appendix Sets B and C. The major components of these calculations are described as follows:

- **Modelled Written Risk Exposure** is the forecast of the number of policies expected to be written between April 1, 2023 and March 31, 2025.
- **Frequency** is the number of claim exposures per policy, expressed as a percentage.[2]
- **Severity** is the average cost of incurred loss and ALAE per claim exposure. Loss is the benefit amounts paid to claimants. ALAE are expenses incurred by ICBC that can be directly attributable to specific claim exposures (e.g., medical and dental reports, engineering and police reports, and vehicle towing costs).
- **Incurred Loss & ALAE** is the product of the modelled written risk exposure, frequency, and severity.
- **Large Claims Factor** is an adjustment factor applied to incurred loss and ALAE to account for long-run expectations of large losses.[3]
- **Bulk Claims Costs** are periodic, aggregate costs that are incurred by ICBC to process and pay claims (e.g., ambulance services, and vehicle repair estimating software).
- **Prospective Adjustments** are claims savings or costs for future events that are not already captured by the PY 2023 estimates of frequency and severity. There are no prospective adjustments for PY 2023.
- **Loss & ALAE** is the sum of the product of incurred loss & ALAE and the large claims factor, bulk claims costs, and prospective adjustments.
- **Unallocated Loss Adjustment Expenses** is the amount of internal claims servicing expenses that are not directly attributable to a particular claim.
- **Total Incurred Loss, ALAE & ULAE with Adjustments** is the sum of the loss & ALAE and ULAE.

[2] Claim exposures represent the part of a claim raised against one specific coverage component by a claimant. A claim exposure is created for each claimant making a demand against a coverage group. A claim may contain multiple claim exposures related to a single coverage group.
[3] See Appendix Set C for information on large loss thresholds.

ICBC Actuarial Analysis for PY 2023

Appendix A.1

Summary of the Actuarial Indicated Rate Change Analysis ($000's)

	Description	PY 2023 (1)	PY 2021 (2)	PY 2020 (3)	Appendix Reference / Formula for (1)	PY 2023 Annualized (4)	PY 2021 Annualized (5)	PY 2020 Annualized (6)
A.	Claims and Related Costs							
(a)	Loss and Allocated Loss Adjustment Expenses	5,919,708	4,819,454	3,228,323	TA A.1.2 + TA A.2.2 + TA A.3.2: Col (1)	2,959,854	2,514,498	3,228,323
(b)	Unallocated Loss Adjustment Expenses	565,224	436,359	274,112	TA A.1.2 + TA A.2.2 + TA A.3.2: Col (2)	282,612	227,665	274,112
(c)	Road Safety and Loss Management	94,038	96,193	50,132	D.1: Row (d) Col (7)	47,019	50,188	50,132
(d)	Total Claims and Related Costs	6,578,969	5,352,006	3,552,567	(a) + (b) + (c)	3,289,485	2,792,351	3,552,567
B.	Expenses							
(e)	General Expenses - Administrative & Other	150,932	141,977	66,728	D.1: Row (e) Col (7)	75,466	74,075	66,728
(f)	General Expenses - Insurance Services	165,134	127,614	73,549	D.1: Row (f) + (g) Col (7)	82,567	66,581	73,549
(g)	General Expenses - Non-Insurance	277,711	245,443	111,220	D.1: Row (h) Col (7)	138,855	128,057	111,220
(h)	Broker Fees	251,381	211,892	104,632	D.1: Row (i) Col (7)	125,691	110,553	104,632
(i)	Premium Tax	266,786	265,432	159,076	TA A.1.2 + TA A.2.2 + TA A.3.2: Col	133,393	138,486	159,076
(j)	Total Expenses	1,111,944	992,359	515,204	sum (e) through (i)	555,972	517,752	515,204
(k)	Capital Provision	424,433	939,604	73,933	TA A.1.2 + TA A.2.2 + TA A.3.2: Col (11)	212,216	490,228	73,933
(l)	Total Projected Costs	8,115,346	7,283,969	4,141,704	(d) + (j) + (k)	4,057,673	3,800,331	4,141,704
C.	Miscellaneous Revenue and Investment Income							
(m)	Miscellaneous Revenue - Payment Plan Finance Fees	210,404	101,904	67,813	D.2: Row (d) Col (2)	105,202	53,167	67,813
(n)	Miscellaneous Revenue - Surcharge for Short-Term Policies	25,320	36,129	19,281	D.2: Row (d) Col (3)	12,660	18,850	19,281
(o)	Miscellaneous Revenue - Driver Penalty Point and Driver Risk Premium	37,022	59,769	34,047	D.2: Row (d) Col (4)	18,511	31,184	34,047
(p)	Miscellaneous Revenue - Unlisted Driver Accident Premium	7,241	596	0	D.2: Row (d) Col (5)	3,620	311	0
(q)	Miscellaneous Revenue - Graduated Licensing Program Road Test Fees and Otl	15,672	13,499	6,635	D.2: Row (d) Col (6)	7,836	7,043	6,635
(r)	Investment Income on Policyholder Supplied Funds	1,563,825	1,004,774	393,614	TA A.1.2 + TA A.2.2 + TA A.3.2: Col (9)	781,912	524,230	393,614
(s)	Investment Income on Capital Available for Rate Setting	192,537	34,757	4,945	F.2: Row (d) Total	96,269	18,134	4,945
(t)	Total Miscellaneous Revenue and Investment Income	2,052,021	1,251,428	526,335	sum (m) through (s)	1,026,011	652,919	526,335
(u)	Required Premium	6,063,325	6,032,541	3,615,369	(l) - (t)	3,031,663	3,147,413	3,615,369
(v)	Projected Premium at Current Rate Level	6,484,731	7,098,736	3,609,065	B.1.1: Row (e) Total	3,242,366	3,703,688	3,609,065
(w)	2023 Basic Insurance Revenue Surplus / (Deficiency)	421,406	1,066,195	(6,304)	(v) - (u)	210,703	556,276	(6,304)
	Actuarial Indicated Rate Change (prior to rate change floor)	-6.5%	-15.0%	0.2%	- (w) ÷ (v)	-6.5%	-15.0%	0.2%
(x)	Impact from Rate Change Floor	421,406	N/A	0	max((w), 0)	210,703	N/A	0
(y)	Proposed Premium (including impact from rate change floor)	6,484,731	6,032,541	3,615,369	(u) + (x)	3,242,366	3,147,413	3,615,369
	Proposed Rate Change	**0.0%**	**-15.0%**	**0.2%**	(y) ÷ (v) - 1	**0.0%**	**-15.0%**	**0.2%**

Notes:

Row (x): To allow a rate decrease, the rate smoothing framework as specified in Special Direction IC2 Section 3 (1.1) (b) was suspended for PY 2021.

Col (2) from 2021 RRA and ICBC errata

Col (3) The required premium and its components for PY 2020 were used to support the Government Direction of a 0% PY 2020 rate change and were not publicly filed. They are provided here for comparative purposes.

Col (4) is the 12-month average of Col (1) and is equal to (1) x (12÷24)

Col (5) is the 12-month average of Col (2) and is equal to (2) x (12÷23)

Col (6) is the 12-month average of Col (3) and is equal to (3)

Summary of the Components of Required Premium by Coverage ($000's)

Valuation Method	Costs					Revenues		Discount		Required Premium Calculation			Reference
	Loss and Allocated Loss Adjustment Expenses	Unallocated Loss Adjustment Expenses	Road Safety and Loss Management	General Expenses	Broker Fees	Miscellaneous Revenue	Investment Income on Capital Available for Rate Setting	Total Cash Flow	Investment Income on Policyholder Supplied Funds	Premium Tax	Capital Provision	Required Premium	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Components at Full Value													
(a) **EAB**	3,753,921	341,246	59,633	376,537	159,411	187,489	122,095	4,381,164	1,420,207	147,045	233,936	3,341,938	TA A.1.2
(b) **BVDC**	1,854,875	204,047	29,466	186,053	78,767	92,642	60,329	2,200,238	99,576	104,322	165,967	2,370,950	TA A.2.2
(c) **TPL**	310,912	19,931	4,939	31,186	13,203	15,528	10,112	354,529	44,042	15,419	24,531	350,437	TA A.3.2
(d) **Total - Full Value**	**5,919,708**	**565,224**	**94,038**	**593,777**	**251,381**	**295,659**	**192,537**	**6,935,931**	**1,563,825**	**266,786**	**424,433**	**6,063,325**	(a) + (b) + (c)
Components Discounted													
(e) **EAB**	2,383,964	300,304	59,647	367,052	159,452	187,571	121,893	2,960,957	N/A	147,045	233,936	3,341,938	TA A.1.1
(f) **BVDC**	1,766,736	197,210	29,473	181,367	78,788	92,682	60,229	2,100,662	N/A	104,322	165,967	2,370,950	TA A.2.1
(g) **TPL**	269,231	18,340	4,940	30,400	13,206	15,535	10,096	310,487	N/A	15,419	24,531	350,437	TA A.3.1
(h) **Total - Discounted**	**4,419,932**	**515,853**	**94,060**	**578,820**	**251,446**	**295,788**	**192,217**	**5,372,106**	**N/A**	**266,786**	**424,433**	**6,063,325**	(e) + (f) + (g)

Notes:
This exhibit represents a 24-month policy period.
(a) thru (d) show the undiscounted cash flows.
(e) thru (h) show the discounted cash flows. For each of the periods, cash flows in (e) thru (h) are derived from their counterparts in (a) thru (d) discounted using the corresponding present value factor.
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) Investment Income on PHSF is the difference between net full value cash flow and net discounted cash flow.
(10) = [(8) - (9)] / (1 - 4.4% - 7.0%) * 4.4%
(11) = [(8) - (9)] / (1 - 4.4% - 7.0%) * 7.0%
(12) = (8) - (9) + (10) + (11)

Policy Year 2023 Incurred Loss & ALAE and ULAE
Enhanced Accident Benefits

		EAB-MR (1)	EAB-ED (2)	EAB-PI (3)	EAB-DB (4)	Total (5)	Reference
(a)	Modelled Written Risk Exposure	7,502,336	7,502,336	7,502,336	7,502,336		B.1.1 Total
(b)	Frequency (%)	1.65%	0.25%	0.17%	0.02%		C.0.1 Col (1)
(c)	Severity ($)	15,287	77,765	24,505	61,940		C.0.2 Col (1)
(d)	Incurred Loss & ALAE ($ 000's)	1,891,874	1,445,752	307,550	92,539	3,737,715	(a) x (b) x (c)
(e)	Large Claims Factor	1.000	1.000	1.000	1.000		C.0.3 Row (c)
(f)	Bulk Claims Costs ($ 000's)	8,202	6,270	1,333	401	16,206	C.4.1 Col 4
(g)	Prospective Adjustments ($ 000's)	-	-	-	-	-	C.5.0
(h)	Loss & ALAE ($ 000's)	1,900,076	1,452,021	308,884	92,940	3,753,921	(d) x (e) + (f) + (g)
(i)	ULAE ($ 000's)	132,583	154,314	47,542	6,806	341,246	C.6.1 Row (d)
(j)	**Total Incurred Loss, ALAE & ULAE with Adjustments ($ 000's)**	**2,032,659**	**1,606,335**	**356,426**	**99,746**	**4,095,167**	(h) + (i)

Notes:
(h), (j) Adjusted for (e) Large Claims Factor, (f) Bulk Claims Costs, and (g) Prospective Adjustments.

Policy Year 2023 Incurred Loss & ALAE and ULAE
Basic Vehicle Damage Coverage

		BVDC (1)	Reference
(a)	Modelled Written Risk Exposure	7,502,336	B.1.1 Total
(b)	Frequency (%)	3.69%	C.0.1 Col (1)
(c)	Severity ($)	6,672	C.0.2 Col (1)
(d)	Incurred Loss & ALAE ($ 000's)	1,846,867	(a) x (b) x (c)
(e)	Large Claims Factor	1.000	C.0.3 Row (c)
(f)	Bulk Claims Costs ($ 000's)	8,008	C.4.1 Col 4
(g)	Prospective Adjustments ($ 000's)	-	C.5.0
(h)	Loss & ALAE ($ 000's)	1,854,875	(d) x (e) + (f) + (g)
(i)	ULAE ($ 000's)	204,047	C.6.1 Row (d)
(j)	**Total Incurred Loss, ALAE & ULAE with Adjustments ($ 000's)**	**2,058,922**	(h) + (i)

Notes:
(h), (j) Adjusted for (e) Large Claims Factor, (f) Bulk Claims Costs, and (g) Prospective Adjustments.

Policy Year 2023 Incurred Loss & ALAE and ULAE
Third Party Liability

		TPL - PD (1)	TPL - OOP BI (2)	Total (3)	Reference
(a)	Modelled Written Risk Exposure	7,502,336	7,502,336		B.1.1 Total
(b)	Frequency (%)	0.25%	0.02%		C.0.1 Col (1)
(c)	Severity ($)	7,935	98,184		C.0.2 Col (1)
(d)	Incurred Loss & ALAE ($ 000's)	148,338	157,844	306,182	(a) x (b) x (c)
(e)	Large Claims Factor	1.023	1.000		C.0.3 Row (c)
(f)	Bulk Claims Costs ($ 000's)	658	684	1,342	C.4.1 Col 4
(g)	Prospective Adjustments ($ 000's)	-	-	-	C.5.0
(h)	Loss & ALAE ($ 000's)	152,383	158,529	310,912	(d) x (e) + (f) + (g)
(i)	ULAE ($ 000's)	11,326	8,605	19,931	C.6.1 Row (d)
(j)	**Total Incurred Loss, ALAE & ULAE with Adjustments ($ 000's)**	**163,708**	**167,134**	**330,842**	(h) + (i)

Notes:
(h), (j) Adjusted for (e) Large Claims Factor, (f) Bulk Claims Costs, and (g) Prospective Adjustments.

APPENDIX B.0

PROJECTED PREMIUM AT CURRENT RATE LEVEL

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A INTRODUCTION

1. The actuarial indicated rate change is calculated as the percentage difference between the premium that needs to be collected to cover Policy Year (PY) 2023 costs, including a capital provision, compared to the premiums customers would have paid in PY 2023 assuming no change to rates. This Appendix discusses the premium customers would have paid in PY 2023 assuming no change to rates, which is called “projected premium at current rate level”.

2. The projected premium at current rate level is the product of the modelled written risk exposure and the trended average premium at current rate level adjusted to include the impact of the Fleet Retrospective Rating program (referred to in the Basic Tariff as the Fleet Premium Adjustment Agreement).[1]

$$\boldsymbol{PP} = E * AP + R$$

Where:

PP	=	Projected premium at current rate level
E	=	Modelled written risk exposure
AP	=	Trended average premium at current rate level
R	=	Fleet Retrospective adjustment

3. This Appendix is organized as follows:

- Section B describes the methodology used to calculate modelled written risk exposure.
- Section C describes the methodology used to calculate trended average premium at current rate level.
- Section D describes the premium impact of the fleet retrospective rating program.

4. Figure B.0.1 shows PY 2023 projected premium for each segment, which includes Personal, Commercial, Trailers, Off-Road Vehicles (ORVs), and Manual Basic.

[1] The term “number of policies written” is used for written risk exposure in Chapter 3.

Figure B.0.1 - PY 2023 Projected Premium at Current Rate Level ($ 000's)

PY 2023	Personal[1]	Commercial	Trailers	ORVs	Manual Basic[2]	Total
(a) Projected Premium	5,530,510	715,674	48,798	3,879	185,871	6,484,731
(b) Projected Premium Annualized [(b) = (a) / 2]	2,765,255	357,837	24,399	1,940	92,936	3,242,366

Notes:
(1) Includes Temporary Operation Permits
(2) Manual Basic comprises of special coverages for Commercial policyholders with unique needs, such as garage service operators and distance-rated taxis.

B MODELLED WRITTEN RISK EXPOSURE

5. PY 2023 written risk exposure is the number of policies expected to be written from April 1, 2023 to March 31, 2025. Written risk exposure is modelled using regression analysis that uses data from before the COVID-19 pandemic to ensure that the estimates are not influenced by pandemic-related decisions (i.e., policyholders cancelling their policies).

6. Forecast models are selected for four of the five segments: Personal, Commercial, Trailers, and ORVs. Manual Basic is treated separately as discussed in Section B.3. For the Personal and Commercial segments, the written exposure forecasting models are further broken down into a set of mutually exclusive sub-groups using historical exposure data. Sub-groups are determined from a collection of rate classes and/or a group of rating territories and each sub-group is chosen using an iterative process that considers historical changes in overall exposure and/or overall average premium. Each sub-group has significant explanatory power on the overall exposure trend and/or overall average premium trend.

7. Regression models use the relationship between historical written risk exposure and historical values of selected explanatory variables to arrive at a forecast of future written risk exposure. ICBC favours explanatory variables that have a reliable forecast and an intuitive relationship to the business segment being forecast. A simple regression model which relies on a single explanatory variable, such as the variable of time, is often the preferred model if it fits the historical exposure data well and produces a reasonable and intuitive forecast. A more complex model is chosen only if it provides a significant improvement over the simple model. This approach provides an appropriate balance between a model's goodness of fit and its simplicity.

8. The regression models are fit to monthly written risk exposure data while accounting for historical seasonal patterns in the data. ICBC then aggregates the output from these models to produce segment-level annual trends.

9. The segment-level annual trends are applied to the forecast starting point, the one-year period of actual written risk exposure from September 1, 2021 to August 31, 2022. This reflects the current state on where and how individuals work, as well as policyholder behaviour after the end of BC's COVID-19 pandemic state of emergency on June 30, 2021.

10. The selected sub-groups, explanatory variables, and the period of historical data used in each model to determine projected written risk exposure are shown in Technical Appendix B.1.

11. Figure B.0.2 below shows the modelled written risk exposure for each segment. Total written risk exposure is the sum of Personal, Commercial, and Manual Basic, and is used to calculate average premium per policy for PY 2023 in Figures 3.2 and 3.3 of Chapter 3.

Figure B.0.2 – PY 2023 Modelled Written Risk Exposure

Segment	PY 2023 (1)	PY 2023 Annualized (2) = (1) / 2
Personal	6,772,239	3,386,119
Commercial	620,289	310,144
Manual Basic	109,809	54,904
Total	**7,502,336**	**3,751,168**
Trailers	1,075,895	537,948
ORVs	119,022	59,511

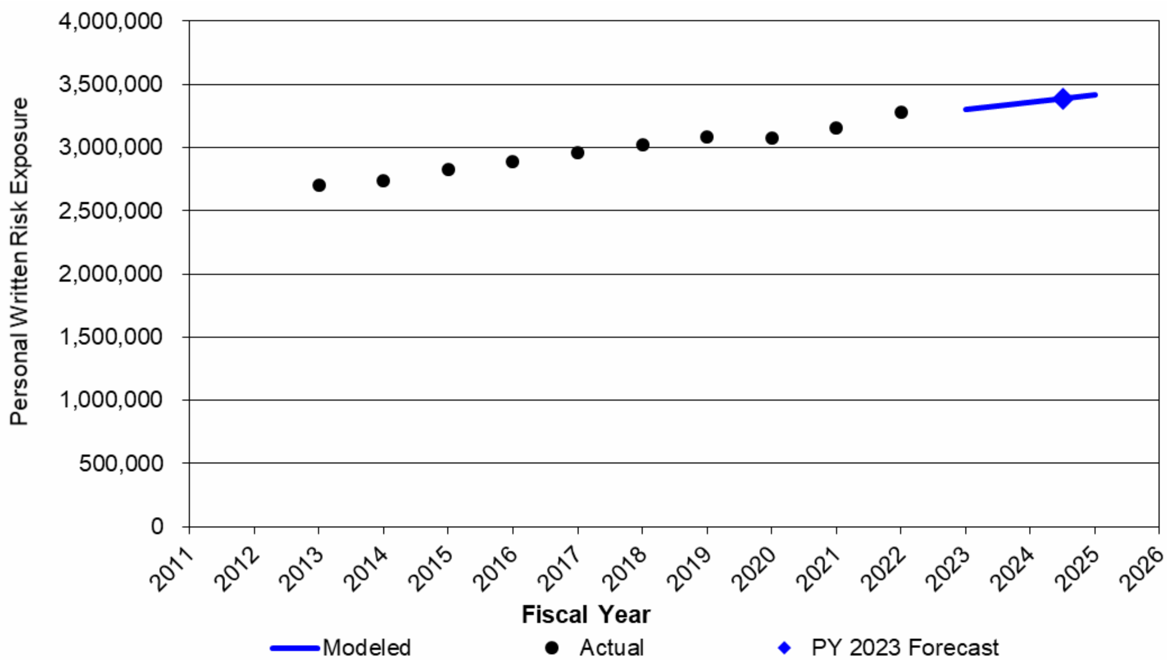
12. Plots with historical data and the modelled results are shown in the following sections. Note that the PY 2023 forecast written risk exposure (denoted by the blue diamond) in these plots is displayed as PY 2023 annualized.

B.1 PERSONAL WRITTEN RISK EXPOSURE

13. As can be seen in Figure B.0.3, the historical long-run trend of 1.7% year-over-year growth in personal written risk exposure has generally followed population growth in BC and is expected to continue through PY 2023. The historical trend is selected based on data prior to the COVID-19

pandemic as ICBC expects the influences of the COVID-19 pandemic to no longer impact Personal written risk exposure trends.

Figure B.0.3 – Personal Written Risk Exposure, Actual and Modelled



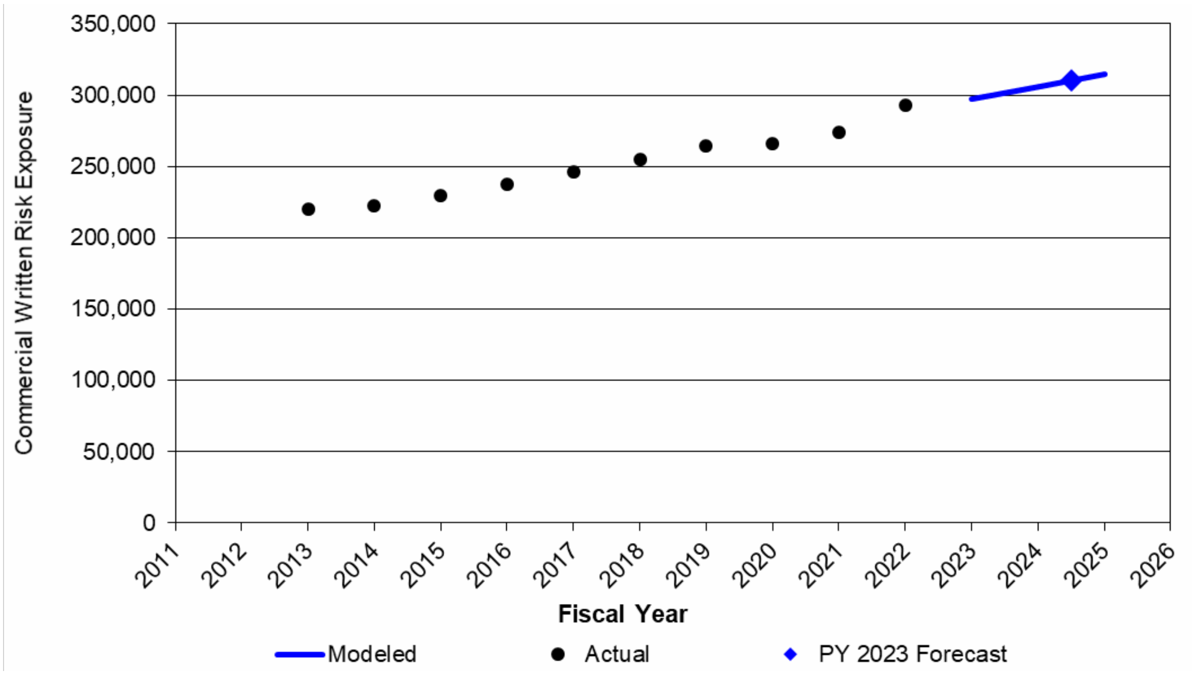
Fiscal Year	Personal			
	Actual	YoY Change	Modelled	YoY Change
2011/12				
2012/13	2,706,957			
2013/14	2,740,929	1.3%		
2014/15	2,826,375	3.1%		
2015/16	2,893,678	2.4%		
2016/17	2,956,501	2.2%		
2017/18	3,024,700	2.3%		
2018/19	3,081,495	1.9%		
2019/20	3,078,640	-0.1%		
2020/21	3,153,949	2.4%		
2021/22	3,281,860	4.1%		
2022/23			3,301,437	
2023/24			3,357,584	1.7%
2024/25			3,414,655	1.7%
PY 2023			**6,772,239**	

B.2 COMMERCIAL WRITTEN RISK EXPOSURE

14. The historical long-run trend of 2.9% year-over-year growth in Commercial written risk exposure is expected to continue through PY 2023, and is shown in Figure B.0.4. Growth in Commercial written risk exposure has been observed to be higher than Personal in periods of economic growth. While economic conditions remain uncertain with high inflation and rising interest rates, economic growth is expected during PY 2023[2].

[2] Bank of Canada Monetary Policy Report – October 2022 (Monetary Policy Report - October 2022 (bankofcanada.ca))

Figure B.0.4 – Commercial Written Risk Exposure, Actual and Modelled



Fiscal Year	Commercial			
	Actual	YoY Change	Modelled	YoY Change
2011/12				
2012/13	220,459			
2013/14	222,838	1.1%		
2014/15	229,796	3.1%		
2015/16	237,724	3.4%		
2016/17	246,040	3.5%		
2017/18	254,991	3.6%		
2018/19	264,230	3.6%		
2019/20	265,699	0.6%		
2020/21	273,983	3.1%		
2021/22	293,075	7.0%		
2022/23			297,102	
2023/24			305,715	2.9%
2024/25			314,574	2.9%
PY 2023			**620,289**	

B.3 TRAILERS, ORVS, AND MANUAL BASIC WRITTEN RISK EXPOSURE

15. Trailers, ORVs, and Manual Basic segments are estimated separately from Personal and Commercial because they are fundamentally different products with different risk characteristics. Trailers and ORVs do not generate the same amount of loss and loss adjustment expenses as

other segments, and they represent a very small (<1%) proportion of projected premium. Manual Basic consists of many different policy forms and also represent a small (~3%) proportion of projected premium. This section briefly discusses the methodology to estimate PY 2023 written risk exposure for these segments. Model specifications for these segments is shown in Technical Appendix B.1.

16. **Trailers** – ICBC selects a simple five-year exponential regression model (excluding the time period after March 2020 to avoid undue influence from the COVID-19 pandemic) to produce a trend of 1.8%. A longer time period was selected compared to the 2021 Revenue Requirements Application in order to utilize more historical data and increase the stability of the selected trend.

17. **ORVs** – The ORV program began in November 2014 on a voluntary basis, and Basic insurance became mandatory on November 1, 2015 for ORVs that operate on highways. The number of ORV owners that purchased Basic insurance increased significantly after implementation as policyholders gained awareness of the program. The year over year trend in risk exposures has been increasing but at a decreasing rate. ICBC has applied a moderated growth rate of 5% to estimate the ORV written risk exposure for the forecast years. The moderated growth rate of 5% was selected judgmentally to reflect the decline in historical ORV growth and the expectation that the trend will move towards the lower Personal trend of 1.7% over time.

18. **Manual Basic** – the selected trend is based on the Commercial written risk exposure selected trend as most Manual Basic policies are Garage or Fleet Reporting policies which are Commercial in nature.

C TRENDED AVERAGE PREMIUM AT CURRENT RATE LEVEL

19. PY 2023 trended average premium at current rate level is the average premium of policies expected to be written between April 1, 2023 and March 31, 2025 based on current rates. Average premium at current rate level is modelled using regression analysis that uses data for policies written after the September 1, 2019 rate design implementation, while controlling for the impact of the COVID-19 pandemic. The COVID-19 pandemic caused a decline in average premium due to a decline in customers using their vehicles to commute to work.[3] ICBC controlled for this effect

[3] The new rate design changes were filed in the 2018 Basic Insurance Rate Design Application and approved in the September 28, 2018 Decision on the 2018 Basic Insurance Rate Design Application, Order G-188-18.

through the inclusion of a variable in the model indicating the time period of the decline, allowing this period to have a different average premium level without affecting the future trend.

20. The first step to estimate average premium at current rate level is to adjust the historical written premium data to the current rate level, a process commonly referred to as “on-leveling”. Historical written premiums are adjusted to the current rate level in order to reflect any prior rate changes including the one-time rate design impacts that have occurred since those premiums were written. This ensures that all historical premiums are on the same rate basis, which allows the impact attributable to premium trend to be estimated.

21. Premium trend represents the changes in ICBC’s average premium level that are not due to rate level changes. Factors such as shifts in the mix of business by experience level, rate class and territory, or shifts in the mix of listed drivers or a change in the proportion of policies eligible for discounts may create a detectable trend in the average Basic insurance premium. Once the data is on-leveled, a regression model is fit using the adjusted historical average premium data to estimate the average premium trend.

22. ICBC’s actuaries select forecast models for Personal and Commercial. Trailers, ORVs, and Manual Basic are treated separately as discussed in Section C.3. For the Personal and Commercial segments, the average premium at current rate levels forecasting models are further broken down into the same set of mutually exclusive sub-groups as was used to forecast written risk exposure. Similar to written risk exposure, this analysis also uses regression models whose results are aggregated to produce segment-level annual trends, and uses the same time period for the forecast starting point (September 1, 2021 to August 31, 2022).

23. Figure B.0.5 below provides a summary of the PY 2023 trended average premium at current rate level for each segment.

Figure B.0.5 – PY 2023 Trended Average Premium at Current Rate Level

Segment	Trended Average Premium at Current Rate Level ($)
Personal	817
Commercial	1,192
Trailers	45
ORVs	33
Manual Basic	1,736

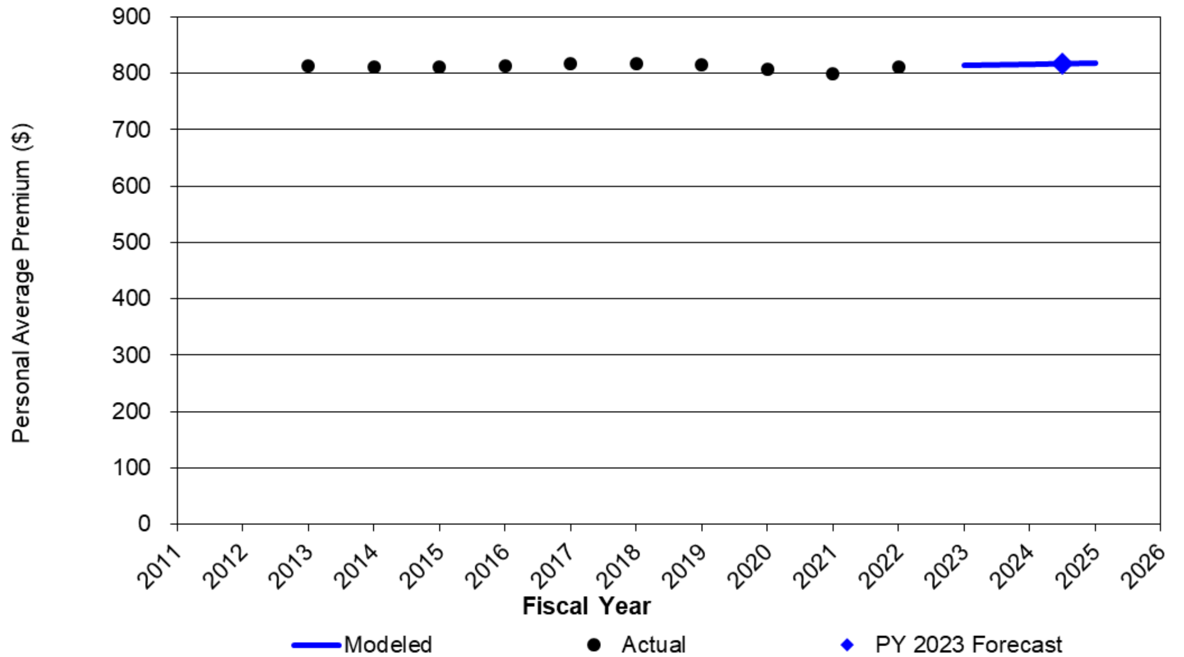
24. Figures B.0.6 and B.0.7 below show modelled versus actual average premium plots for the Personal and Commercial average premium models. A table of actual historical average premium at current rate level and modelled average premium is shown below each of the modelled versus actual average premium plots. The selected average premium forecast for PY 2023 is depicted as a diamond in the modelled versus actual plots. The numerical data is presented in the tables that follow.

C.1 PERSONAL AVERAGE PREMIUM AT CURRENT RATE LEVEL

25. In Figure B.0.6 below, Personal average premium at current rate level is expected to increase at a trend of +0.2% per year. The positive trend is largely the result of a rate design transitional change that will continue until 2027. The changes to the rating model in September 2019 included a scan period for at fault claims which started from March 1, 2017, to a maximum of 10 years. From the implementation of rate design in September 2019, the length of the scan period will continue to increase until it reaches its maximum length of 10 years in 2027.[4] As the scan period increases over time, the number of claims used to calculate the policyholder premium will also increase, slightly increasing average premium.

[4] The Government Directive of August 3, 2018 with respect to Rate Design Tariff Amendments approved by Order in Council 458/18, August 9, 2018

Figure B.0.6 – Personal Average Premium at Current Rate Level, Actual and Modelled



Fiscal Year	Personal			
	Actual ($)	YoY Change	Modelled ($)	YoY Change
2011/12				
2012/13	813			
2013/14	811	-0.2%		
2014/15	811	-0.1%		
2015/16	813	0.3%		
2016/17	817	0.4%		
2017/18	818	0.1%		
2018/19	816	-0.2%		
2019/20	807	-1.1%		
2020/21	800	-0.8%		
2021/22	812	1.4%		
2022/23			814	
2023/24			816	0.2%
2024/25			818	0.2%

PY 2023			**817**	

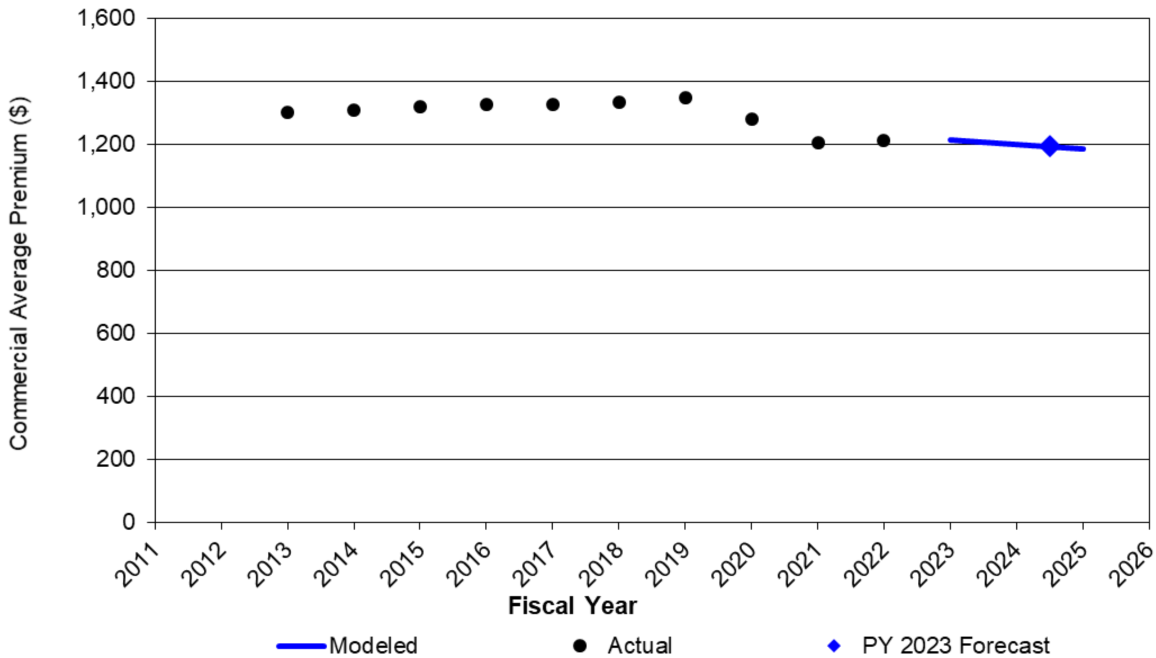
C.2 COMMERCIAL AVERAGE PREMIUM AT CURRENT RATE LEVEL

26. As shown in Figure B.0.7 below, Commercial average premium at current rate level is expected to decrease at a trend of -1.1% per year. The negative trend results primarily from an increase in the premium discount for Fleetplan customers due to lower than expected claim frequency attributed to the COVID-19 pandemic and introduction of Enhanced Care on May 1, 2021.[5] While claim frequency is expected to recover to the pre-COVID-19 pandemic trend line, the average Fleetplan discount will continue to increase throughout PY 2023 because the premium discount is based on a historical three-year claim scan period.

27. The small increase in average premium from FY 2021 to FY 2022 is caused by an increase in long-haul delivery vehicles, which have a much higher average premium than other Commercial vehicles.

[5] Fleetplan is for policyholders insuring five or more motor vehicles that are primarily used for commercial or business purposes.

Figure B.0.7 – Commercial Average Written Premium at Current Rate Level, Actual and Modelled



Fiscal Year	Commercial			
	Actual ($)	YoY Change	Modelled ($)	YoY Change
2011/12				
2012/13	1,300			
2013/14	1,308	0.6%		
2014/15	1,320	0.9%		
2015/16	1,325	0.4%		
2016/17	1,326	0.1%		
2017/18	1,331	0.4%		
2018/19	1,348	1.2%		
2019/20	1,277	-5.2%		
2020/21	1,205	-5.7%		
2021/22	1,212	0.7%		
2022/23			1,212	
2023/24			1,199	-1.1%
2024/25			1,186	-1.1%

PY 2023			**1,192**	

C.3 TRAILERS, ORVS, AND MANUAL BASIC AVERAGE PREMIUM AT CURRENT RATE LEVEL

28. Similar to written risk exposure, the average premium at current rate level for trailers, ORVs, and Manual Basic segments are estimated separately from Personal and Commercial. Trailers and ORVs have low average premiums relative to the other groups and ICBC analyzes them separately to ensure that they do not distort the average premium trends of the other groups.

29. **Trailers** – with the amendment of the trailer definition in September 2016, trailer average premiums have been slightly lower after fiscal year 2016/17. Since that point in time, average premium trend for trailers has been relatively flat and the flat trend is expected to continue through PY 2023.

30. **ORVs** – based on available data, the ORVs average premium trend is flat and the flat trend is expected to continue through PY 2023.

31. **Manual Basic** – similar to written risk exposure, the average premium trend is based on the Commercial average premium selected trend.

D RETROSPECTIVE ADJUSTMENT

32. To determine the projected premium at current rate level shown in Figure B.0.1, the product of the modelled written risk exposure and the trended average premium at current rate level is adjusted for the impact of the Fleet Retrospective Rating program, a performance-based program that can earn large fleets additional discounts (or surcharges) depending on their claims experience. ICBC uses historical billing and refund premium patterns for retrospective rated fleet policies to determine the retrospective adjustment amount for PY 2023. Details of these calculations are available in Appendix B.3 and Appendix B.4.

Policy Year 2023 Projected Premium at Current Rate Level

		PY 2023					
		Personal[1]	Commercial	Trailers	Off-Road Vehicles	Manual Basic[2]	Total
Modelled Written Risk Exposure3	(a)	6,772,239	620,289	1,075,895	119,022	109,809	7,502,336
Trended Average Premium ($)	(b)	817	1,192	45	33	1,736	
Trended Premium ($ 000's)	(c)	5,530,510	739,332	48,798	3,879	190,653	6,513,172
Fleet Retrospective Adjustment ($ 000's)	(d)		(23,659)			(4,782)	(28,440)
Projected Premium ($ 000's)	(e)	5,530,510	715,674	48,798	3,879	185,871	6,484,731

Notes:

(a), (b) Based on forecast values at the midpoint of policy year 2023 using the models discussed in Appendix B.0.
(c) = (a) x (b) / 1000
(d) = (c) x Appendix B.3 (iii) (a) for Commercial;
Appendix B.1.2 (d) Total for Manual Basic
(e) = (c) + (d)

[1] Includes Temporary Operating Permit premium
[2] Manual Basic comprises of special coverages for commercial policyholders with unique needs, such as garage service operators and distance-rated taxis. This information comes from Appendix B.1.2
[3] In the PY 2021 RRA, Total included Trailers and ORVs but it was not used in the analysis; total excluding Trailers and ORVs was used. For PY 2023, Trailers and ORVs are excluded from Total to align with how it is leveraged in the analysis.

Policy Year 2023 Projected Premium at Current Rate Level
MANUAL BASIC

		PY2023			
		Garage	Fleet Reporting	Other Special Coverages[1]	Manual Basic (Total)
Modelled Written Risk Exposure	(a)	26,304	73,198	10,307	109,809
Trended Average Premium ($)	(b)	2,085	1,337	3,684	
Trended Premium ($ 000's)	(c)	54,844	97,840	37,969	190,653
Fleet Retrospective Adjustment ($ 000's)	(d)	(439)	(4,305)	(38)	(4,782)
Projected Premium ($ 000's)	(e)	54,405	93,535	37,931	185,871

Notes:
(a), (b) Based on forecast values at the midpoint of policy year 2023 using the models discussed in Appendix B.0.
(c) = (a) x (b) / 1000
(d) = (c) x Appendix B.3 (iii) (b) for Garage;
(c) x Appendix B.3 (iii) (c) for Fleet Reporting;
(c) x Appendix B.3 (iii) (d) for Other Special Coverages
(e) = (c) + (d)

[1] Includes Manuscript and all other Manual Basic products

Written Risk Exposure and Average Premium Historical Data and Modelled Results

A. Written Risk Exposures

Fiscal Year	Personal[2]			
	Actual	YoY Change	Modelled	YoY Change
2011/12				
2012/13	2,706,957			
2013/14	2,740,929	1.3%		
2014/15	2,826,375	3.1%		
2015/16	2,893,678	2.4%		
2016/17	2,956,501	2.2%		
2017/18	3,024,700	2.3%		
2018/19	3,081,495	1.9%		
2019/20	3,078,640	-0.1%		
2020/21	3,153,949	2.4%		
2021/22	3,281,860	4.1%		
2022/23			3,301,437	
2023/24			3,357,584	1.7%
2024/25			3,414,655	1.7%
PY 2023[1]			**6,772,239**	

Fiscal Year	Commercial			
	Actual	YoY Change	Modelled	YoY Change
2011/12				
2012/13	220,459			
2013/14	222,838	1.1%		
2014/15	229,796	3.1%		
2015/16	237,724	3.4%		
2016/17	246,040	3.5%		
2017/18	254,991	3.6%		
2018/19	264,230	3.6%		
2019/20	265,699	0.6%		
2020/21	273,983	3.1%		
2021/22	293,075	7.0%		
2022/23			297,102	
2023/24			305,715	2.9%
2024/25			314,574	2.9%
PY 2023			**620,289**	

B. Average Premium at Current Rate Level ($)

Fiscal Year	Personal			
	Actual ($)	YoY Change	Modelled ($)	YoY Change
2011/12				
2012/13	813			
2013/14	811	-0.2%		
2014/15	811	-0.1%		
2015/16	813	0.3%		
2016/17	817	0.4%		
2017/18	818	0.1%		
2018/19	816	-0.2%		
2019/20	807	-1.1%		
2020/21	800	-0.8%		
2021/22	812	1.4%		
2022/23			814	
2023/24			816	0.2%
2024/25			818	0.2%
PY 2023			**817**	

Fiscal Year	Commercial			
	Actual ($)	YoY Change	Modelled ($)	YoY Change
2011/12				
2012/13	1,300			
2013/14	1,308	0.6%		
2014/15	1,320	0.9%		
2015/16	1,325	0.4%		
2016/17	1,326	0.1%		
2017/18	1,331	0.4%		
2018/19	1,348	1.2%		
2019/20	1,277	-5.2%		
2020/21	1,205	-5.7%		
2021/22	1,212	0.7%		
2022/23			1,212	
2023/24			1,199	-1.1%
2024/25			1,186	-1.1%
PY 2023			**1,192**	

[1] PY 2023 values are based on the selected models discussed in Appendix B.0.
[2] Temporary Operating Permits are now included in Personal.

Retrospective Adjustment Factor Calculation

A. Percentage of Premium Participating in the Fleet Retrospective Rating Program

	Fiscal Year Written	Commercial	Garage	Fleet Reporting	Other Special Coverages
	2020	17.9%	4.0%	27.8%	0.6%
	2021	15.8%	3.6%	23.2%	0.3%
	2022	16.3%	4.7%	17.8%	0.3%
(i)	**% of premium participating in Fleet Retrospective Rating program in PY 2023**	**16.7%**	**4.1%**	**22.9%**	**0.4%**

B. Retrospective Adjustment Factor

(ii)	**Return/Additional Net Premium under the Fleet Retrospective Rating program (%)**				**-19.2%**
		(a)	**(b)**	**(c)**	**(d)**
		Commercial	**Garage**	**Fleet Reporting**	**Other Special Coverages**
(iii)	**Retrospective Adjustment Factor**	**-3.2%**	**-0.8%**	**-4.4%**	**-0.1%**

Notes:
(i) The average of the participation rates for 2019, 2020 and 2021.
(ii) From Appendix B.4 (a)
(iii) = (i) x (ii)

Net Return/Additional Premium under the Fleet Retrospective Rating Program

(data as of August 2022 for fleets that participated in the Fleet Retrospective Rating program)

Written and Billed Premium for Policies Participating in the Fleet Retrospective Rating program ($)

Policy Effective Year	12	24	36	48	60
2012	41,612,759	241,397	615,229	1,511,232	763,126
2013	50,974,357	420,960	1,324,825	1,061,368	516,742
2014	61,781,162	923,911	1,209,802	1,531,965	698,614
2015	72,380,238	748,512	1,907,803	2,522,885	828,539
2016	78,422,478	872,108	2,387,587	1,563,065	497,857
2017	80,573,689	1,002,968	1,339,572	1,625,511	1,147,226
2018	94,032,502	959,618	1,079,336	1,403,043	
2019	89,214,317	522,388	375,596		
2020	76,754,445	307,212			

Refunded Premium ($)

Policy Effective Year	12	24	36	48	60
2012		(4,263,881)	(6,562,107)	(116,770)	(49,035)
2013		(4,238,735)	(6,561,984)	(255,443)	(161,377)
2014		(4,091,036)	(8,442,745)	(411,463)	(134,291)
2015		(5,487,429)	(9,045,685)	(569,249)	(231,367)
2016		(6,084,634)	(8,864,837)	(674,441)	(231,801)
2017		(6,170,644)	(9,245,045)	(641,690)	(360,352)
2018		(9,069,815)	(12,497,722)	(898,483)	
2019		(12,042,994)	(12,059,929)		
2020		(11,444,894)			

Net Written Premium ($)

Policy Effective Year	12	24	36	48	60
2012	41,612,759	37,590,274	31,643,396	33,037,858	33,751,949
2013	50,974,357	47,156,581	41,919,422	42,725,347	43,080,713
2014	61,781,162	58,614,036	51,381,093	52,501,595	53,065,918
2015	72,380,238	67,641,321	60,503,440	62,457,076	63,054,248
2016	78,422,478	73,209,952	66,732,702	67,621,325	67,887,381
2017	80,573,689	75,406,013	67,500,540	68,484,361	69,271,234
2018	94,032,502	85,922,305	74,503,919	75,008,479	
2019	89,214,317	77,693,712	66,009,379		
2020	76,754,445	65,616,764			

Age to Age Factor

Policy Effective Year	12 to 24	24 to 36	36 to 48	48 to 60	60 to Ult
2012	0.903	0.842	1.044	1.022	
2013	0.925	0.889	1.019	1.008	
2014	0.949	0.877	1.022	1.011	
2015	0.935	0.894	1.032	1.010	
2016	0.934	0.912	1.013	1.004	
2017	0.936	0.895	1.015	1.011	
2018	0.914	0.867	1.007		
2019	0.871	0.850			
2020	0.855				
	Avg 4				**one**
Selected	0.894	0.881	1.017	1.009	1.000
Selected to Ultimate	$\boxed{0.808}$	0.904	1.026	1.009	

(a) Return/additional net premium under the Fleet Retrospective Rating program: (0.808- 1) x 100% = -19.2%

APPENDIX C.0

CLAIMS FORECAST ANALYSIS

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A INTRODUCTION

1. This analysis estimates the average cost level of claims associated with policies written in the 24-month period from April 1, 2023 to March 31, 2025, Policy Year (PY) 2023. Future claims associated with policies written in this period can occur from April 1, 2023 to March 30, 2026. This claims period is longer than the 24-month policies-written period because a 12-month policy written on March 31, 2025 is in force until March 30, 2026.

2. As discussed in Appendix A.0, PY 2023 incurred loss and allocated loss adjustment expenses (ALAE) is the product of the forecast written risk exposure, frequency, and severity for each sub-coverage. These calculations are shown in Appendices A.3 to A.5. The forecasts of frequency and severity for PY 2023 rely on historical claim frequency and claim severity statistics. The focus of this Appendix is on the estimation of the PY 2023 claim frequencies and severities, while the derivation of the historical claims statistics is discussed in Technical Appendix C.0.

3. This appendix is organized as follows:

- Section B explains the data sources used in the claims forecast analysis and provides an assessment of the impact on claims costs, and therefore on the actuarial indicated rate change, of any changes in the sourcing and grouping of the claims data compared to the methodology used in the 2021 Revenue Requirements Application (RRA).
- Section C explains the general approach to model selection, while specific details on each of the coverages are provided in Appendix C.1.0 for Enhanced Accident Benefits (EAB), Appendix C.2.0 for Basic Vehicle Damage Coverage (BVDC) and Appendix C.3.0 for Third Party Liability (TPL).

4. Figure C.0.1 shows a summary of the PY 2023 claims frequencies and severities for the different coverages, together with the loss cost and large loss loading used in the forecasts.

Figure C.0.1– PY 2023 Forecast Frequency and Severity

Coverage	Frequency (1)	Severity ($) (2)	Large Loss Loading (3)	Loss Cost incl. Large Loss Loading ($) (4) = (1) x (2) x (3)	Proportion of Loss Cost incl. Large Loss Loading (5) = (4) / Total (4)
Enhanced Accident Benefits (EAB)					
Medical Rehabilitation (EAB-MR)	1.65%	15,287	1.000	252	32.1%
Enhanced Disability (EAB-ED)	0.25%	77,765	1.000	193	24.5%
Permanent Impairment (EAB-PI)	0.17%	24,505	1.000	41	5.2%
Death Benefits (EAB-DB)	0.02%	61,940	1.000	12	1.6%
Basic Vehicle Damage Coverage (BVDC)	3.69%	6,672	1.000	246	31.3%
Third Party Liability (TPL)					
TPL-Property Damage (TPL-PD)	0.25%	7,935	1.023	20	2.6%
TPL-Out-of-Province Bodily Injury (TPL-OOP BI)	0.021%	98,184	1.000	21	2.7%
Total				**786**	100%

B DATA SOURCING AND GROUPING

5. The claims frequency and severity forecasts are based on incurred frequency and severity data points from an actuarial reserving analysis of claims data as of August 31, 2022. All frequencies and severities are stated on a claim exposure basis. The historical data is split into loss quarters for modelling, except for EAB coverages where there is insufficient historical data for this to be meaningful. The use of loss quarter data creates more data points and generally produces models that are more robust. To simplify the presentation of the historical and modelled points, summarized data at an annual level is shown in Appendices C.1.0, C.2.0 and C.3.0.

6. Appendices C.0.1 and C.0.2 provide a summary of the historical and modelled incurred claim frequency and severity data, respectively, along with the forecast value for PY 2023 that is shown in Figure C.0.1. The historical incurred claims frequencies and severities are sourced from the actuarial reserving analysis provided in Technical Appendix Set C, which makes use of the claims experience under Enhanced Care, supplemented with historical ICBC claims data and relevant external information, primarily from Manitoba Public Insurance.

7. There have been some changes in the naming and grouping of the various sub-coverages. These changes do not have any material impact on the indicated rate change:

- The EAB-ED sub-coverage in this Application is the counterpart of the Income Replacement and Indemnity (IRI) coverage in the 2021 RRA. This is a naming change only with no change in the coverage definition or benefits provided.
- The analyses for EAB-PI and EAB-DB claims estimates are performed separately in this Application, whereas the 2021 RRA analysis of these two sub-coverages was combined. The separate analysis of EAB-DB is a refinement to the analysis that is enabled by emerging claims experience, which was not available at the time of the 2021 RRA.
- The analysis for TPL-PD includes claims that occurred outside of BC, other-than-vehicle PD claims, and claims for customer vehicles while under garage service operator care. The first two groups of claims were presented and discussed separately in the 2021 RRA and the last was analyzed under Manual Basic.
- ICBC no longer distinguishes Manual Basic claims costs from other claims costs. In the 2021 RRA, there was a separate analysis for this small segment of claims costs.

8. The incurred severity statistics used in the claims forecast analysis reflect the capping of certain unusually large losses to a threshold value. With the change to presenting all frequency and severity statistics on a claim exposure basis, the threshold values have been revisited, and their current values are summarised in Figure C.0.2 below with the comparison to the thresholds used in RRA 2021.[1] Capping the costs of large losses to a threshold value limits their influence on the historical severity statistics, and can provide more consistent data for the severity trend models.

[1] This change was discussed in the 2021 RRA, Chapter 3, Appendix A.0.1 Overview of Appendices, Section C.1.

Figure C.0.2 – Large Loss Thresholds for the Claims Forecast Analysis

Sub-Coverage	2023 RRA	2021 RRA
EAB-MR [1]	n/a	n/a
EAB-ED [2]	n/a	n/a
EAB-PI	n/a	n/a
EAB-DB	n/a	n/a
BVDC	No Cap [3]	No Cap [4]
TPL-PD	$400,000	No Cap [4]
TPL-OOP BI	No Cap	No Cap [4]

[1] In the 2021 RRA, the legal-based AB-MR threshold was $500,000 on a per claim basis. In the 2023 RRA, the EAB-MR non-inflationary trend is derived based on legal-based AB-MR paid severity by fiscal year as described in Chapter 3, Appendix C.1.0, Section D, rather than relying on incurred severity statistics. The legal-based AB-MR paid severity by fiscal year data is from the actuarial reserving analysis and does not apply large loss capping, although certain large claims are excluded as described in Technical Appendix C.0 Section B.4.
[2] In the 2021 RRA, the legal-based AB-WB threshold was $750,000 on a per claim basis. In the 2023 RRA, the legal-based AB-WB threshold is revised to $500,000 on a per claim exposure basis. In the 2023 RRA, the EAB-ED non-inflationary trend is derived based on the legal-based AB-WB incurred severity trend adjusted for large losses.
[3] There is no large loss capping for BVDC claims, for which the Basic insurance limit of $200,000 per claim applies.
[4] No large loss capping was applied for these coverages in the 2021 RRA, as discussed in the 2021 RRA Chapter 3, Appendix C.6.0 Loss Trend Analysis - Other.

9. The thresholds for identifying unusually large losses for capping in the claims forecast analysis have been determined for each coverage based on a review of statistical and qualitative considerations. Claim exposures with case incurred loss and ALAE amounts above the determined thresholds are capped to the threshold value before being used for severity trend selection. The capped amounts are shown in Appendix C.0.3. Since these capped amounts are removed from the process of estimating the claim forecast, separate loading factors are estimated in order to produce a complete estimate of future incurred claims costs. The determination of these loading factors is also shown in Appendix C.0.3, and their application is shown in Appendices A.3, A.4 and A.5, as well as in Figure C.0.1 above.

C LOSS TREND MODELLING

10. **Loss Trend Models –** Forecasting of loss trends requires in-depth statistical analysis. Based on statistical modeling results, input from subject matter experts, and knowledge of the business and relevant economic and social influences, judgment is applied to arrive at selected trend rates. Overall, the actuaries strike a balance between the model's goodness of fit and simplicity is considered when selecting an appropriate model. A simple regression model will be

selected if it can fit the historical data and the forecast is reasonable and intuitive. However, when called for (if there are features in the data for which a simple regression model does not work well), other regression models or some modifications to the simple regression model are used to produce a reasonable forecast.

11. **Simple Regression Model –** A simple regression model is fit to the historical data using time and seasonality as explanatory variables. Each model is tested using up to 15 years of historical data. This time period was selected based in consideration of social and economic trends. Consideration is first given to the recent ten years if the data are relatively stable and the analysis produced a reasonable forecast. This model is referred to as the ‘10-year simple regression’ in Appendices C.1.0 to C.3.0, and serves as a baseline for the trend selection. A longer-term model using more than ten years of historical data is often considered and selected for coverages with more volatile experience. A shorter-term model may be considered in cases where there appears to be a meaningfully different trend emerging in recent years, although ICBC generally avoids using particularly short-term models (e.g., under three years) due to the level of volatility that is inherent to a trend rate derived from a regression over a short period in time. Any deviation from the baseline model is explained in the relevant Appendix for the coverage.

12. **Alternative Models for EAB Loss Trends** – For the EAB sub-coverages, which were introduced beginning on May 1, 2021, the limited amount of historical data available is insufficient to support a reliable regression model. In addition, the cost of certain EAB benefits are adjusted based on BC Consumer Price Index (CPI) inflation, which is an important cost driver that is currently expected to grow at a rate significantly different from its historical rate. As a result, both the frequency and severity trends for the EAB sub-coverages are based on alternative approaches, which are discussed in Appendix C.1.0. The frequency trends use the forecast for BVDC claims, assuming that the trend in vehicle claims will also affect injury claims. The severity trends use the BC CPI forecast, and also consider the trend due to factors other than inflation. Historical and forecast BC CPI inflation is summarized in Figure C.0.3.

Figure C.0.3 – BC Consumer Price Index Inflation

Calendar Year	BC CPI Inflation
2016	1.9%
2017	2.1%
2018	2.7%
2019	2.3%
2020	0.8%
2021	2.8%
2022	7.0%
2023	3.9%
2024	2.4%
2025	2.2%
2026+	2.0%
Average 2016-2020	**2.0%**

Calendar Years 2016-2021 from Statistics Canada Table 18-10-0004-01 (https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000401).
Calendar Years 2022 and after from page 50 of September 2022 BC Budget Update (https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/government-finances/quarterly-reports/2022-23-q1-report.pdf).

13. **Flat Trend** – If there does not appear to be an obvious upward or downward trend in the historical data, then the PY 2023 forecast may be set equal to an average of the historical data. The number of years used in the historical average of each "flat trend" selection is specified.

Frequency Incurred and Modelled
As of August 31, 2022

Frequency

Coverage	Incurred 2019	Incurred 2020	Incurred 2021	Incurred 2022	Modelled 2023	Modelled 2024	Modelled 2025	Modelled 2026	(1) PY 2023	Reference
Medical Rehabilitation				1.50%	1.68%	1.67%	1.65%	1.63%	1.65%	Appendix C.1.1, Col (1), (2)
Enhanced Disability				0.23%	0.25%	0.25%	0.25%	0.25%	0.25%	Appendix C.1.1, Col (3), (4)
Permanent Impairment				0.15%	0.17%	0.17%	0.17%	0.17%	0.17%	Appendix C.1.1, Col (5), (6)
Death Benefits				0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	Appendix C.1.1, Col (7), (8)
Basic Vehicle Damage Coverage	4.14%	3.76%	2.67%	3.31%	3.76%	3.73%	3.69%	3.65%	3.69%	Appendix C.2.1, Col (2), (3)
TPL - Property Damage	0.28%	0.26%	0.20%	0.30%	0.26%	0.26%	0.25%	0.24%	0.25%	Appendix C.3.1, Col (2), (3)
TPL - Out of Province Bodily Injury	0.03%	0.03%	0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	Appendix C.3.2, Col (2), (3)

Year over Year Change in Frequency

Coverage		2020 vs 2019	2021 vs 2020	2022 vs 2021	2023 vs 2022	2024 vs 2023	2025 vs 2024	2026 vs 2025
Medical Rehabilitation						-1.0%	-1.0%	-1.0%
Enhanced Disability						-1.0%	-1.0%	-1.0%
Permanent Impairment						-1.0%	-1.0%	-1.0%
Death Benefits						0.0%	0.0%	0.0%
Basic Vehicle Damage Coverage		-9.1%	-28.9%	23.9%	13.5%	-1.0%	-1.0%	-1.0%
TPL - Property Damage		-8.1%	-21.0%	47.4%	-11.6%	-2.6%	-2.6%	-2.6%
TPL - Out of Province Bodily Injury		-3.0%	-61.0%	42.6%	46.8%	-5.6%	-5.5%	-5.5%

Severity Incurred and Modelled
As of August 31, 2022

Severity ($)

	Incurred				Modelled				(1)	
Coverage	2019	2020	2021	2022	2023	2024	2025	2026	PY 2023	Reference
Medical Rehabilitation				13,290	13,951	14,655	15,293	15,907	15,287	Appendix C.1.2, Col (1)
Enhanced Disability				67,701	70,903	74,400	77,772	81,117	77,765	Appendix C.1.2, Col (2)
Permanent Impairment				21,718	22,326	23,665	24,588	25,179	24,505	Appendix C.1.2, Col (3)
Death Benefits				54,895	56,432	59,818	62,151	63,642	61,940	Appendix C.1.2, Col (4)
Basic Vehicle Damage Coverage	3,842	4,092	4,475	5,009	5,626	6,158	6,664	7,198	6,672	Appendix C.2.1, Col (4), (5)
TPL - Property Damage	5,726	6,048	6,326	5,272	7,102	7,515	7,938	8,385	7,935	Appendix C.3.1, Col (4), (5)
TPL - Out of Province Bodily Injury	59,334	62,595	76,005	79,433	81,275	89,329	98,071	107,669	98,184	Appendix C.3.2, Col (4), (5)

Year over Year Change in Severity

Coverage		2020 vs 2019	2021 vs 2020	2022 vs 2021	2023 vs 2022	2024 vs 2023	2025 vs 2024	2026 vs 2025
Medical Rehabilitation						5.0%	4.4%	4.0%
Enhanced Disability						4.9%	4.5%	4.3%
Permanent Impairment						6.0%	3.9%	2.4%
Death Benefits						6.0%	3.9%	2.4%
Basic Vehicle Damage Coverage		6.5%	9.4%	11.9%	12.3%	9.5%	8.2%	8.0%
TPL - Property Damage		5.6%	4.6%	-16.7%	34.7%	5.8%	5.6%	5.6%
TPL - Out of Province Bodily Injury		5.5%	21.4%	4.5%	2.3%	9.9%	9.8%	9.8%

Summary of Capped Amounts on Large Claims
As of August 31, 2022

Fiscal Loss Year	Capped Amounts on Large Claims ($)						
	Medical Rehabilitation (1)	Enhanced Disability (2)	Permanent Impairment (3)	Death Benefits (4)	Basic Vehicle Damage Coverage (5)	Third Party Liability Property Damage (6)	Third Party Liability Out of Province Bodily Injury (7)
2008					-	1,400,465	-
2009					-	714,765	-
2010					-	639,512	-
2011					-	589,244	-
2012					-	1,507,311	-
2013					-	607,657	-
2014					-	3,136,565	-
2015					-	767,794	-
2016					-	-	-
2017					-	2,403,447	-
2018					-	4,332,045	-
2019					-	28,011	-
2020					-	805,484	-
2021					-	177,799	-
2022	-	-	-	-	-	600,000	-
Threshold:	n/a	n/a	n/a	n/a	No Cap	400,000	No Cap

From internal ICBC database, case incurred loss & ALAE amounts above selected thresholds

Loading for Capped Large Claims
Based on 5-year average (Fiscal Loss Years 2018 to 2022), applied only for Third Party Liability Property Damage
($ 000's except for Loading Factor)

	Medical Rehabilitation	Enhanced Disability	Permanent Impairment	Death Benefits	Basic Vehicle Damage Coverage	Third Party Liability Property Damage	Third Party Liability Out of Province Bodily Injury
(a) Capped Amounts on Large Claims						5,943	
(b) Capped Incurred Loss and ALAE						260,276	
(c) Large Claims Factor	1.000	1.000	1.000	1.000	1.000	1.023	1.000
Exposures Source Appendix:						C.3.1, col (1)	
Frequency Source Appendix:						C.3.1, col (2)	
Severity Source Appendix:						C.3.1, col (4)	

Notes:
(a) = sum [Capped Amounts on Large Claims from FLYs 2018 to 2022)]
(b) = the product of Earned Risk Exposures, Incurred Loss, and Capped Incurred Severity for each FLY, summed across FLYs 2018 to 2022
(c) = [(a) + (b)] ÷ (b)
= 1.0 for all other coverages as no cap is applied in the models

APPENDIX C.1.0

ENHANCED ACCIDENT BENEFITS CLAIMS FORECAST ANALYSIS

Table of Contents

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A INTRODUCTION

1. This Appendix shows the forecast analysis of the Enhanced Accident Benefits (EAB) sub-coverages: Enhanced Medical Rehabilitation (EAB-MR), Enhanced Disability Benefits (EAB-ED), Permanent Impairment (EAB-PI), and Enhanced Death Benefits (EAB-DB) for claims associated with Policy Year (PY) 2023. Figure C.1.0.1 below provides the forecasted frequency and severity for PY 2023.

Figure C.1.0.1 – EAB PY 2023 Frequency and Severity

Coverage	PY 2023 Forecast	
	Frequency[1]	Severity[2]
EAB-MR	1.65%	$15,287
EAB-ED	0.25%	$77,765
EAB-PI	0.17%	$24,505
EAB-DB	0.02%	$61,940
Overall – EAB	**2.08%**	**$23,901**

[1] From Appendix C.1.1; Overall – EAB Frequency is the sum of the frequencies for each EAB sub-coverage.
[2] From Appendix C.1.2; Overall – EAB Severity is the product of frequency and severity for each EAB sub-coverage, summed across all the EAB sub-coverages, and divided by the Overall – EAB frequency.

2. This Appendix shows the incurred versus modelled plots of frequency and severity for each of the EAB sub-coverages in Sections D, E, F, and G. The plots are based on the incurred frequency and severity data points as shown in Appendices C.1.1 and C.1.2 and are derived as shown in Technical Appendix Set C.1.

3. Due to the very limited relevant historical information available for the EAB coverages, the actuaries have used alternative approaches for the frequency and severity forecasts as described in Sections B and C below.

B EAB FREQUENCY

4. Fiscal loss year (FLY) 2022 is the first year of Enhanced Care (EC), so it is used to determine the spring-off (starting) point to forecast EAB claim frequencies. Details of the estimation of the FLY 2022 frequency for each EAB sub-coverage are provided in Technical Appendix Set C.1.

5. Because there is not sufficient historical data under Enhanced Care to support a reliable regression model, ICBC has used an alternative approach to forecast EAB frequency for future

FLYs (except for EAB-DB). The forecast approach relies on the assumption that the propensity to incur an injury claim against each of the EAB sub-coverages, in the event of a crash, will be relatively stable over time. With this assumption, the frequency forecast for each EAB sub-coverage can be derived from the Basic Vehicle Damage Coverage (BVDC) frequency forecast, based on the observed propensity to claim relative to BVDC claims. This propensity to BVDC approach is used to determine the FLY 2022 modelled frequency spring-off point for each of the EAB sub-coverages. Under the propensity approach, the following three components are needed to derive the FLY 2022 modelled frequency for each EAB sub-coverage, which is equal to (1) ÷ (2) x (3):

(1) FLY 2022 incurred frequency for each EAB sub-coverage;

(2) FLY 2022 BVDC incurred frequency; and

(3) FLY 2022 BVDC modelled frequency spring-off point.

6. The BVDC claims forecast analysis, including the FLY 2022 BVDC incurred frequency and modelled frequency values, are presented in Appendix Set C.2. The calculation of the FLY 2022 modelled frequency spring-off point for each of the EAB sub-coverage is shown in Figure C.1.0.2.

Figure C.1.0 2 – FLY 2022 Modelled Frequency Spring-off Point for the EAB Sub-Coverages

Sub-Coverage	Incurred Frequency (1)	Propensity to BVDC (2)	Frequency Spring-off Point (3)
BVDC	3.35%		3.80%
EAB-MR	1.50%	45%	1.70%
EAB-ED	0.23%	7%	0.26%
EAB-PI	0.15%	5%	0.17%
EAB-DB	0.02%	1%	0.02%

(1) BVDC from TA C.2.1 column (1) row (a) ÷ TA C.1.1.1 column (1)
EAB-MR from TA C.1.1.1 column (5)
EAB-ED from TA C.1.2.1 column (5)
EAB-PI from TA C.1.3.1 column (5)
EAB-DB from TA C.1.4.1 column (15)
(2) Each EAB sub-coverage = column (1) ÷ BVDC column (1)
(3) BVDC from Appendix C.2.1 column (3)
Each EAB sub-coverage = column (2) x BVDC column (3)

7. The frequency trend for each EAB sub-coverage (except for EAB-DB) is set equal to the BVDC frequency trend of -1.0% per year, assuming forecast injury frequency will decrease at the same pace as the forecast BVDC frequency. For EAB-DB, a flat frequency trend is selected, as there does not appear to be an obvious upward or downward trend in the historical death benefits data.

8. The selected trend is applied from each FLY 2022 frequency spring-off point to forecast the FLYs 2023 to 2026 modelled frequencies. The policy year (PY) 2023 frequency forecast is calculated as a weighted average of the forecast FLYs, with weights of 0.25, 0.50, and 0.25 applied to FLYs 2024, 2025, and 2026 respectively, and is shown in Appendix C.1.1.

9. This represents a change from the selection in the 2021 RRA where the modelled frequency spring-off point was based on ICBC's historical claim experience under the legal-based AB coverages, adjusted for estimated impacts of the change to the Enhanced Care product, with a flat trend rate. This change reflects a greater reliance on ICBC's EAB claims experience, which is now available.

C EAB SEVERITY

10. Determination of FLY 2022 incurred severity spring-off point for the EAB coverages is described in Technical Appendix C.1.0.

11. Fiscal loss year (FLY) 2022 is the first year of EC, so it is used to determine the spring-off points to forecast EAB claim severities. Details of the estimation of the FLY 2022 severity for each EAB sub-coverage are provided in Technical Appendix Set C.1.

12. According to the *Enhanced Accident Benefits Regulation*, BC benefit limits must be adjusted with BC consumer price index (CPI) for the fiscal year beginning on April 1, 2022 and for each fiscal year after that, capped at 6.0%. Consistent with this, the actuaries rely on known and forecast BC CPI changes to capture this inflation component in the forecast severities for the coming fiscal years. For sub-coverages where there is also a trend due to factors other than inflation, a non-inflationary trend is also added. The non-inflationary trend is selected based on relevant historical information, and discussed for each EAB sub-coverage to which it applies in the sections below. BC CPI forecast, the non-inflationary trend, and the selected severity trend for each EAB sub-coverage are shown in Figure C.1.0.3 below.

Figure C.1.0.3 – BC CPI Inflation Forecast, Non-inflationary Trend, and Selected Severity Trend

Calendar Year of BC CPI	Fiscal Year to which CPI increase applies	BC CPI Inflation (1)	BC CPI Inflation Capped (2)	EAB-MR Non-Inflationary Trend (3)	EAB-ED Non-Inflationary Trend (4)	EAB-MR Selected Trend (5)	EAB-ED Selected Trend (6)	EAB-PI & EAB-DB Selected Trend (7)
2021	2023	2.8%	2.8%	1.9%	2.2%	4.7%	5.0%	2.8%
2022	2024	7.0%	6.0%			8.0%	8.3%	6.0%
2023	2025	3.9%	3.9%			5.8%	6.2%	3.9%
2024	2026	2.4%	2.4%			4.3%	4.6%	2.4%
2025	2027	2.2%	2.2%			4.1%	4.4%	2.2%
2026+	2028+	2.0%	2.0%			3.9%	4.2%	2.0%

(1) From Appendix C.0 Figure C.0.3
(2) Column (1) capped at 6.0%
(3) From Figure C.1.0.6
(4) From Figure C.1.0.9 Row (c)
(5) = [1 + (2)] x [1 + (3)] - 1
(6) = [1 + (2)] x [1 + (4)] - 1
(7) = (2)

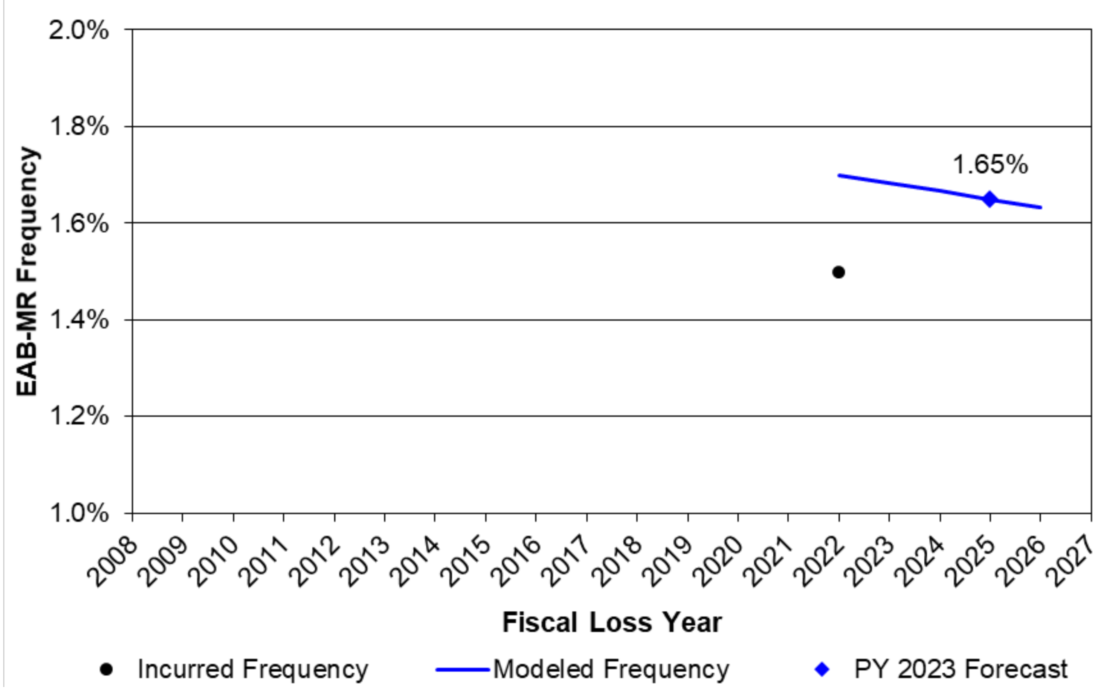
13. The selected trend is applied from each FLY 2022 severity spring-off point to forecast the FLYs 2023 to 2026 modelled severities. The policy year (PY) 2023 severity forecast is calculated as a weighted average of the forecast FLYs, with weights of 0.25, 0.50 and 0.25 applied to FLYs 2024, 2025 and 2026 respectively.

D EAB-MR

14. EAB-MR provides medical and rehabilitation benefits for the care and support needed by injured parties for their recovery, subject to legal limits.

15. **Frequency Forecast –** The EAB-MR frequency forecast is shown in Figure C.1.0.4 below. The frequency trend is set equal to the BVDC frequency trend of -1.0% per year, and applied from a spring-off point for FLY 2022 as discussed in Section B above.

Figure C.1.0.4 – EAB-MR Frequency



16. **Severity Forecast –** The EAB-MR severity forecast is shown in Figure C.1.0.5.

17. Under EAB-MR, the treatment fees paid to medical service providers are subject to annual increases based on the rate of inflation as reflected in the BC CPI (capped at 6.0%). Therefore, the severity trend for EAB-MR relies on the BC CPI inflation forecast. Other factors, such as changes in the mix of claimants and treatments utilized over time, are also expected to contribute to the EAB-MR severity trend. In order to determine the trend due to factors other than inflation (referred to as the non-inflationary trend), the actuaries have referred to historical data from medical and rehabilitation benefits under the legal-based product (AB-MR).

18. The AB-MR paid severity by Fiscal Year (FY) is shown in Figure C.1.0.6. ICBC actuaries selected a five-year simple exponential regression model ending March 2019, resulting in a trend of 1.9%. This represents a period where the benefits and treatment fees paid under AB-MR were fixed, so as to provide a stable non-inflationary trend (product enhancements and treatment fee increases were introduced beginning April 1, 2019). This underlying non-inflationary trend for changes in mix is assumed to continue in the first few years under EAB-MR.

19. The selected severity trend is based on the non-inflationary trend described in the previous paragraph and the BC CPI inflation according to the September 2022 BC Budget update as shown

in Figure C.1.0.3.[1] This represents a change from the selection in the 2021 RRA where the forecast projected forward from a FLY 2020 spring-off point using an AB-MR trend of 5.6% per year.

Figure C.1.0.5 – EAB-MR Severity

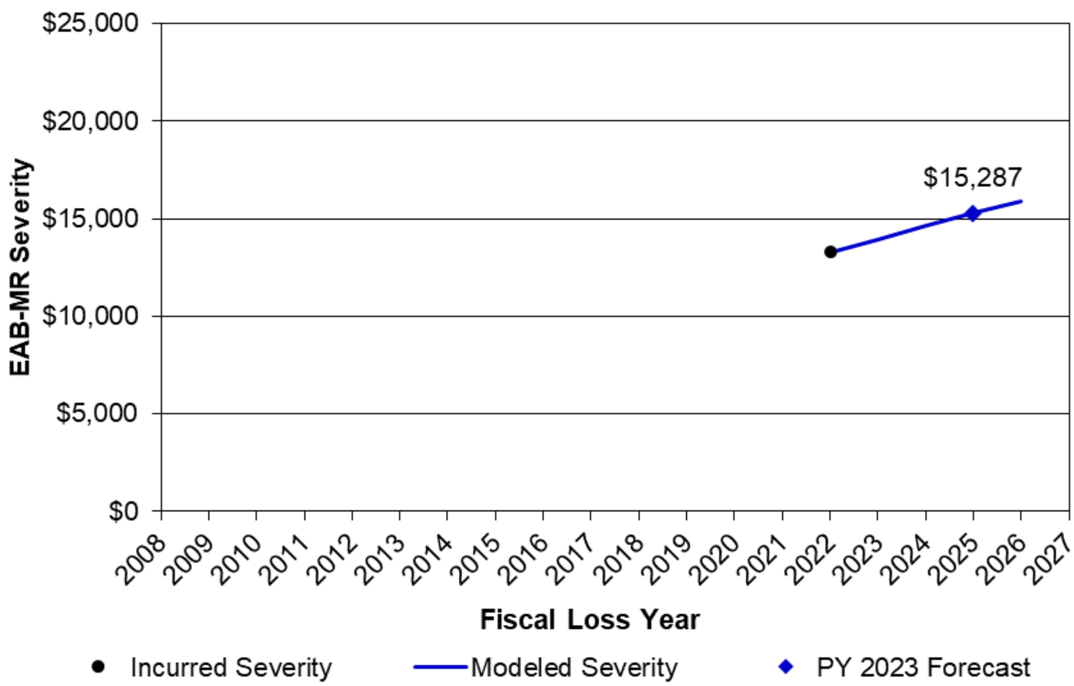


Figure C.1.0.6 – EAB-MR Non-inflationary Trend

Fiscal Year	AB-MR Paid Severity ($)	Modelled Severity ($)
2013	1,947	
2014	1,944	
2015	2,477	2,387
2016	2,458	2,432
2017	2,338	2,477
2018	2,363	2,523
2019	2,771	2,571
2020	5,484	
2021	5,019	
2022	7,251	
Fiscal Year Annual Trend Rate		**1.9%**

Data Source: AB-MR FYs 2013 to 2022 paid severities based on ICBC Internal Database

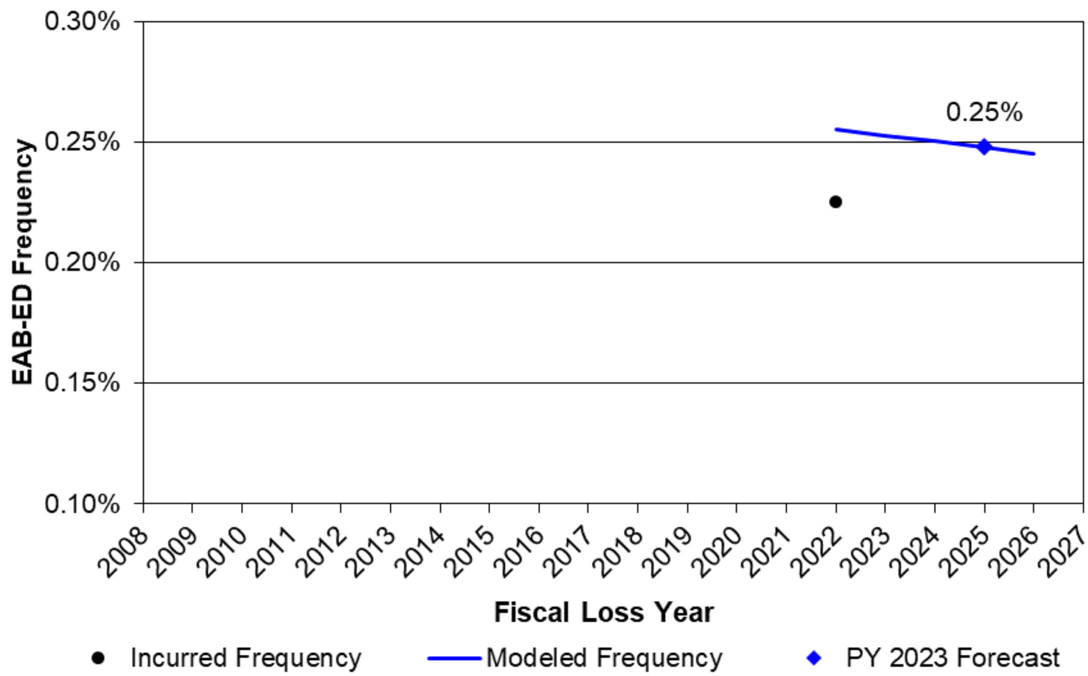
[1] https://www2.gov.bc.ca/assets/gov/british-columbians-our-governments/government-finances/quarterly-reports/2022-23-q1-report.pdf

E EAB-ED

20. EAB-ED provides wage earners, including those who are self-employed, and non-earners (such as students and minors) income replacement benefits when they are unable to work or perform their regular activities due to injuries suffered in a crash.

21. **Frequency Forecast –** The EAB-ED frequency forecast is shown in Figure C.1.0.7 below. The frequency trend is set equal to the BVDC frequency trend of -1.0% per year, and applied from a spring-off point for FLY 2022 as discussed in Section B above.

Figure C.1.0.7 – EAB-ED Frequency



22. **Severity Forecast –** The EAB-ED severity forecast is shown in Figure C.1.0.8.

23. Under EAB-ED, the indemnities paid to claimants are subject to annual increases based on the rate of inflation as reflected in the BC CPI (capped at 6.0%). Therefore the severity trend for EAB-ED relies on the BC CPI inflation forecast. Other factors, such as changes in the mix of claimants and the duration of indemnity payments, are also expected to contribute to the EAB-ED severity trend. In order to determine the trend due to factors other than inflation (referred to as the non-inflationary trend), the actuaries have referred to historical data from Weekly Benefits (AB-WB) under the legal-based product.

24. ICBC actuaries selected a non-inflationary severity trend of 2.2% for EAB-ED, which is derived by removing an annual inflation factor of 2.0% from the AB-WB modelled severity trend of 4.2%, as shown in Figure C.1.0.9. The AB-WB modelled severity trend of 4.2% is from a seven-year simple exponential regression model ending December 31, 2016 based on AB-WB incurred severity. This represents a period where the benefits paid under AB-WB were stable, following the recession in 2008-2009, and preceding the change of Employment Insurance waiting period in 2017 and the enhancement to benefits effective April 1, 2019. It therefore provides an appropriate trend from which the impact of general inflation can be removed to arrive at the non-inflationary trend. This underlying non-inflationary trend for changes in mix is assumed to continue in the first few years under EAB-ED.

25. The selected severity trend is based on the non-inflationary trend described in the previous paragraph and the BC CPI according to the September 2022 BC Budget update as shown in Figure C.1.0.3. This represents a change from the selection in the 2021 RRA where the forecast projected forward from a FLY 2020 spring-off point using an AB-WB trend of 3.9%.

Figure C.1.0.8 – EAB-ED Severity

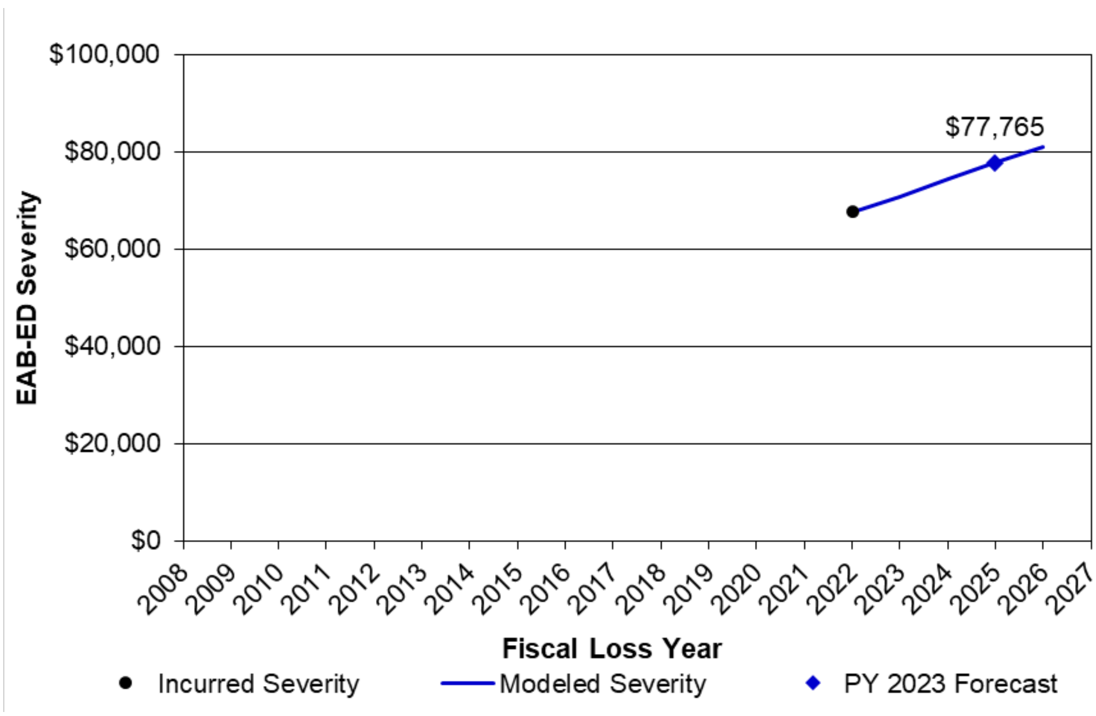
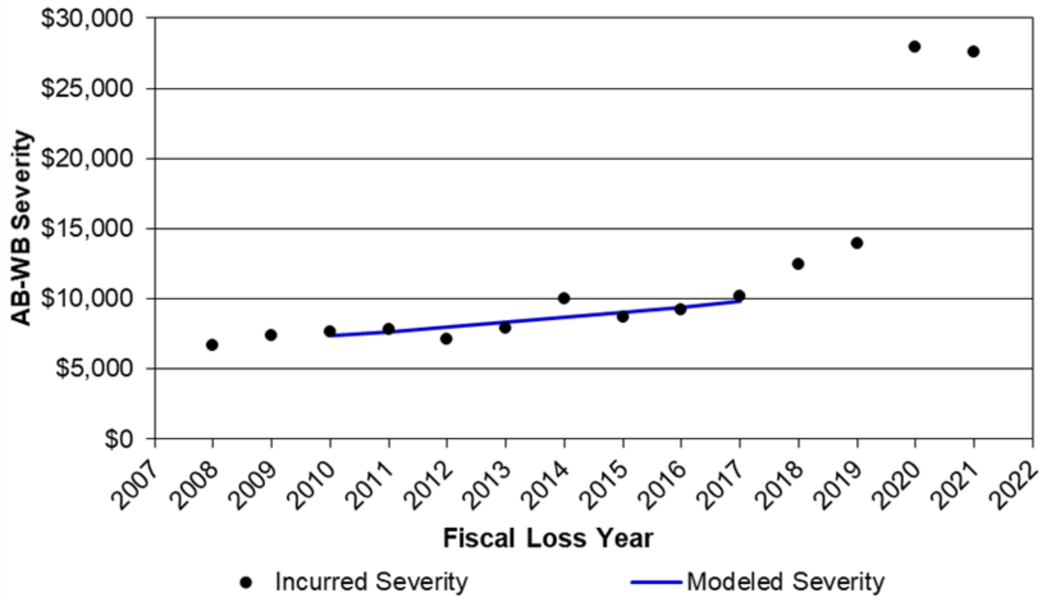


Figure C.1.0.9 – AB-WB Severity and EAB-ED Non-inflationary Trend



Fiscal Loss Year	AB-WB Incurred Severity ($) (1)	Modelled Severity ($) (2)
2007/08	6,686	
2008/09	7,336	
2009/10	7,611	7,357
2010/11	7,772	7,667
2011/12	7,104	7,971
2012/13	7,863	8,325
2013/14	9,965	8,699
2014/15	8,697	9,027
2015/16	9,178	9,426
2016/17	10,182	9,856
2017/18	12,416	
2018/19	13,948	
2019/20	27,962	
2020/21	27,570	
(a) Modelled Annual Trend Rate		4.2%
(b) Annual Inflation		2.0%
(c) Non-Inflationary Annual Trend Rate		2.2%

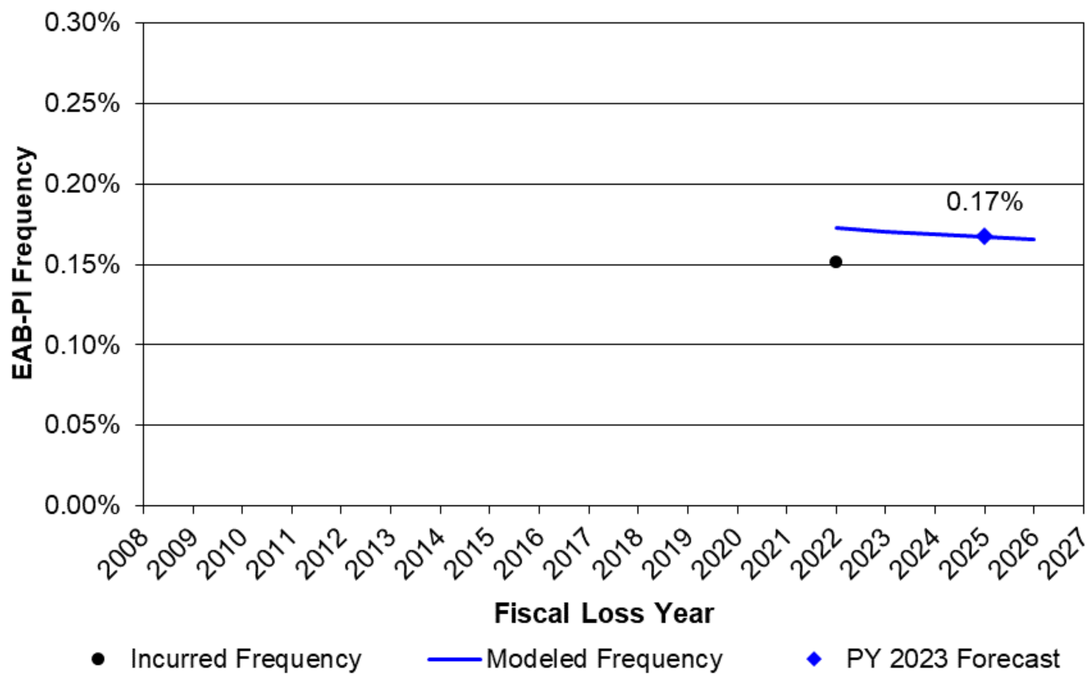
(1) Incurred Severity is based on the incurred loss & ALAE estimates in Technical Appendix C.1.2.1, adjusted to remove large losses as described in Appendix C.0 Section B.
(2) Modelled Severity is the result of an exponential regression model over loss quarter severity points from Q4 of FY 2010 through Q3 FY 2017.
(a) Based on the model in column (2).
(b) Annual inflation factor assumed for the historical period.
(c) = [(1+ (a)] ÷ [1+ (b)] – 1

F EAB-PI

26. EAB-PI provides support for injuries that result in an impairment(s) that lasts for the rest of a claimant's life. A permanent impairment means someone has permanently lost certain physical or cognitive function or is permanently disfigured. The payment amounts depend on the nature of the injury and the degree of permanent impairment caused by the specific nature of the injury.

27. **Frequency Forecast –** The EAB-PI frequency forecast is shown in Figure C.1.0.10 below. The frequency trend is set equal to the BVDC frequency trend of -1.0% per year, and applied from a spring-off point for FLY 2022 as discussed in Section B above.

Figure C.1.0.10 – EAB-PI Frequency

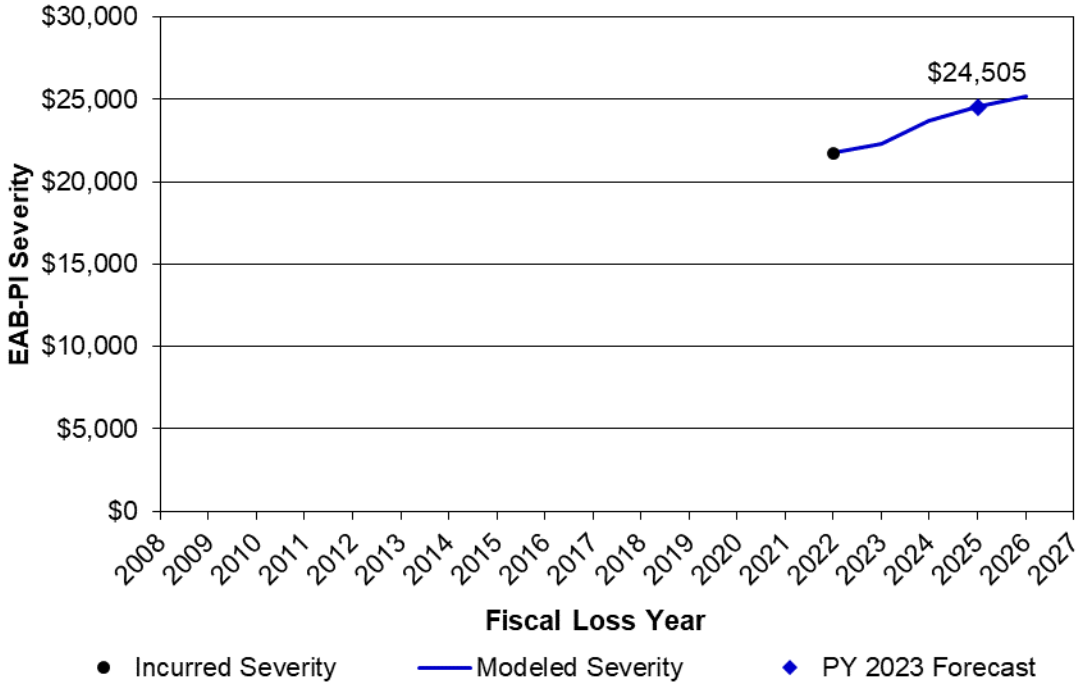


28. **Severity Forecast –** The EAB-PI severity forecast is shown in Figure C.1.0.11.

29. According to the *Enhanced Accident Benefits Regulation* as discussed in paragraph 12, the selected EAB-PI severity trend is based on BC CPI inflation according to the September 2022 BC Budget update as shown in Figure C.1.0.3. This represents a change from the selection in the 2021 RRA where the forecast projected from a FLY 2020 spring-off point using MPI Accident Benefits Other – Non-Indexed trend of 1.2% for combined EAB-PI and EAB-DB. Analysing

EAB-PI and EAB-DB separately enables ICBC to refine the analysis and support a separate cost forecast for each of these sub-coverages in this Application.

Figure C.1.0.11 – EAB-PI Severity



G EAB-DB

30. EAB-DB provides burial and funeral expense benefits, grief counselling support, as well as lump sum payments to the surviving spouse, dependant(s) and non-dependant children or parents. The benefit levels are higher under EAB-DB than historical death benefits under the legal-based product (AB-DB).

31. **Frequency Forecast –** The EAB-DB frequency forecast is shown in Figure C.1.0.12 below.

32. The AB-DB incurred frequencies are shown in Figure C.1.0.13, which indicates that there does not appear to be an obvious upward or downward trend in the historical AB-DB data. Therefore, a flat frequency trend is selected for EAB-DB.

Figure C.1.0.12 – EAB-DB Frequency

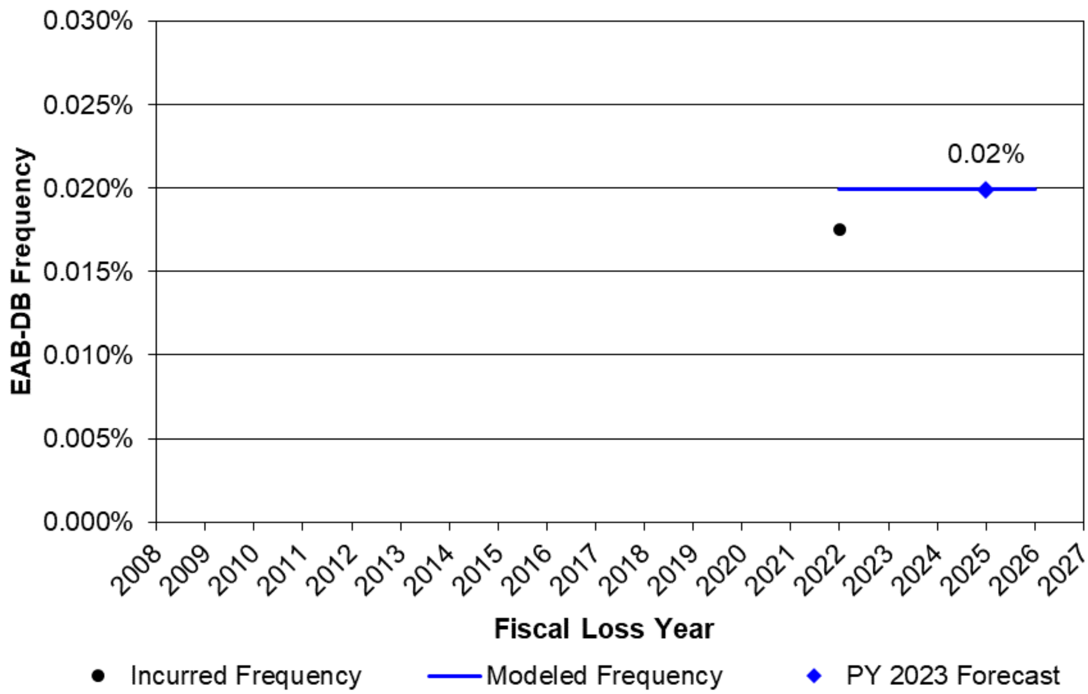
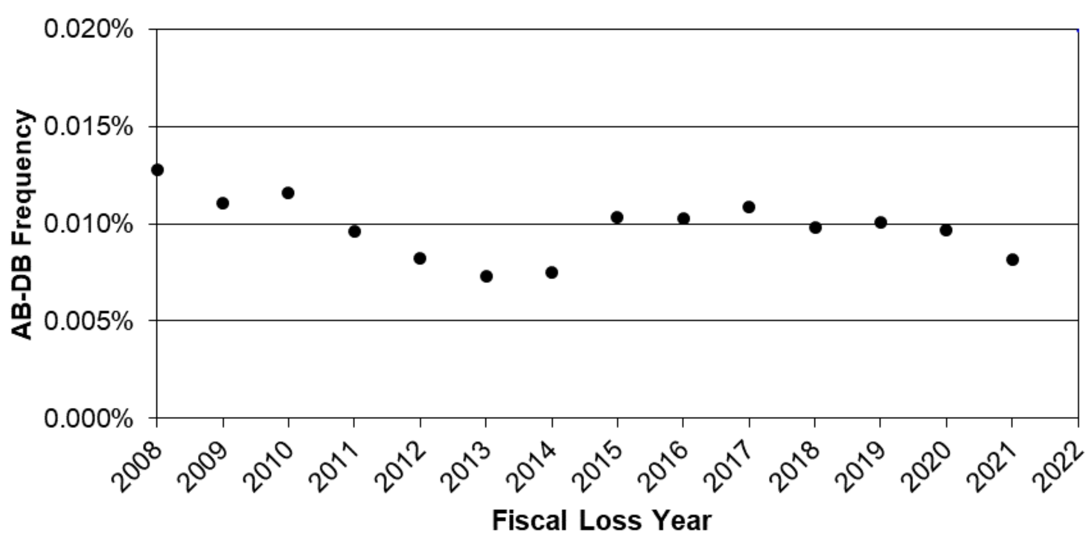


Figure C.1.0.13 – AB-DB Incurred Frequency

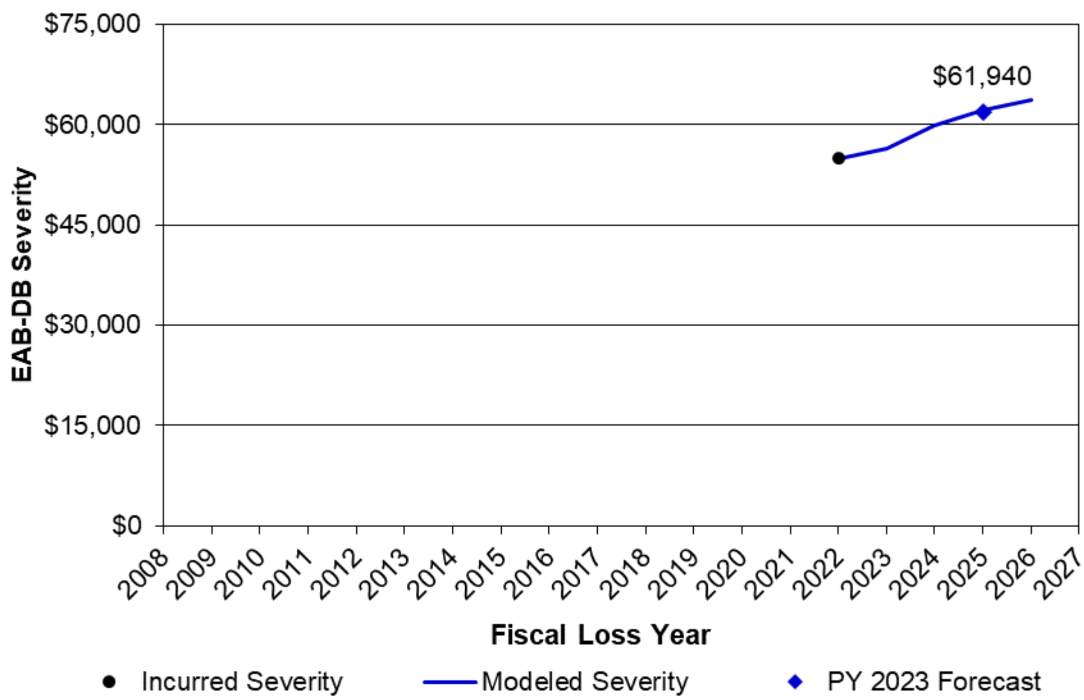


33. **Severity Forecast –** The EAB-DB severity forecast is shown in Figure C.1.0.14 below.

34. According to the *Enhanced Accident Benefits Regulation* as discussed in paragraph 12, the selected EAB-DB severity trend is based on BC CPI according to the September 2022 BC Budget update as shown in Figure C.1.0.3. This represents a change from the selection in the 2021 RRA

where the forecast projected from a FLY 2020 spring-off point using MPI Accident Benefits Other – Non-Indexed trend of 1.2% for combined EAB-PI and EAB-DB. Analysing EAB-PI and EAB-DB separately enables ICBC to refine the analysis and support a separate cost forecast for each of these sub-coverages in this Application.

Figure C.1.0.14 – EAB-DB Severity



Summary of Incurred Frequency
Enhanced Accident Benefits Sub-Coverages (EAB)
For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Fiscal Loss Year	Enhanced Medical Rehabilitation (EAB-MR)		Enhanced Disability (EAB-ED)		Permanent Impairment (EAB-PI)		Death Benefits (EAB-DB)	
	Incurred (1)	Modelled (2)	Incurred (3)	Modelled (4)	Incurred (5)	Modelled (6)	Incurred (7)	Modelled (8)
2022 (11 months)	1.50%	1.70%	0.23%	0.26%	0.15%	0.17%	0.02%	0.02%
2023		1.68%		0.25%		0.17%		0.02%
2024		1.67%		0.25%		0.17%		0.02%
2025		1.65%		0.25%		0.17%		0.02%
2026		1.63%		0.25%		0.17%		0.02%
PY 2023 Forecast		**1.65%**		**0.25%**		**0.17%**		**0.02%**

Notes:
(1) Technical Appendix C.1.1.1 Col (5)
(3) Technical Appendix C.1.2.1 Col (5)
(5) Technical Appendix C.1.3.1 Col (5)
(7) Technical Appendix C.1.4.1 Col (15)
The models are described in Appendix C.1.0

Summary of Incurred Severity ($)

Enhanced Accident Benefits Sub-Coverages (EAB)

For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Fiscal Loss Year	Enhanced Medical Rehabilitation (EAB-MR) Severity (1)	Enhanced Disability (EAB-ED) Severity (2)	Permanent Impairment (EAB-PI) Severity (3)	Death Benefits (EAB-DB) Severity (4)
2022 (11 months)	13,290	67,701	21,718	54,895
2023	13,951	70,903	22,326	56,432
2024	14,655	74,400	23,665	59,818
2025	15,293	77,772	24,588	62,151
2026	15,907	81,117	25,179	63,642
PY 2023 Forecast	**15,287**	**77,765**	**24,505**	**61,940**

Notes:

(1) FLY 2022 (11 months) from TA C.1.0.16 (14b); FLYs 2023 - 2026 from C.1.2.1 (14b) to C.1.2.4 (14b)

(2) FLY 2022 (11 months) from TA C.1.0.16 (15b); FLYs 2023 - 2026 from C.1.2.1 (15b) to C.1.2.4 (15b)

(3) FLY 2022 (11 months) from TA C.1.3.1 Col (4);
FLYs 2023 - 2026: FLYN = FLYN-1 x [1 + BC CPI Inflation Capped from Appendix C.1.0 Figure C.1.0.3 Col (2)]

(4) FLY 2022 (11 months) from TA C.1.4.1 Col (14);
FLYs 2023 - 2026: FLYN = FLYN-1 x [1 + BC CPI Inflation Capped from Appendix C.1.0 Figure C.1.0.3 Col (2)]

The models are described in Appendix C.1.0

Incurred Severities before and after Indexation for EAB-MR and EAB-ED - FLY 2023

Development Month	No indexation							
	Age-to-Age LDF		Age-to-Ultimate LDF		Cumulative % Paid		Incremental % Paid	
	EAB-MR (1)	EAB-ED (2)	EAB-MR (3)	EAB-ED (4)	EAB-MR (5)	EAB-ED (6)	EAB-MR (7)	EAB-ED (8)
12 to 24	2.052	1.966	4.560	8.411	21.93%	11.89%	21.93%	11.89%
24 to 36	1.155	1.279	2.222	4.279	45.00%	23.37%	23.07%	11.48%
36 to 48	1.076	1.177	1.924	3.346	51.97%	29.88%	6.97%	6.52%
48 to 60	1.052	1.128	1.787	2.843	55.95%	35.17%	3.98%	5.29%
60 to 72	1.035	1.098	1.700	2.519	58.83%	39.69%	2.88%	4.52%
72 to 84	1.030	1.075	1.641	2.296	60.92%	43.56%	2.09%	3.87%
84 to 96	1.030	1.064	1.594	2.134	62.75%	46.85%	1.83%	3.29%
96 to 108	1.030	1.059	1.547	2.007	64.63%	49.83%	1.88%	2.98%
108 to 120	1.030	1.052	1.502	1.896	66.57%	52.74%	1.94%	2.92%
120 to 132	1.030	1.047	1.458	1.801	68.57%	55.51%	2.00%	2.77%
132 to 144	1.030	1.042	1.416	1.721	70.63%	58.12%	2.06%	2.61%
144 to 156	1.030	1.041	1.375	1.651	72.75%	60.56%	2.12%	2.44%
156 to 168	1.028	1.037	1.335	1.587	74.92%	63.02%	2.18%	2.45%
168 to 180	1.023	1.033	1.298	1.530	77.02%	65.35%	2.10%	2.33%
180 to 192	1.019	1.031	1.269	1.481	78.79%	67.50%	1.77%	2.16%
192 to 204	1.017	1.028	1.245	1.438	80.29%	69.56%	1.50%	2.06%
204 to 216	1.017	1.026	1.225	1.399	81.66%	71.48%	1.36%	1.91%
216-228	1.016	1.025	1.205	1.363	83.00%	73.37%	1.35%	1.89%
228-240	1.015	1.023	1.186	1.330	84.34%	75.18%	1.34%	1.81%
240-252	1.015	1.021	1.168	1.300	85.63%	76.90%	1.29%	1.72%
252-264	1.014	1.020	1.151	1.273	86.87%	78.53%	1.24%	1.64%
264-276	1.013	1.018	1.135	1.249	88.07%	80.09%	1.20%	1.56%
276-288	1.012	1.017	1.121	1.226	89.23%	81.56%	1.15%	1.48%
288-300	1.012	1.016	1.107	1.205	90.34%	82.96%	1.11%	1.40%
300-312	1.011	1.015	1.094	1.186	91.41%	84.28%	1.07%	1.32%
312-324	1.011	1.014	1.082	1.169	92.44%	85.53%	1.03%	1.25%
324-336	1.010	1.013	1.070	1.153	93.42%	86.71%	0.99%	1.18%
336-348	1.010	1.012	1.060	1.139	94.37%	87.82%	0.95%	1.11%
348-360	1.009	1.011	1.050	1.125	95.28%	88.87%	0.91%	1.05%
360-372	1.009	1.010	1.040	1.113	96.16%	89.85%	0.87%	0.98%
372-384	1.008	1.010	1.031	1.102	96.99%	90.78%	0.84%	0.93%
384-396	1.008	1.009	1.023	1.091	97.79%	91.65%	0.80%	0.87%
396-408	1.007	1.008	1.015	1.081	98.56%	92.47%	0.77%	0.82%
408-420	1.007	1.008	1.007	1.073	99.30%	93.23%	0.74%	0.77%
420-432	1.000	1.007	1.000	1.064	100.00%	93.95%	0.70%	0.72%
432-444		1.007		1.057		94.63%		0.67%
444-456		1.006		1.050		95.26%		0.63%
456-468		1.006		1.043		95.85%		0.59%
468-480		1.005		1.037		96.40%		0.55%
480-492		1.005		1.032		96.92%		0.52%
492-504		1.005		1.027		97.40%		0.48%
504-516		1.004		1.022		97.85%		0.45%
516-528		1.004		1.018		98.27%		0.42%
528-540		1.004		1.013		98.67%		0.39%
540-552		1.003		1.010		99.04%		0.37%
552-564		1.003		1.006		99.38%		0.34%
564-576		1.003		1.003		99.70%		0.32%
576-Ult		1.000		1.000		100.00%		0.30%

Notes:
(1) From Technical Appendix E.1 Col (a)
(2) From Technical Appendix E.2 Col (a)
(3) Selected To Ultimate = product of Col (1) beginning from same maturity
(4) Selected To Ultimate = product of Col (2) beginning from same maturity
(5) = 1 ÷ (3)
(6) = 1 ÷ (4)
(7) = (5) - (5) Prior
(8) = (6) - (6) Prior
(9) From Appendix C.1.0 Figure C.1.0.3 Col (2)
(10) Year n factor = PRODUCT(Year 1:Year n) of Col (9)
(11) Year n factor = PRODUCT(Year 1:Year n-1) * Year n^0.5 of Col (9)
Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year.
(12) = (14a) x (7) x (10)
(13) = (15a) x (8) x (11)

Payment Year	Inflation Assumption (9)	Indexation Factor for EAB-MR (10)	Indexation Factor for EAB-ED (11)	EAB-MR Incremental Paid ($) (12)	EAB-ED Incremental Paid ($) (13)
Year 1	1.000	1.000	1.000	2,476	6,242
Year 2	1.060	1.060	1.030	2,761	6,205
Year 3	1.039	1.101	1.080	867	3,696
Year 4	1.024	1.128	1.114	506	3,095
Year 5	1.022	1.153	1.140	375	2,705
Year 6	1.020	1.176	1.164	277	2,365
Year 7	1.020	1.199	1.187	248	2,050
Year 8	1.020	1.223	1.211	260	1,892
Year 9	1.020	1.248	1.235	273	1,891
Year 10	1.020	1.273	1.260	287	1,832
Year 11	1.020	1.298	1.285	301	1,761
Year 12	1.020	1.324	1.311	317	1,681
Year 13	1.020	1.350	1.337	332	1,722
Year 14	1.020	1.377	1.364	326	1,668
Year 15	1.020	1.405	1.391	281	1,575
Year 16	1.020	1.433	1.419	242	1,535
Year 17	1.020	1.462	1.447	225	1,454
Year 18	1.020	1.491	1.476	227	1,467
Year 19	1.020	1.521	1.506	229	1,428
Year 20	1.020	1.551	1.536	226	1,388
Year 21	1.020	1.582	1.567	222	1,347
Year 22	1.020	1.614	1.598	218	1,305
Year 23	1.020	1.646	1.630	215	1,262
Year 24	1.020	1.679	1.663	211	1,220
Year 25	1.020	1.713	1.696	207	1,177
Year 26	1.020	1.747	1.730	203	1,134
Year 27	1.020	1.782	1.764	199	1,092
Year 28	1.020	1.818	1.800	194	1,050
Year 29	1.020	1.854	1.836	190	1,009
Year 30	1.020	1.891	1.872	186	968
Year 31	1.020	1.929	1.910	182	929
Year 32	1.020	1.967	1.948	178	890
Year 33	1.020	2.007	1.987	174	852
Year 34	1.020	2.047	2.027	170	816
Year 35	1.020	2.088	2.067	166	780
Year 36	1.020	2.129	2.109	-	746
Year 37	1.020	2.172	2.151	-	712
Year 38	1.020	2.216	2.194	-	680
Year 39	1.020	2.260	2.238	-	649
Year 40	1.020	2.305	2.282	-	620
Year 41	1.020	2.351	2.328	-	591
Year 42	1.020	2.398	2.375	-	563
Year 43	1.020	2.446	2.422	-	537
Year 44	1.020	2.495	2.470	-	511
Year 45	1.020	2.545	2.520	-	487
Year 46	1.020	2.596	2.570	-	464
Year 47	1.020	2.648	2.622	-	441
Year 48	1.020	2.701	2.674	-	420
			Incurred Severity after Indexation	**13,951**	**70,903**
			Indexation Impact	2,663	18,401

	FLY 2023	(14)	(15)
(a)	**Incurred Severity before Indexation**	11,289	52,502
(b)	**Incurred Severity after Indexation**	13,951	70,903

(14a) = TA C.1.0 Figure C.1.0.9 Col (1) Row (a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (5)]
(14b) = SUM(Year 1:Year 48) of Col (12)
(15a) = TA C.1.0 Figure C.1.0.9 Col (2) Row (a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (6)]
(15b) = SUM(Year 1:Year 48) of Col (13)

Incurred Severities before and after Indexation for EAB-MR and EAB-ED - FLY 2024

Development Month	No indexation							
	Age-to-Age LDF		Age-to-Ultimate LDF		Cumulative % Paid		Incremental % Paid	
	EAB-MR (1)	EAB-ED (2)	EAB-MR (3)	EAB-ED (4)	EAB-MR (5)	EAB-ED (6)	EAB-MR (7)	EAB-ED (8)
12 to 24	2.052	1.966	4.560	8.411	21.93%	11.89%	21.93%	11.89%
24 to 36	1.155	1.279	2.222	4.279	45.00%	23.37%	23.07%	11.48%
36 to 48	1.076	1.177	1.924	3.346	51.97%	29.88%	6.97%	6.52%
48 to 60	1.052	1.128	1.787	2.843	55.95%	35.17%	3.98%	5.29%
60 to 72	1.035	1.098	1.700	2.519	58.83%	39.69%	2.88%	4.52%
72 to 84	1.030	1.075	1.641	2.296	60.92%	43.56%	2.09%	3.87%
84 to 96	1.030	1.064	1.594	2.134	62.75%	46.85%	1.83%	3.29%
96 to 108	1.030	1.059	1.547	2.007	64.63%	49.83%	1.88%	2.98%
108 to 120	1.030	1.052	1.502	1.896	66.57%	52.74%	1.94%	2.92%
120 to 132	1.030	1.047	1.458	1.801	68.57%	55.51%	2.00%	2.77%
132 to 144	1.030	1.042	1.416	1.721	70.63%	58.12%	2.06%	2.61%
144 to 156	1.030	1.041	1.375	1.651	72.75%	60.56%	2.12%	2.44%
156 to 168	1.028	1.037	1.335	1.587	74.92%	63.02%	2.18%	2.45%
168 to 180	1.023	1.033	1.298	1.530	77.02%	65.35%	2.10%	2.33%
180 to 192	1.019	1.031	1.269	1.481	78.79%	67.50%	1.77%	2.16%
192 to 204	1.017	1.028	1.245	1.438	80.29%	69.56%	1.50%	2.06%
204 to 216	1.017	1.026	1.225	1.399	81.66%	71.48%	1.36%	1.91%
216-228	1.016	1.025	1.205	1.363	83.00%	73.37%	1.35%	1.89%
228-240	1.015	1.023	1.186	1.330	84.34%	75.18%	1.34%	1.81%
240-252	1.015	1.021	1.168	1.300	85.63%	76.90%	1.29%	1.72%
252-264	1.014	1.020	1.151	1.273	86.87%	78.53%	1.24%	1.64%
264-276	1.013	1.018	1.135	1.249	88.07%	80.09%	1.20%	1.56%
276-288	1.012	1.017	1.121	1.226	89.23%	81.56%	1.15%	1.48%
288-300	1.012	1.016	1.107	1.205	90.34%	82.96%	1.11%	1.40%
300-312	1.011	1.015	1.094	1.186	91.41%	84.28%	1.07%	1.32%
312-324	1.011	1.014	1.082	1.169	92.44%	85.53%	1.03%	1.25%
324-336	1.010	1.013	1.070	1.153	93.42%	86.71%	0.99%	1.18%
336-348	1.010	1.012	1.060	1.139	94.37%	87.82%	0.95%	1.11%
348-360	1.009	1.011	1.050	1.125	95.28%	88.87%	0.91%	1.05%
360-372	1.009	1.010	1.040	1.113	96.16%	89.85%	0.87%	0.98%
372-384	1.008	1.010	1.031	1.102	96.99%	90.78%	0.84%	0.93%
384-396	1.008	1.009	1.023	1.091	97.79%	91.65%	0.80%	0.87%
396-408	1.007	1.008	1.015	1.081	98.56%	92.47%	0.77%	0.82%
408-420	1.007	1.008	1.007	1.073	99.30%	93.23%	0.74%	0.77%
420-432	1.000	1.007	1.000	1.064	100.00%	93.95%	0.70%	0.72%
432-444		1.007		1.057		94.63%		0.67%
444-456		1.006		1.050		95.26%		0.63%
456-468		1.006		1.043		95.85%		0.59%
468-480		1.005		1.037		96.40%		0.55%
480-492		1.005		1.032		96.92%		0.52%
492-504		1.005		1.027		97.40%		0.48%
504-516		1.004		1.022		97.85%		0.45%
516-528		1.004		1.018		98.27%		0.42%
528-540		1.004		1.013		98.67%		0.39%
540-552		1.003		1.010		99.04%		0.37%
552-564		1.003		1.006		99.38%		0.34%
564-576		1.003		1.003		99.70%		0.32%
576-Ult		1.000		1.000		100.00%		0.30%

Payment Year	Inflation Assumption (9)	Indexation Factor for EAB-MR (10)	Indexation Factor for EAB-ED (11)	EAB-MR Incremental Paid ($) (12)	EAB-ED Incremental Paid ($) (13)
Year 1	1.000	1.000	1.000	2,673	6,761
Year 2	1.039	1.039	1.019	2,922	6,655
Year 3	1.024	1.064	1.051	905	3,896
Year 4	1.022	1.087	1.076	527	3,235
Year 5	1.020	1.109	1.098	390	2,822
Year 6	1.020	1.131	1.120	288	2,465
Year 7	1.020	1.154	1.143	257	2,137
Year 8	1.020	1.177	1.165	270	1,972
Year 9	1.020	1.201	1.189	284	1,971
Year 10	1.020	1.225	1.212	298	1,909
Year 11	1.020	1.249	1.237	313	1,835
Year 12	1.020	1.274	1.261	329	1,752
Year 13	1.020	1.299	1.287	345	1,795
Year 14	1.020	1.325	1.312	339	1,739
Year 15	1.020	1.352	1.339	292	1,641
Year 16	1.020	1.379	1.365	252	1,600
Year 17	1.020	1.407	1.393	234	1,516
Year 18	1.020	1.435	1.421	236	1,529
Year 19	1.020	1.463	1.449	238	1,489
Year 20	1.020	1.493	1.478	235	1,447
Year 21	1.020	1.523	1.508	231	1,404
Year 22	1.020	1.553	1.538	227	1,360
Year 23	1.020	1.584	1.568	223	1,316
Year 24	1.020	1.616	1.600	219	1,271
Year 25	1.020	1.648	1.632	215	1,226
Year 26	1.020	1.681	1.664	211	1,182
Year 27	1.020	1.715	1.698	206	1,138
Year 28	1.020	1.749	1.732	202	1,094
Year 29	1.020	1.784	1.766	198	1,051
Year 30	1.020	1.820	1.802	194	1,009
Year 31	1.020	1.856	1.838	189	968
Year 32	1.020	1.893	1.874	185	928
Year 33	1.020	1.931	1.912	181	888
Year 34	1.020	1.970	1.950	176	850
Year 35	1.020	2.009	1.989	172	813
Year 36	1.020	2.049	2.029	-	777
Year 37	1.020	2.090	2.070	-	743
Year 38	1.020	2.132	2.111	-	709
Year 39	1.020	2.175	2.153	-	677
Year 40	1.020	2.218	2.196	-	646
Year 41	1.020	2.262	2.240	-	616
Year 42	1.020	2.308	2.285	-	587
Year 43	1.020	2.354	2.331	-	560
Year 44	1.020	2.401	2.377	-	533
Year 45	1.020	2.449	2.425	-	508
Year 46	1.020	2.498	2.473	-	483
Year 47	1.020	2.548	2.523	-	460
Year 48	1.020	2.599	2.573	-	438
			Incurred Severity after Indexation	**14,655**	**74,400**
			Indexation Impact	2,466	17,531

	FLY 2024	(14)	(15)
(a)	Incurred Severity before Indexation	12,189	56,869
(b)	Incurred Severity after Indexation	14,655	74,400

(14a) = C.1.2.1 (14a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (5)]
(14b) = SUM(Year 1:Year 48) of Col (12)
(15a) = C.1.2.1 (15a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (6)]
(15b) = SUM(Year 1:Year 48) of Col (13)

Notes:
(1) From Technical Appendix E.1 Col (a)
(2) From Technical Appendix E.2 Col (a)
(3) Selected To Ultimate = product of Col (1) beginning from same maturity
(4) Selected To Ultimate = product of Col (2) beginning from same maturity
(5) = 1 ÷ (3)
(6) = 1 ÷ (4)
(7) = (5) - (5) Prior
(8) = (6) - (6) Prior
(9) From Appendix C.1.0 Figure C.1.0.3 Col (2)
(10) Year n factor = PRODUCT(Year 1:Year n) of Col (9)
(11) Year n factor = PRODUCT(Year 1:Year n-1) * Year n^0.5 of Col (9)
Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year.
(12) = (14a) x (7) x (10)
(13) = (15a) x (8) x (11)

Incurred Severities before and after Indexation for EAB-MR and EAB-ED - FLY 2025

	No indexation							
	Age-to-Age LDF		Age-to-Ultimate LDF		Cumulative % Paid		Incremental % Paid	
Development Month	EAB-MR (1)	EAB-ED (2)	EAB-MR (3)	EAB-ED (4)	EAB-MR (5)	EAB-ED (6)	EAB-MR (7)	EAB-ED (8)
12 to 24	2.052	1.966	4.560	8.411	21.93%	11.89%	21.93%	11.89%
24 to 36	1.155	1.279	2.222	4.279	45.00%	23.37%	23.07%	11.48%
36 to 48	1.076	1.177	1.924	3.346	51.97%	29.88%	6.97%	6.52%
48 to 60	1.052	1.128	1.787	2.843	55.95%	35.17%	3.98%	5.29%
60 to 72	1.035	1.098	1.700	2.519	58.83%	39.69%	2.88%	4.52%
72 to 84	1.030	1.075	1.641	2.296	60.92%	43.56%	2.09%	3.87%
84 to 96	1.030	1.064	1.594	2.134	62.75%	46.85%	1.83%	3.29%
96 to 108	1.030	1.059	1.547	2.007	64.63%	49.83%	1.88%	2.98%
108 to 120	1.030	1.052	1.502	1.896	66.57%	52.74%	1.94%	2.92%
120 to 132	1.030	1.047	1.458	1.801	68.57%	55.51%	2.00%	2.77%
132 to 144	1.030	1.042	1.416	1.721	70.63%	58.12%	2.06%	2.61%
144 to 156	1.030	1.041	1.375	1.651	72.75%	60.56%	2.12%	2.44%
156 to 168	1.028	1.037	1.335	1.587	74.92%	63.02%	2.18%	2.45%
168 to 180	1.023	1.033	1.298	1.530	77.02%	65.35%	2.10%	2.33%
180 to 192	1.019	1.031	1.269	1.481	78.79%	67.50%	1.77%	2.16%
192 to 204	1.017	1.028	1.245	1.438	80.29%	69.56%	1.50%	2.06%
204 to 216	1.017	1.026	1.225	1.399	81.66%	71.48%	1.36%	1.91%
216-228	1.016	1.025	1.205	1.363	83.00%	73.37%	1.35%	1.89%
228-240	1.015	1.023	1.186	1.330	84.34%	75.18%	1.34%	1.81%
240-252	1.015	1.021	1.168	1.300	85.63%	76.90%	1.29%	1.72%
252-264	1.014	1.020	1.151	1.273	86.87%	78.53%	1.24%	1.64%
264-276	1.013	1.018	1.135	1.249	88.07%	80.09%	1.20%	1.56%
276-288	1.012	1.017	1.121	1.226	89.23%	81.56%	1.15%	1.48%
288-300	1.012	1.016	1.107	1.205	90.34%	82.96%	1.11%	1.40%
300-312	1.011	1.015	1.094	1.186	91.41%	84.28%	1.07%	1.32%
312-324	1.011	1.014	1.082	1.169	92.44%	85.53%	1.03%	1.25%
324-336	1.010	1.013	1.070	1.153	93.42%	86.71%	0.99%	1.18%
336-348	1.010	1.012	1.060	1.139	94.37%	87.82%	0.95%	1.11%
348-360	1.009	1.011	1.050	1.125	95.28%	88.87%	0.91%	1.05%
360-372	1.009	1.010	1.040	1.113	96.16%	89.85%	0.87%	0.98%
372-384	1.008	1.010	1.031	1.102	96.99%	90.78%	0.84%	0.93%
384-396	1.008	1.009	1.023	1.091	97.79%	91.65%	0.80%	0.87%
396-408	1.007	1.008	1.015	1.081	98.56%	92.47%	0.77%	0.82%
408-420	1.007	1.008	1.007	1.073	99.30%	93.23%	0.74%	0.77%
420-432	1.000	1.007	1.000	1.064	100.00%	93.95%	0.70%	0.72%
432-444		1.007		1.057		94.63%		0.67%
444-456		1.006		1.050		95.26%		0.63%
456-468		1.006		1.043		95.85%		0.59%
468-480		1.005		1.037		96.40%		0.55%
480-492		1.005		1.032		96.92%		0.52%
492-504		1.005		1.027		97.40%		0.48%
504-516		1.004		1.022		97.85%		0.45%
516-528		1.004		1.018		98.27%		0.42%
528-540		1.004		1.013		98.67%		0.39%
540-552		1.003		1.010		99.04%		0.37%
552-564		1.003		1.006		99.38%		0.34%
564-576		1.003		1.003		99.70%		0.32%
576-Ult		1.000		1.000		100.00%		0.30%

Payment Year	Inflation Assumption (9)	Indexation Factor for EAB-MR (10)	Indexation Factor for EAB-ED (11)	EAB-MR Incremental Paid ($) (12)	EAB-ED Incremental Paid ($) (13)
Year 1	1.000	1.000	1.000	2,829	7,178
Year 2	1.024	1.024	1.012	3,048	7,014
Year 3	1.022	1.047	1.035	942	4,072
Year 4	1.020	1.067	1.057	548	3,376
Year 5	1.020	1.089	1.078	405	2,942
Year 6	1.020	1.111	1.100	299	2,570
Year 7	1.020	1.133	1.122	267	2,227
Year 8	1.020	1.155	1.144	280	2,055
Year 9	1.020	1.179	1.167	295	2,055
Year 10	1.020	1.202	1.190	310	1,990
Year 11	1.020	1.226	1.214	325	1,913
Year 12	1.020	1.251	1.238	342	1,826
Year 13	1.020	1.276	1.263	359	1,871
Year 14	1.020	1.301	1.288	352	1,812
Year 15	1.020	1.327	1.314	303	1,711
Year 16	1.020	1.354	1.340	262	1,668
Year 17	1.020	1.381	1.367	243	1,580
Year 18	1.020	1.408	1.395	245	1,593
Year 19	1.020	1.437	1.423	248	1,552
Year 20	1.020	1.465	1.451	244	1,508
Year 21	1.020	1.495	1.480	240	1,463
Year 22	1.020	1.525	1.510	236	1,418
Year 23	1.020	1.555	1.540	232	1,371
Year 24	1.020	1.586	1.571	227	1,325
Year 25	1.020	1.618	1.602	223	1,278
Year 26	1.020	1.650	1.634	219	1,232
Year 27	1.020	1.683	1.667	214	1,186
Year 28	1.020	1.717	1.700	210	1,140
Year 29	1.020	1.751	1.734	206	1,096
Year 30	1.020	1.786	1.769	201	1,052
Year 31	1.020	1.822	1.804	197	1,009
Year 32	1.020	1.858	1.840	192	967
Year 33	1.020	1.896	1.877	188	926
Year 34	1.020	1.934	1.915	183	886
Year 35	1.020	1.972	1.953	179	848
Year 36	1.020	2.012	1.992	-	810
Year 37	1.020	2.052	2.032	-	774
Year 38	1.020	2.093	2.072	-	739
Year 39	1.020	2.135	2.114	-	705
Year 40	1.020	2.177	2.156	-	673
Year 41	1.020	2.221	2.199	-	642
Year 42	1.020	2.265	2.243	-	612
Year 43	1.020	2.311	2.288	-	583
Year 44	1.020	2.357	2.334	-	556
Year 45	1.020	2.404	2.380	-	529
Year 46	1.020	2.452	2.428	-	504
Year 47	1.020	2.501	2.477	-	480
Year 48	1.020	2.551	2.526	-	456
			Incurred Severity after Indexation	**15,293**	**77,772**
			Indexation Impact	2,391	17,393

	FLY 2025	(14)	(15)
(a)	Incurred Severity before Indexation	12,901	60,379
(b)	Incurred Severity after Indexation	15,293	77,772

(14a) = C.1.2.2 (14a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (5)]
(14b) = SUM(Year 1:Year 48) of Col (12)
(15a) = C.1.2.2 (15a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (6)]
(15b) = SUM(Year 1:Year 48) of Col (13)

Notes:
(1) From Technical Appendix E.1 Col (a)
(2) From Technical Appendix E.2 Col (a)
(3) Selected To Ultimate = product of Col (1) beginning from same maturity
(4) Selected To Ultimate = product of Col (2) beginning from same maturity
(5) = 1 ÷ (3)
(6) = 1 ÷ (4)
(7) = (5) - (5) Prior
(8) = (6) - (6) Prior
(9) From Appendix C.1.0 Figure C.1.0.3 Col (2)
(10) Year n factor = PRODUCT(Year 1:Year n) of Col (9)
(11) Year n factor = PRODUCT(Year 1:Year n-1) * Year n^0.5 of Col (9)
Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year.
(12) = (14a) x (7) x (10)
(13) = (15a) x (8) x (11)

Incurred Severities before and after Indexation for EAB-MR and EAB-ED - FLY 2026

Development Month	No indexation							
	Age-to-Age LDF		Age-to-Ultimate LDF		Cumulative % Paid		Incremental % Paid	
	EAB-MR (1)	EAB-ED (2)	EAB-MR (3)	EAB-ED (4)	EAB-MR (5)	EAB-ED (6)	EAB-MR (7)	EAB-ED (8)
12 to 24	2.052	1.966	4.560	8.411	21.93%	11.89%	21.93%	11.89%
24 to 36	1.155	1.279	2.222	4.279	45.00%	23.37%	23.07%	11.48%
36 to 48	1.076	1.177	1.924	3.346	51.97%	29.88%	6.97%	6.52%
48 to 60	1.052	1.128	1.787	2.843	55.95%	35.17%	3.98%	5.29%
60 to 72	1.035	1.098	1.700	2.519	58.83%	39.69%	2.88%	4.52%
72 to 84	1.030	1.075	1.641	2.296	60.92%	43.56%	2.09%	3.87%
84 to 96	1.030	1.064	1.594	2.134	62.75%	46.85%	1.83%	3.29%
96 to 108	1.030	1.059	1.547	2.007	64.63%	49.83%	1.88%	2.98%
108 to 120	1.030	1.052	1.502	1.896	66.57%	52.74%	1.94%	2.92%
120 to 132	1.030	1.047	1.458	1.801	68.57%	55.51%	2.00%	2.77%
132 to 144	1.030	1.042	1.416	1.721	70.63%	58.12%	2.06%	2.61%
144 to 156	1.030	1.041	1.375	1.651	72.75%	60.56%	2.12%	2.44%
156 to 168	1.028	1.037	1.335	1.587	74.92%	63.02%	2.18%	2.45%
168 to 180	1.023	1.033	1.298	1.530	77.02%	65.35%	2.10%	2.33%
180 to 192	1.019	1.031	1.269	1.481	78.79%	67.50%	1.77%	2.16%
192 to 204	1.017	1.028	1.245	1.438	80.29%	69.56%	1.50%	2.06%
204 to 216	1.017	1.026	1.225	1.399	81.66%	71.48%	1.36%	1.91%
216-228	1.016	1.025	1.205	1.363	83.00%	73.37%	1.35%	1.89%
228-240	1.015	1.023	1.186	1.330	84.34%	75.18%	1.34%	1.81%
240-252	1.015	1.021	1.168	1.300	85.63%	76.90%	1.29%	1.72%
252-264	1.014	1.020	1.151	1.273	86.87%	78.53%	1.24%	1.64%
264-276	1.013	1.018	1.135	1.249	88.07%	80.09%	1.20%	1.56%
276-288	1.012	1.017	1.121	1.226	89.23%	81.56%	1.15%	1.48%
288-300	1.012	1.016	1.107	1.205	90.34%	82.96%	1.11%	1.40%
300-312	1.011	1.015	1.094	1.186	91.41%	84.28%	1.07%	1.32%
312-324	1.011	1.014	1.082	1.169	92.44%	85.53%	1.03%	1.25%
324-336	1.010	1.013	1.070	1.153	93.42%	86.71%	0.99%	1.18%
336-348	1.010	1.012	1.060	1.139	94.37%	87.82%	0.95%	1.11%
348-360	1.009	1.011	1.050	1.125	95.28%	88.87%	0.91%	1.05%
360-372	1.009	1.010	1.040	1.113	96.16%	89.85%	0.87%	0.98%
372-384	1.008	1.010	1.031	1.102	96.99%	90.78%	0.84%	0.93%
384-396	1.008	1.009	1.023	1.091	97.79%	91.65%	0.80%	0.87%
396-408	1.007	1.008	1.015	1.081	98.56%	92.47%	0.77%	0.82%
408-420	1.007	1.008	1.007	1.073	99.30%	93.23%	0.74%	0.77%
420-432	1.000	1.007	1.000	1.064	100.00%	93.95%	0.70%	0.72%
432-444		1.007		1.057		94.63%		0.67%
444-456		1.006		1.050		95.26%		0.63%
456-468		1.006		1.043		95.85%		0.59%
468-480		1.005		1.037		96.40%		0.55%
480-492		1.005		1.032		96.92%		0.52%
492-504		1.005		1.027		97.40%		0.48%
504-516		1.004		1.022		97.85%		0.45%
516-528		1.004		1.018		98.27%		0.42%
528-540		1.004		1.013		98.67%		0.39%
540-552		1.003		1.010		99.04%		0.37%
552-564		1.003		1.006		99.38%		0.34%
564-576		1.003		1.003		99.70%		0.32%
576-Ult		1.000		1.000		100.00%		0.30%

Payment Year	Inflation Assumption (9)	Indexation Factor for EAB-MR (10)	Indexation Factor for EAB-ED (11)	EAB-MR Incremental Paid ($) (12)	EAB-ED Incremental Paid ($) (13)
Year 1	1.000	1.000	1.000	2,951	7,511
Year 2	1.022	1.022	1.011	3,173	7,332
Year 3	1.020	1.042	1.032	978	4,249
Year 4	1.020	1.063	1.053	569	3,518
Year 5	1.020	1.085	1.074	421	3,066
Year 6	1.020	1.106	1.095	311	2,678
Year 7	1.020	1.128	1.117	278	2,322
Year 8	1.020	1.151	1.140	291	2,142
Year 9	1.020	1.174	1.162	306	2,142
Year 10	1.020	1.197	1.186	322	2,074
Year 11	1.020	1.221	1.209	338	1,994
Year 12	1.020	1.246	1.234	356	1,903
Year 13	1.020	1.271	1.258	373	1,950
Year 14	1.020	1.296	1.283	366	1,889
Year 15	1.020	1.322	1.309	315	1,783
Year 16	1.020	1.349	1.335	272	1,738
Year 17	1.020	1.375	1.362	252	1,647
Year 18	1.020	1.403	1.389	255	1,661
Year 19	1.020	1.431	1.417	257	1,617
Year 20	1.020	1.460	1.445	253	1,572
Year 21	1.020	1.489	1.474	249	1,525
Year 22	1.020	1.519	1.504	245	1,478
Year 23	1.020	1.549	1.534	241	1,429
Year 24	1.020	1.580	1.564	236	1,381
Year 25	1.020	1.612	1.596	232	1,332
Year 26	1.020	1.644	1.628	227	1,284
Year 27	1.020	1.677	1.660	223	1,236
Year 28	1.020	1.710	1.693	218	1,189
Year 29	1.020	1.744	1.727	214	1,142
Year 30	1.020	1.779	1.762	209	1,096
Year 31	1.020	1.815	1.797	204	1,051
Year 32	1.020	1.851	1.833	200	1,008
Year 33	1.020	1.888	1.870	195	965
Year 34	1.020	1.926	1.907	191	924
Year 35	1.020	1.965	1.945	186	883
Year 36	1.020	2.004	1.984	-	844
Year 37	1.020	2.044	2.024	-	807
Year 38	1.020	2.085	2.064	-	770
Year 39	1.020	2.126	2.106	-	735
Year 40	1.020	2.169	2.148	-	702
Year 41	1.020	2.212	2.191	-	669
Year 42	1.020	2.257	2.234	-	638
Year 43	1.020	2.302	2.279	-	608
Year 44	1.020	2.348	2.325	-	579
Year 45	1.020	2.395	2.371	-	552
Year 46	1.020	2.443	2.419	-	525
Year 47	1.020	2.491	2.467	-	500
Year 48	1.020	2.541	2.516	-	476
			Incurred Severity after Indexation	**15,907**	**81,117**
			Indexation Impact	2,450	17,937

	FLY 2026	(14)	(15)
(a)	Incurred Severity before Indexation	13,457	63,180
(b)	Incurred Severity after Indexation	15,907	81,117

(14a) = C.1.2.3 (14a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (5)]
(14b) = SUM(Year 1:Year 48) of Col (12)
(15a) = C.1.2.3 (15a) * [1+ Appendix C.1.0 Figure C.1.0.3 Col (6)]
(15b) = SUM(Year 1:Year 48) of Col (13)

Notes:
(1) From Technical Appendix E.1 Col (a)
(2) From Technical Appendix E.2 Col (a)
(3) Selected To Ultimate = product of Col (1) beginning from same maturity
(4) Selected To Ultimate = product of Col (2) beginning from same maturity
(5) = 1 ÷ (3)
(6) = 1 ÷ (4)
(7) = (5) - (5) Prior
(8) = (6) - (6) Prior
(9) From Appendix C.1.0 Figure C.1.0.3 Col (2)
(10) Year n factor = PRODUCT(Year 1:Year n) of Col (9)
(11) Year n factor = PRODUCT(Year 1:Year n-1) * Year n^0.5 of Col (9)
Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year.
(12) = (14a) x (7) x (10)
(13) = (15a) x (8) x (11)

APPENDIX C.2.0

BASIC VEHICLE DAMAGE COVERAGE CLAIMS FORECAST ANALYSIS

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Table of Figures

A INTRODUCTION

1. This Appendix shows the forecast analysis of Basic Vehicle Damage Coverage (BVDC) for claims associated with Policy Year (PY) 2023. Figure C.2.0.1 below provides the forecasted frequency and severity for PY 2023.

Figure C.2.0.1 – PY 2023 Forecast Frequency and Severity

Coverage	Frequency	Severity
Basic Vehicle Damage Coverage (BVDC)	3.69%	$ 6,672

2. The PY 2023 frequency and severity forecasts are calculated as weighted averages of the modelled frequency and severity across future loss quarters from Fiscal Loss Years (FLYs) 2024 through 2026. The quarterly frequency points are weighted by the risk exposure in each quarter, and the quarterly severity points are weighted by the claim exposure counts in each quarter, in addition to a factor representing the distribution of PY 2023 risk exposure across the period. Figure C.2.0.2 below provides the weights for each fiscal loss quarter for frequency and severity.

Figure C.2.0.2 – PY 2023 Forecast Weights for Frequency and Severity

Fiscal Loss Quarter	Weight for Frequency	Weight for Severity
2024Q1	0.016 x risk exposure	0.016 x incurred count
2024Q2	0.047 x risk exposure	0.047 x incurred count
2024Q3	0.078 x risk exposure	0.078 x incurred count
2024Q4	0.109 x risk exposure	0.109 x incurred count
2025Q1	0.125 x risk exposure	0.125 x incurred count
2025Q2	0.125 x risk exposure	0.125 x incurred count
2025Q3	0.125 x risk exposure	0.125 x incurred count
2025Q4	0.125 x risk exposure	0.125 x incurred count
2026Q1	0.109 x risk exposure	0.109 x incurred count
2026Q2	0.078 x risk exposure	0.078 x incurred count
2026Q3	0.047 x risk exposure	0.047 x incurred count
2026Q4	0.016 x risk exposure	0.016 x incurred count

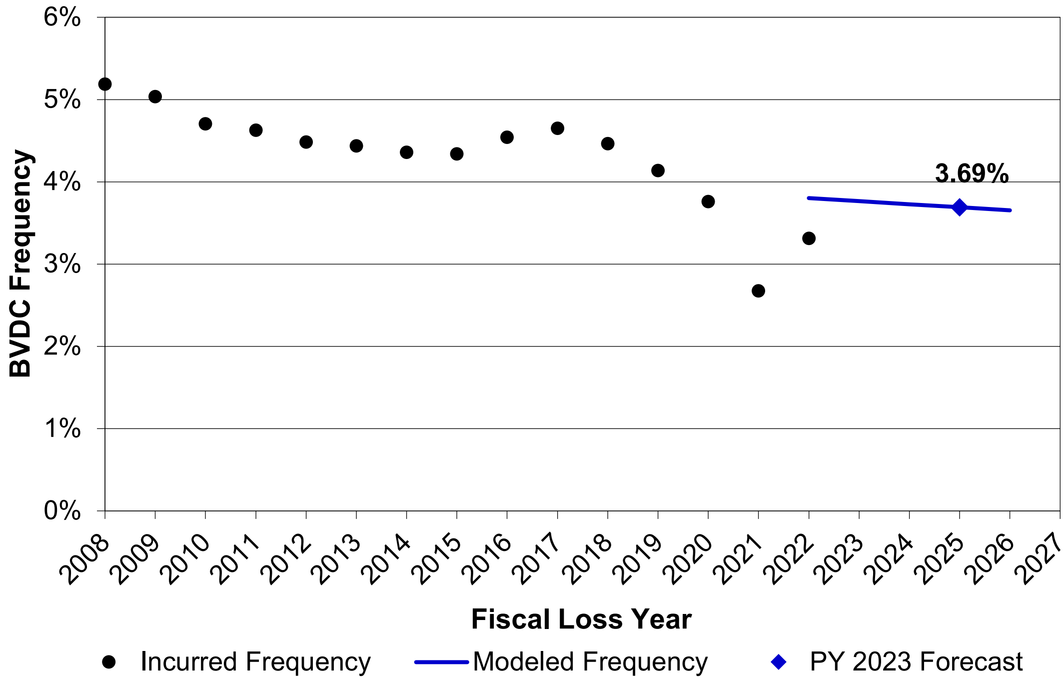
3. Section B and C below show the modelled versus incurred data plots of frequency and severity for BVDC. The plots are based on the incurred frequency and severity data points as shown in Appendix C.2.1 and are derived as shown in Technical Appendix Set C.2.

B BVDC FREQUENCY

4. The BVDC frequency forecast is shown in Figure C.2.0.3. A 10-year simple regression model (baseline) was selected ending at the third quarter of FLY 2020. The selected model excludes all points beginning with the fourth quarter of FLY 2020 because impacts of the COVID-19 pandemic in this period could bias the trend.

5. The resulting annualized trend rate of -1.0% is then applied from a point based on the first three quarters of FLY 2020 (seasonally adjusted), trended forward to the FLY 2022 level. This spring-off point reflects the pre-COVID-19 pandemic frequency level and trend. While a substantial reduction in claim frequency was observed through FLYs 2021 and 2022 as a consequence of the COVID-19 pandemic, the number of claims has been rising and is expected to return to the previous level and trend. The forecast level can be seen to fall above the most recent frequency point for FLY 2022, in which frequency remained relatively low and was affected by a number of factors that are not expected to re-occur, including: public health restrictions related to the Omicron variant of COVID-19, substantial flooding impacting travel through the Fraser Valley, and economic volatility, including impacts to fuel prices, following Russia's invasion of the Ukraine.

Figure C.2.0.3 – BVDC Frequency Forecast



C BVDC SEVERITY

6. BVDC severity is mainly related to materials and labour costs to repair vehicles, and costs to replace when a vehicle is deemed a total loss. It also includes other costs associated with repairs such as towing and storage of vehicle and costs accrued from renting a vehicle or other alternative transportations such as courtesy cars.

7. The BVDC severity forecast is shown in Figure C.2.0.4. ICBC actuaries selected a five-year simple regression model, resulting in a 7.9% annualized trend rate. Although this trend was selected to give consideration to the steeper trend rates observed in recent years, the trend does not fully capture the high cost of payments seen in the most recent two years, which have been in excess of 9%. This is influenced by very high inflation in parts costs and vehicle prices seen recently. Conditions in the vehicle repair industry are also challenging, and have led to both cost pressures and capacity concerns. As discussed in Chapter 7, Appendix 7B Claims Cost Management, ICBC is providing annual rate increases to suppliers, based on the rate of inflation and related industry cost pressures. The effect of inflation is accentuated by increased cycle times for vehicle repairs, which are affected by capacity issues in the vehicle repair industry and parts

shortages affected by disruption in supply chains. This can also increase the costs of towing and storage charges, as well as usage of rental vehicles and alternative transportation, all of which result in higher BVDC severity. The combination of all these effects is not expected to subside substantially within the forecast period, over which inflation is also forecast to remain elevated.

8. Therefore, the actuaries have made an additional adjustment to the model which uses the forecasted BC Consumer Price Index (CPI) inflation, to the extent that it exceeds the typical level of general inflation which would be embedded in the historical trend period. This adjustment for excess inflation over the historical level is applied as an increase to the severity trend for each fiscal loss year, in addition to the underlying trend rate of 7.9%. The calculation of the adjustment for excess inflation is shown in Figure C.2.0.5. The addition of this adjustment represents a change from the selection in the 2021 Revenue Requirements Application (2021 RRA) where the results of a regression model were used without adjustment. At the time of the 2021 RRA, an elevated level of inflation for BC CPI had not been experienced and was not being forecast.

Figure C.2.0.4 – BVDC Severity Forecast

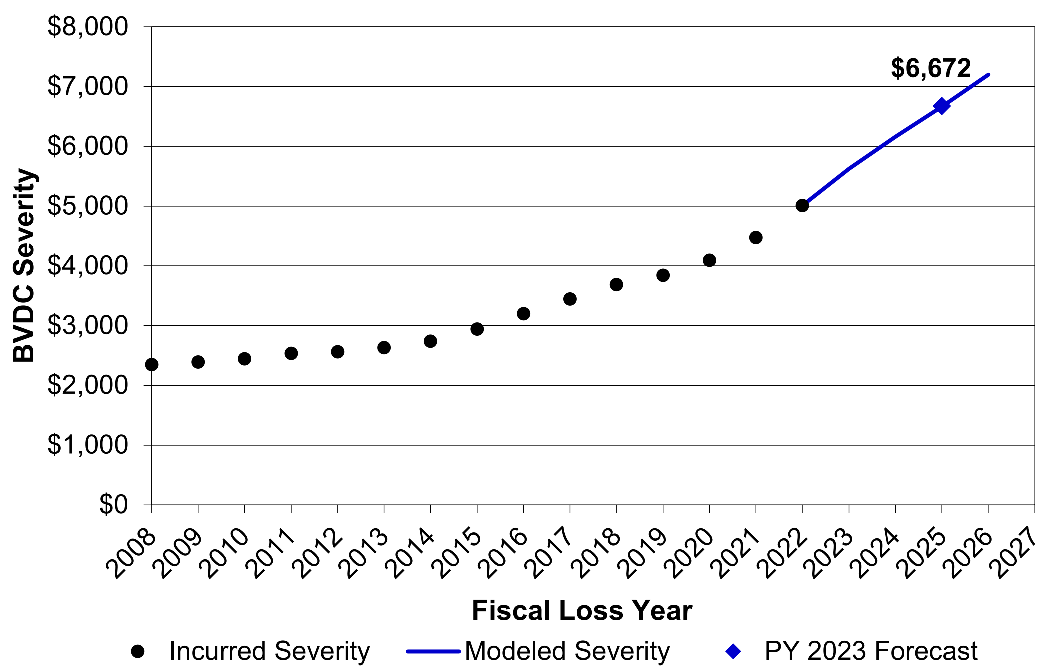


Figure C.2.0.5 – BC CPI Inflation and Adjustment to Severity Trend

Calendar Year/ Fiscal Loss Year	BC CPI Inflation Forecast		Adjustment to Severity Model for Excess Inflation (3)
	Calendar Year (1)	Fiscal Loss Year (2)	
2022	7.0%		
2023	3.9%	6.2%	4.1%
2024	2.4%	3.5%	1.5%
2025	2.2%	2.4%	0.3%
2026	2.0%	2.2%	0.1%
2027		2.0%	0.0%

(1) From Appendix C.0, Figure C.0.3.
(2) = 0.75 x prior year Calendar Year + 0.25 x current Calendar Year.
(3) = [1 + (2)] ÷ [1 + 2%] - 1, where 2% represents the average historical level of general inflation.

Summary of Incurred Frequency and Severity

Basic Vehicle Damage Coverage

For Fiscal Loss Years 2008 to 2026
as of August 31, 2022

Fiscal Loss Year	Earned Risk Exposure	(a) BVDC Frequency		(b) BVDC Severity ($)	
		Incurred	Modelled	Incurred	Modelled
	(1)	(2)	(3)	(4)	(5)
2008	2,760,184	5.19%		2,345	
2009	2,808,456	5.04%		2,390	
2010	2,831,762	4.71%		2,443	
2011	2,872,477	4.63%		2,534	
2012	2,907,909	4.48%		2,564	
2013	2,948,524	4.44%		2,629	
2014	2,997,254	4.36%		2,736	
2015	3,055,349	4.34%		2,941	
2016	3,138,276	4.54%		3,198	
2017	3,217,385	4.65%		3,445	
2018	3,295,151	4.47%		3,687	
2019	3,356,998	4.14%		3,842	
2020	3,402,980	3.76%		4,092	
2021	3,392,499	2.67%		4,475	
2022	3,565,834	3.31%	3.80%	5,009	5,009
2023			3.76%		5,626
2024			3.73%		6,158
2025			3.69%		6,664
2026			3.65%		7,198
PY 2023 Forecast (6)			**3.69%**		**6,672**

(a) Incurred Frequency = Incurred Count ÷ Earned Risk Exposure
(b) Incurred Severity = [Incurred Loss and ALAE - Capped Amounts on Large Claims] ÷ Incurred Count

(1) From Internal ICBC database
(2) Incurred Count from Technical Appendix C.2.1, Col (1)
(4) Incurred Loss and ALAE from Technical Appendix C.2.1, Col (4)
Capped Amounts on Large Claims from Appendix C.0.3, Col (5)
(6) PY 2023 Forecast = Weights x Projected Frequency and Severity Across Fiscal Loss Quarters from FLYs 2024-2026
Weights from Appendix C.2.0 Figure C.2.0.2
The models are described in Appendix C.2.0

APPENDIX C.3.0

THIRD PARTY LIABILITY CLAIMS FORECAST ANALYSIS

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A INTRODUCTION

1. This Appendix shows the forecast analysis of claims associated with Policy Year (PY) 2023 for the Third Party Liability (TPL) sub-coverages. Figure C.3.0.1 below provides a summary of the forecasts for PY 2023.

Figure C.3.0. 1 – PY 2023 Forecast Frequency and Severity

Coverage	Frequency	Severity
TPL – Property Damage (TPL-PD)	0.25%	$ 7,935
TPL – Out-of-Province Bodily Injury (TPL-OOP BI)	0.02%	$ 98,184

2. The PY 2023 frequency and severity forecasts are calculated as weighted averages of the modelled frequency and severity across future loss quarters from Fiscal Loss Years (FLYs) 2024 through 2026. The quarterly frequency points are weighted by the risk exposure in each quarter, and the quarterly severity points are weighted by the claim exposure counts in each quarter, in addition to a factor representing the distribution of PY 2023 risk exposure across the period. Figure C.3.0.2 below provides the weights for each fiscal loss quarter for frequency and severity.

Figure C.3.0. 2 – PY 2023 Forecast Weights for Frequency and Severity

Fiscal Loss Quarter	Weight for Frequency	Weight for Severity
2024Q1	0.016 x risk exposure	0.016 x incurred count
2024Q2	0.047 x risk exposure	0.047 x incurred count
2024Q3	0.078 x risk exposure	0.078 x incurred count
2024Q4	0.109 x risk exposure	0.109 x incurred count
2025Q1	0.125 x risk exposure	0.125 x incurred count
2025Q2	0.125 x risk exposure	0.125 x incurred count
2025Q3	0.125 x risk exposure	0.125 x incurred count
2025Q4	0.125 x risk exposure	0.125 x incurred count
2026Q1	0.109 x risk exposure	0.109 x incurred count
2026Q2	0.078 x risk exposure	0.078 x incurred count
2026Q3	0.047 x risk exposure	0.047 x incurred count
2026Q4	0.016 x risk exposure	0.016 x incurred count

3. This Appendix shows the incurred versus modelled plots of frequency and severity for each of the TPL coverages in Sections B and C below. The plots are based on the incurred frequency and severity data points as shown in Appendices C.3.1 and C.3.2 and are derived as shown in Technical Appendix Set C.3.

B TPL–PROPERTY DAMAGE FORECASTS

4. **Frequency –** The TPL-PD frequency forecast is shown in Figure C.3.0.3. ICBC actuaries selected a 10-year simple regression (baseline) model, ending at the third quarter of FLY 2020. The selected model excludes all points beginning with the fourth quarter of FLY 2020 because of multiple factors:

- Impacts of the COVID-19 pandemic beginning with the fourth quarter of FLY 2020, including travel restrictions and limitations on cross-border travel, could bias the trend (seen in the low FLY 2021 incurred frequency point).
- Transition to the Enhanced Care product in FLY 2022, with changes to the insurance product and new claims procedures in relation to TPL-PD claims. While this appears to have resulted in a higher frequency for TPL-PD claims in FLY 2022, it is unclear that this level of frequency will continue as staff gain further experience under the new product.

5. The actuaries are assuming that the lifting of travel restrictions and stabilization of claims experience will return TPL-PD frequency to its historical trend line. The selected model results in an annualized trend rate of -2.6%.

6. **Severity –** The TPL-PD severity forecast is shown in Figure C.3.0.4. ICBC selected a 10-year simple regression (baseline) model, also ending at the third quarter of FLY 2020. The selected model excludes all points beginning with the fourth quarter of FLY 2020 because impacts of the COVID-19 pandemic in this period have altered the mix of claims and would bias the trend. The actuaries are assuming that the future mix of claims will return to levels consistent with the historical trend period. The selected model results in an annualized trend rate of 5.6%.

Figure C.3.0.3 – TPL-Property Damage Frequency Forecast

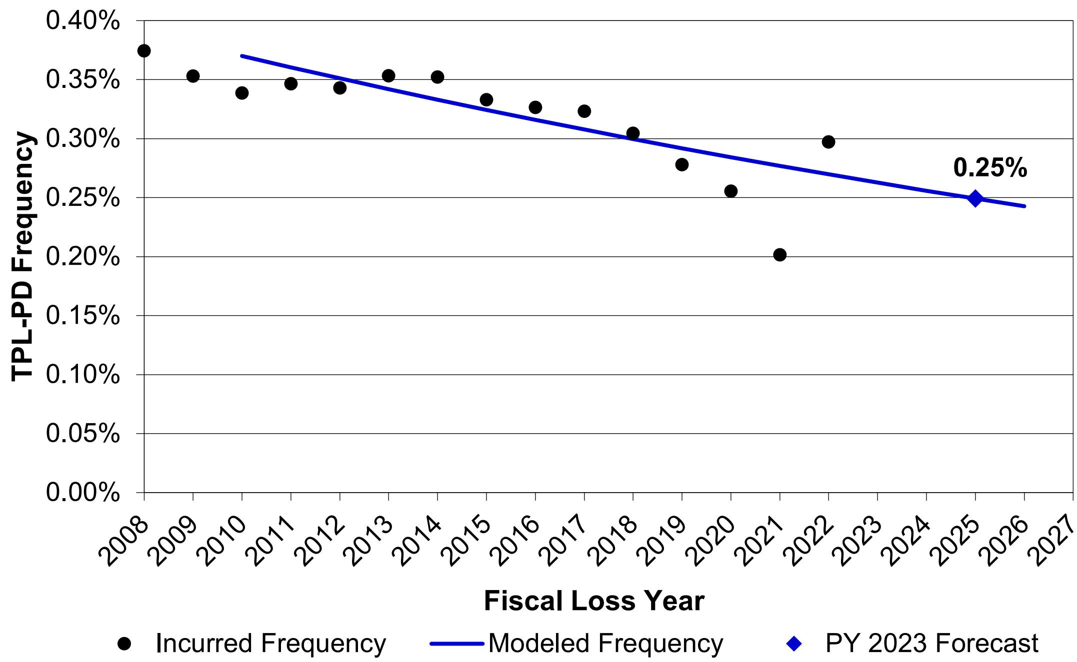
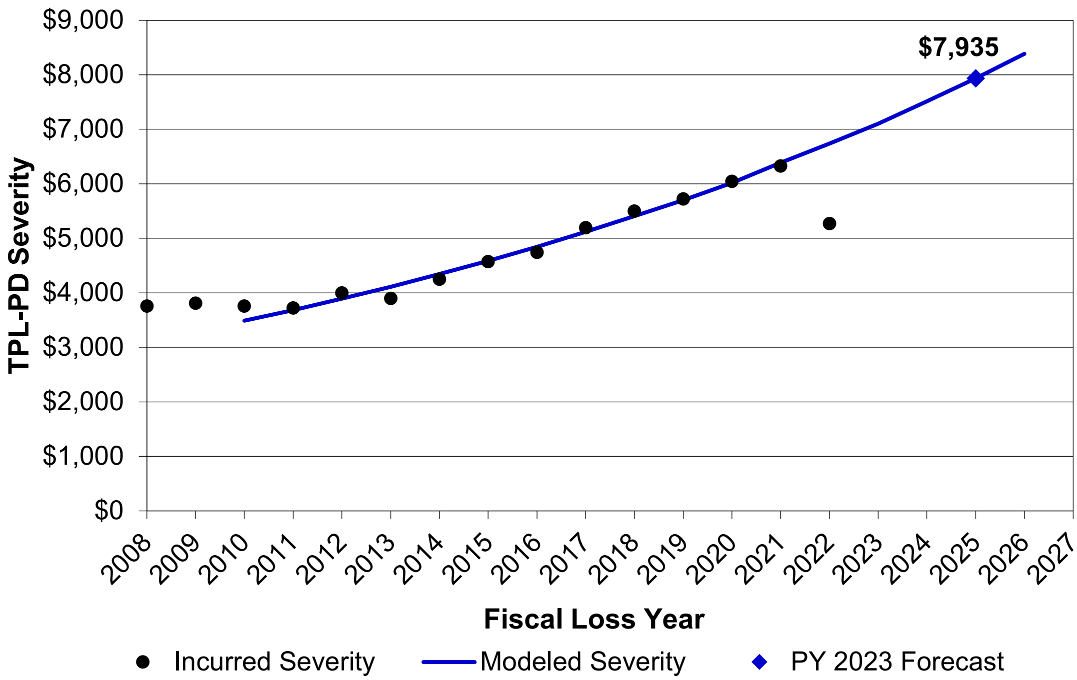


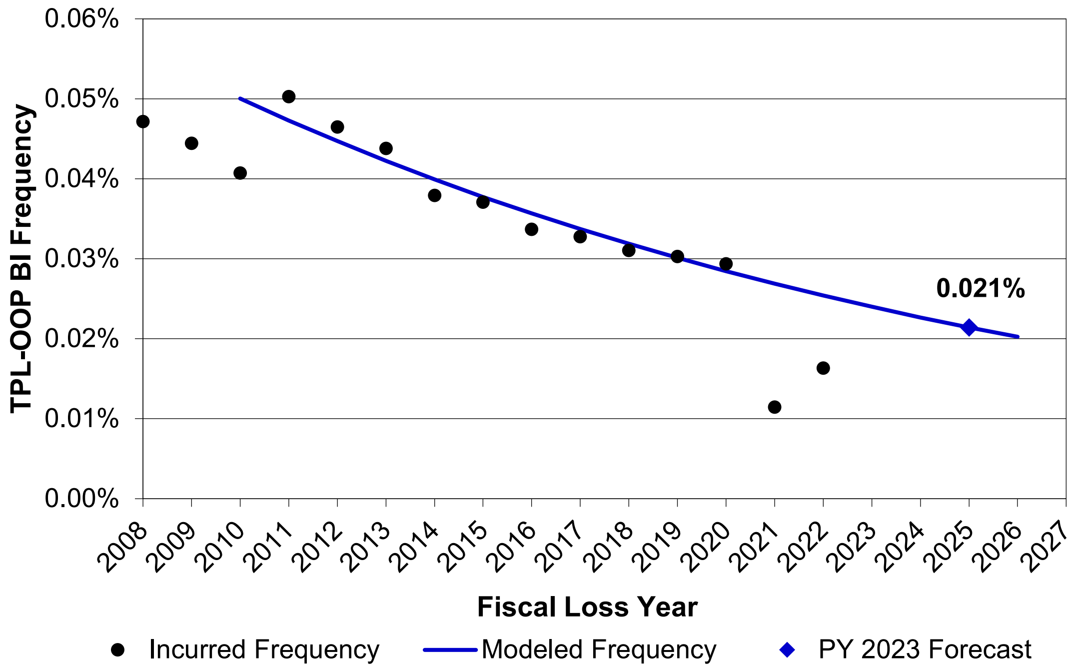
Figure C.3.0.4 – TPL-Property Damage Severity Forecast



C TPL-OOP BI FORECASTS

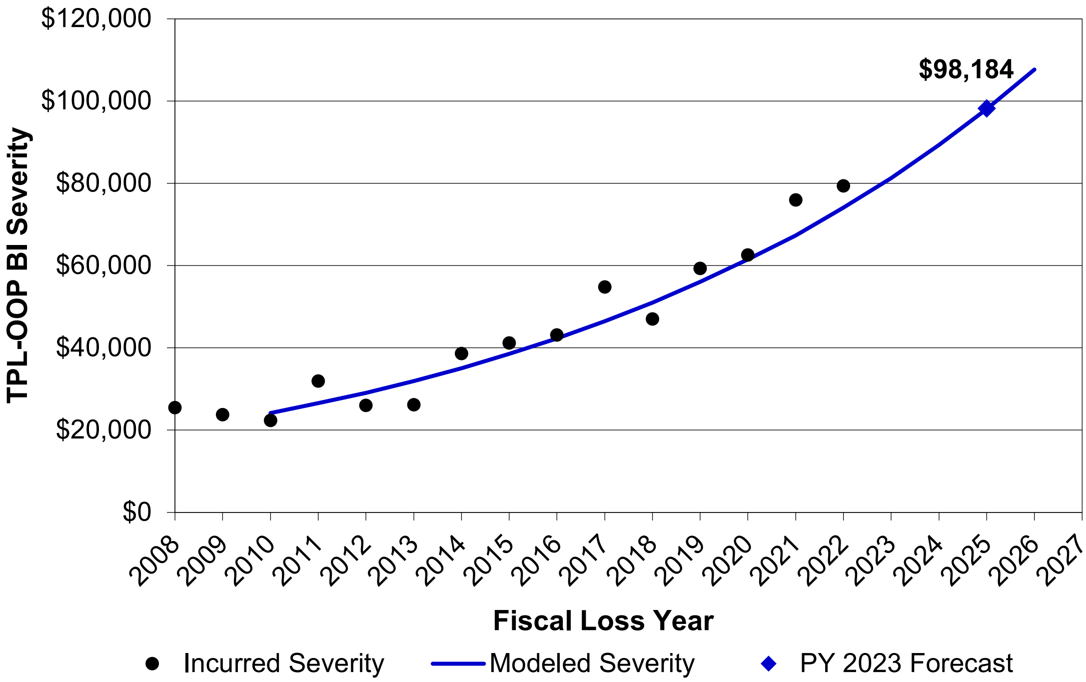
7. **Frequency –** The TPL-OOP BI frequency forecast is shown in Figure C.3.0.5. ICBC selected a 10-year simple regression (baseline) model, ending at the third quarter of FLY 2020, resulting in a -5.5% annualized trend rate. The selected model excludes all points beginning with the fourth quarter of FLY 2020 because impacts of the COVID-19 pandemic in this period, including travel restrictions and limitations on cross-border travel, could bias the trend.

Figure C.3.0.5 – TPL-OOP BI Frequency Forecast



8. **Severity –** The TPL-OOP BI severity forecast is shown in Figure C.3.0.6. ICBC actuaries selected a 10-year simple regression (baseline) model ending at the third quarter of FLY 2020, resulting in a 9.8% annualized trend rate. The selected model excludes all points after the third quarter of FLY 2020 because impacts of the COVID-19 pandemic in this period could bias the trend.

Figure C.3.0.6 – TPL-OOP BI Severity Forecast



Summary of Incurred Frequency and Severity

Third Party Liability - Property Damage

For Fiscal Loss Years 2008 to 2026
as of August 31, 2022

Fiscal Loss Year	Earned Risk Exposure	(a) TPL - PD Frequency		(b) TPL - PD Severity ($)	
		Incurred	Modelled	Incurred	Modelled
	(1)	(2)	(3)	(4)	(5)
2008	2,760,184	0.37%		3,758	
2009	2,808,456	0.35%		3,814	
2010	2,831,762	0.34%	0.37%	3,760	3,490
2011	2,872,477	0.35%	0.36%	3,722	3,682
2012	2,907,909	0.34%	0.35%	4,000	3,896
2013	2,948,524	0.35%	0.34%	3,899	4,112
2014	2,997,254	0.35%	0.33%	4,253	4,343
2015	3,055,349	0.33%	0.32%	4,575	4,587
2016	3,138,276	0.33%	0.32%	4,745	4,843
2017	3,217,385	0.32%	0.31%	5,198	5,118
2018	3,295,151	0.30%	0.30%	5,499	5,407
2019	3,356,998	0.28%	0.29%	5,726	5,703
2020	3,402,980	0.26%	0.28%	6,048	6,015
2021	3,392,499	0.20%	0.28%	6,326	6,388
2022	3,565,834	0.30%	0.27%	5,272	6,737
2023			0.26%		7,102
2024			0.26%		7,515
2025			0.25%		7,938
2026			0.24%		8,385
PY 2023 Forecast (6)			**0.25%**		**7,935**

(a) Incurred Frequency = Incurred Counts ÷ Earned Risk Exposure
(b) Incurred Severity = [Incurred Loss and ALAE - Capped Amounts on Large Claims] ÷ Incurred Count

(1) From Internal ICBC database
(2) Incurred Counts from Technical Appendix C.3.1.1, Col (1)
(4) Incurred Loss and ALAE from Technical Appendix C.3.1.1, Col (4)
Capped Amounts on Large Claims from Appendix C.0.3, Col (6)
(6) PY 2023 Forecast = Weights x Projected Frequency and Severity Across Fiscal Loss Quarters from FLYs 2024-2026
Weights from Appendix C.3.0 Figure C.3.0.2
The models are described in Appendix C.3.0

Summary of Incurred Frequency and Severity

Third Party Liability - Out of Province Bodily Injury

For Fiscal Loss Years 2008 to 2026
as of August 31, 2022

Fiscal Loss Year	Earned Risk Exposure	(a) TPL - OOP BI Frequency		(b) TPL - OOP BI Severity ($)	
		Incurred	Modelled	Incurred	Modelled
	(1)	(2)	(3)	(4)	(5)
2008	2,760,184	0.05%		25,462	
2009	2,808,456	0.04%		23,811	
2010	2,831,762	0.04%	0.05%	22,336	24,160
2011	2,872,477	0.05%	0.05%	31,963	26,574
2012	2,907,909	0.05%	0.04%	26,062	29,087
2013	2,948,524	0.04%	0.04%	26,217	31,954
2014	2,997,254	0.04%	0.04%	38,637	35,076
2015	3,055,349	0.04%	0.04%	41,206	38,563
2016	3,138,276	0.03%	0.04%	43,129	42,307
2017	3,217,385	0.03%	0.03%	54,801	46,480
2018	3,295,151	0.03%	0.03%	47,051	51,018
2019	3,356,998	0.03%	0.03%	59,334	56,060
2020	3,402,980	0.03%	0.03%	62,595	61,471
2021	3,392,499	0.01%	0.03%	76,005	67,343
2022	3,565,834	0.02%	0.03%	79,433	74,121
2023			0.02%		81,275
2024			0.02%		89,329
2025			0.02%		98,071
2026			0.02%		107,669
PY 2023 Forecast (6)			**0.02%**		**98,184**

(a) Incurred Frequency = Incurred Counts ÷ Earned Risk Exposure
(b) Incurred Severity = [Incurred Loss and ALAE - Capped Amounts on Large Claims] ÷ Incurred Count

(1) From Internal ICBC database
(2) Incurred Counts from Technical Appendix C.3.2.1, Col (1)
(4) Incurred Loss and ALAE from Technical Appendix C.3.2.1, Col (2)
Capped Amounts on Large Claims from Appendix C.0.3, Col (7)
(6) PY 2023 Forecast = Weights x Projected Frequency and Severity Across Fiscal Loss Quarters from FLYs 2024-2026
Weights from Appendix C.3.0 Figure C.3.0.2
The models are described in Appendix C.3.0

APPENDIX C.4.0

BULK CLAIMS COST FORECAST

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A INTRODUCTION

1. Bulk claim payments are made for certain claims-related costs, such as those for ambulance services and vehicle valuation reports, which are invoiced to ICBC periodically on an aggregate basis. As these are not invoiced on an individual claim basis, these payments are not recorded in ICBC's claims management system, Guidewire ClaimCenter® like regular claims, but are instead processed through ICBC's financial accounting system (SAP), and thus are not included in the claims database.[1] The Basic insurance portion of Bulk claims costs is therefore not included in the actuarial analysis of claims costs for individual sub-coverages (as discussed in Appendix C.1 to C.3), but instead is forecasted separately, and discussed in this Appendix. Section B below explains the forecasting and allocation of Bulk claims costs, which are reflected in Appendix A.0 as a component of overall claims costs.

B FORECASTING AND ALLOCATION

2. The incurred amounts of Bulk claims costs for each fiscal loss year are estimated on an overall basis for historical loss years, forecasted to future years based on exposure growth and inflation, and then allocated to sub-coverages, as shown in Appendix C.4.1. This represents a change from the 2021 Revenue Requirements Application, in which Bulk claims costs were first allocated into coverages and then forecasted based on the loss cost trends for each coverage. This change reflects that Bulk claims costs do not have a specific relationship with the cost drivers for each coverage, and that general cost inflation is expected to be a key driver of Bulk claims costs.

3. After removing legal-based costs in order to support an appropriate forecast for future Bulk claims costs under the Enhanced Care product, Bulk claims costs for Fiscal Loss Years (FLYs) 2023 through 2026 are forecast by applying assumptions for annual written risk exposure growth and BC consumer price index inflation to a selected FLY 2022 level. The FLY 2022 spring-off point used for forecasting is based on an average of FLYs 2019 to 2022, excluding FLY 2021 to limit the impacts of the COVID-19 pandemic on the forecast. The forecast for Policy Year (PY) 2023 is then determined by a weighted sum of the FLY 2024, 2025, and 2026 amounts, representing the period over which claims associated with PY 2023 policies can occur (as

[1] SAP is an enterprise resource planning system that helps manage processing, information and reporting on business operations, financials and human resources.

discussed in Chapter 3, Appendix C.0 Claims Forecast Analysis, Section A). The calculations are shown in Appendix C.4.1 sections A and B.

4. After forecasting the Basic Bulk claims costs for PY 2023, the overall amount is allocated to sub-coverages. The proportion of PY 2023 Bulk claims costs associated with each sub-coverage is assumed to be equivalent to the proportion of PY 2023 loss cost for each sub-coverage. The calculations are shown in Appendix C.4.1, Section C.

Bulk Claims Costs

As of August 31, 2022

A. Summary of Bulk Claims Costs Before & After Exclusion of Legal-Based Expenses ($ 000's)

Fiscal Loss Year	Historical 2019	2020	2021	2022	Selected FLY 2022 (1)
(a) Unadjusted Bulk	10,511	10,815	8,073	13,166	11,497
(b) Legal-Based Expenses	619	756	745	830	735
(c) Adjusted Bulk	**9,892**	**10,059**	**7,329**	**12,336**	**10,762**

(a) Losses with legal-based related expenses
(b) Legal-Based related expenses from internal ICBC database
(c) = (a) - (b)
(1) = The average of FLY 2019, 2020 and 2022. FLY 2021 is excluded to remove COVID-19 pandemic impacts.

B. Bulk Claims Costs Forecasts

	2022	2023	2024	2025	2026
(d) Forecast BC CPI Inflation by Calendar Year	7.0%	3.9%	2.4%	2.2%	2.0%

Fiscal Loss Year	2022	2023	2024	2025	2026	PY 2023 Forecast (2)
(e) CPI Growth Forecasts		6.2%	3.5%	2.4%	2.2%	
(f) Written Exposure Growth		1.8%	1.8%	1.8%	1.8%	
(g) Bulk Forecast ($ 000's)	**10,762**	**11,638**	**12,265**	**12,779**	**13,289**	**25,556**

(d) From Appendix C.0, Figure C.0.3
(e) = 0.75 x Prior year (d) + 0.25 x Current year (d)
(f) Appendix B.2, weighted Personal and Commercial growth, fiscal year 2024/25
(g) = (1c), for FLY 2022
= (prior year) x [1 + (e)] x [1 + (f)], for FLY 2023 and beyond
(2) = 0.5 x FLY 2024 + 1.0 x FLY 2025 + 0.5 x FLY 2026
weights based on PY 2023 weighting

C. PY2023 Bulk Claims Costs by Sub-Coverage Level

Sub-Coverage	Allocation Factor (3)	PY 2023 Bulk Claims Costs Forecast ($000's) (4) = (3) x (2)
Medical & Rehabilitation	32.1%	**8,202**
Enhanced Disability	24.5%	**6,270**
Permanent Impairment	5.2%	**1,333**
Death Benefits	1.6%	**401**
Basic Vehicle Damage Coverage	31.3%	**8,008**
TPL-Property Damage	2.6%	**658**
TPL-Out of Province Bodily Injury	2.7%	**684**
Total	**100.0%**	**25,556**

(3) From Appendix C.0, Figure C.0.1, Col (5)

APPENDIX C.5.0

PROSPECTIVE ADJUSTMENTS

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A INTRODUCTION

1. Loss trend modelling relies on the data and information available at the time of the actuarial indicated rate change analysis to forecast the costs for claims associated with policies written in the upcoming policy years, such that it does not reflect impacts from imminent or recent changes. As required by actuarial Standards of Practice (SOP) section 2620.05,[1] when a future event that will influence (either positively or negatively) the number or cost of future claims is not accounted for within the loss trend models, a specific adjustment is made to the estimated claims costs for the prospective policy year (PY) in order to reflect the impact of the event. This is known as a prospective adjustment. The need for any particular prospective adjustment is transitory; as time passes, the actual impact of the event becomes reflected in the data itself and in the loss trends so that it becomes unnecessary to include an adjustment. In some cases, a partial adjustment may be needed until the amount is fully reflected in the loss trends.

2. As in past revenue requirements applications (RRAs), ICBC applies a framework described in Section B for determining prospective adjustments in accordance with accepted actuarial practice. Under this established framework, prospective adjustments are included for events where relevant and sufficient information is available to estimate the adjustments, while taking into consideration the fact that the cost and effort expended in pursuit of estimates must be balanced against the transitory benefit of including an adjustment for any particular event.

3. Similar to PY 2021, there are no prospective adjustments in this Application to determine the actuarial indicated rate change for PY 2023.

B ICBC USES ESTABLISHED FRAMEWORK FOR ASSESSING PROSPECTIVE ADJUSTMENTS

4. A prospective adjustment considers province-wide claims costs or savings arising from a particular event or initiative, in advance of the occurrence of that event. A prospective adjustment is based on evidence that supports the production of an unbiased best estimate of its impact on claims costs for a future policy year.

[1] Section 2620.05 of the SOP states that "The actuary would consider that the subject experience, related experience, and future cash flows may be affected by changes in circumstances that may affect expected claim costs, expense costs, and provision for profit." Canadian Institute of Actuaries, (n.d.), *Standards of Practice.* Retrieved from, https://www.cia-ica.ca/publications/standards-of-practice.

5. ICBC's actuaries consult with internal experts on a regular basis to identify upcoming events that may result in future costs or savings. The identified events are then considered as candidates for prospective adjustment. Each candidate event is examined to determine its potential to effect a change in loss cost. If a change is expected, relevant internal and external data is collected to estimate the amount of the future costs or savings. The blending of information from subject experience with information from one or more sets of related experience can improve the predictive value of estimates. Section C below describes the events considered for prospective adjustments in this Application.

6. The candidate events for which prospective adjustments are considered must qualify under four criteria. These criteria remain unchanged from previous RRAs:

1. **Timing**
   The implementation/completion of the project, initiative, or event is highly probable and the impact on costs or savings is expected within the prospective policy year.

2. **Causal Relationship to Claims Costs or Savings**
   The project, initiative, or event is expected to impact claims costs, either directly or indirectly.

3. **Estimable Costs or Savings**
   A credible estimation of the project's, initiative's, or event's impact on ICBC claims costs is available, or can be produced based on BC data or generalizable results from other jurisdictions.

4. **Significant Impact**
   i. The costs or savings to be realized within the prospective policy year are significant.
   ii. A prospective adjustment may still be included for a candidate event, which is not expected to produce a significant impact, if a credible estimate is readily available.

7. Candidate events are evaluated according to these criteria in the following three-step process:

- **Step 1** – The first step relates primarily to the first two criteria. Internal experts are consulted in order to identify candidate events that are considered likely to occur within the scope of the upcoming policy year, and that have an intuitive causal relationship to future claims costs or savings. If there is significant uncertainty that a candidate event will occur within the scope of the upcoming policy year, it will not be considered as a prospective adjustment. It may, however, continue to be considered as a candidate event in future years.

- **Step 2** – The second step relates to infrastructure and road use changes, which are considered a special case. For projects with significant potential impacts on claims as a result of infrastructure or road use changes, ICBC will attempt to obtain credible estimates that are developed on behalf of project sponsors and can be used to estimate the amount of future claims costs or savings as a result of the change.

- **Step 3** – The third step relates primarily to the third criterion. The remaining candidate events at this stage are assessed to determine if credible estimates can be determined for the costs or savings they represent. In the case of internal initiatives, this is often done through the use of pilot programs. A pilot program would involve a small group of customers and therefore not result in significant savings in itself, but can generate credible data which can subsequently be used for the estimation of savings associated with a full roll-out of the initiative. Where a pilot program is not used, alternative internal or external information is collected in order to assess the potential impact of the candidate event. If insufficient evidence is available to provide a credible estimate of the costs or savings generated by a candidate event, then no prospective adjustment is made.

8. Although the absence of a credible estimate of its impact disqualifies an event from consideration as a prospective adjustment, it should be noted that ICBC operates in a closed system. Thus, any actual costs or savings generated will flow through to capital available for rate setting, which is managed for the benefit of Basic insurance customers.

C EVENTS CONSIDERED FOR PROSPECTIVE ADJUSTMENTS

9. ICBC has not identified any prospective adjustments required in this Application. In coming to this conclusion, ICBC considered whether it should include a prospective adjustment for Material Damage (MD) programs.

C.1 MATERIAL DAMAGE (MD) CHANGES ALREADY REFLECTED IN TRENDS

10. As discussed in Chapter 7, Appendix 7B Claims Cost Management, Section C, ICBC has concluded the implementation of the new Collision and Glass Programs (MD RAAP) in March 2022. Specifically, ICBC has:

- Ensured that all estimating staff have access to industry standard training materials and introduced a dedicated Original Equipment research team which works closely with vehicle manufacturers to ensure the safe and cost effective application of repair procedures.
- Updated compliance and control processes to ensure a greater number of Quality Assurance (QA) assessments.
- Made technology enhancements such as refinements to the Quality Assessment application, the repair facility locator, and performance scorecards.

11. In addition, macro-economic conditions have changed considerably which have placed further cost pressures on MD suppliers. In an effort to help address ongoing inflationary cost pressures, to better support the industry, and to support the goal of ensuring a sufficient number of repair facilities and qualified technicians , ICBC has increased MD supplier rates effective July 1, 2022 and is providing annual MD supplier rate increases over the next three years. Please see Chapter 7, Appendix 7B, Section C for more information.

12. The implementation of MD RAAP and the MD supplier rate increases have been considered within the selection of the loss cost trends for PY 2023 and therefore there is no prospective adjustment for these material damage changes.

APPENDIX C.6.0

UNALLOCATED LOSS ADJUSTMENT EXPENSES FORECAST

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A INTRODUCTION

1. Unallocated Loss Adjustment Expenses (ULAE) accounts for expenses incurred in the management of claims, which cannot be allocated directly to a particular claim such as internal claims staff salaries. Claims servicing expenses may be paid on a claim over a number of years, from when it is first reported until it is completed. ULAE is incurred when a claim opens, is maintained while open, and is completed.

2. The ULAE forecasts discussed in this Appendix pertain only to internal claims servicing costs to handle Enhanced Care (EC) Basic claims that are related to policies written in Policy Year (PY) 2023 and will be paid over a long period as claims from PY 2023 are handled and eventually completed. The actuaries forecast ULAE amounts for claims occurring in future years (fiscal loss years 2024 through 2026) separately for each sub-coverage as further explained in Technical Appendix C.6. The ULAE amounts for PY 2023 are derived from these future year forecasts, as shown in Appendix C.6.1, and the results are summarized in Figure C.6.0.1 below. The ULAE amounts are reflected in Appendices A.3 to A.5 as part of the overall claims costs used in the calculation of the required premium as discussed in Appendix A.0.

Figure C.6.0.1 – PY 2023 ULAE Forecast ($ 000's)

Coverage	PY 2023
Enhanced Accident Benefits (EAB)	
Medical and Rehabilitation (EAB-MR)	132,583
Enhanced Disability (EAB-ED)	154,314
Permanent Impairment (EAB-PI)	47,542
Death Benefits (EAB-DB)	6,806
Basic Vehicle Damage Coverage (BVDC)	204,047
Third Party Liability (TPL)	
Property Damage (TPL-PD)	11,326
Out-of-Province Bodily Injury (TPL-OOP BI)	8,605
TOTAL PY 2023 ULAE FORECAST	**565,224**

3. The estimated ULAE amounts for PY 2023 are higher than PY 2021, mainly due to higher projected average costs in future years. For further details on cost projections, please refer to Chapter 6, Operating Expenses and Allocation Information.

B ULAE IS DIFFERENT FROM FINANCIAL FORECASTS

4. In a given fiscal year, ICBC claims staff service claims that have occurred in that year, as well as claims from prior years that had not yet completed. The Claims Services Expenses reflected in Chapter 6, Figure 6.1 represent the amounts ICBC spent or expect to spend in each fiscal year, regardless of which loss year or policy year the claims were incurred. Chapter 6, Figure 6.1 includes the claims handling costs for claims from previous insurance products and policy years (both legal-based claims that occurred prior to May 1, 2021 and EC claims from PY 2021) along with PY 2023 claims (EC).

5. PY 2023 ULAE represents the internal claims servicing expenses for the set of claims associated with PY 2023 policies. Claims from PY 2023 will be incurred in fiscal years 2024, 2025 and 2026, but the associated ULAE amounts will be paid over a longer period, as claims from PY 2023 policies are handled and eventually completed.

6. The portion of the expenses expected to be paid in fiscal years 2024, 2025 and 2026 shown in Figure 6.1 to service claims from previous policy years is not included in the calculation of the PY 2023 required premium.[1] In addition, the 2024 to 2026 fiscal year forecasts from Chapter 6, Figure 6.1 do not provide for all of the claims services expenses that will be paid in future years on claims incurred during PY 2023.

7. Thus, although ULAE forecasts are based on expectations of staffing and compensation costs discussed in Chapter 6 of this Application, the forecasts of Claims Services Expenses in Chapter 6, Figure 6.1 are not directly comparable to the ULAE costs for PY 2023.

C DATA AND METHODOLOGY FOR FORECASTING PY 2023 ULAE

8. ULAE costs for each sub-coverage are estimated for PY 2023 based on projected claim exposure counts incurred in the policy period and average ULAE costs per claim exposure count to service these claims. Projected claim exposure counts for each sub-coverage are based on the selected frequency trend for each sub-coverage. Average future ULAE cost per claim exposure count is estimated to increase each year. ICBC estimates the increase based on general inflationary changes and anticipated increases to compensation costs in the next few years, beyond which a long term trend rate is applied.

[1] From an accounting perspective, the Claims Services Expenses for the prior year claims are part of ULAE reserve in the unpaid claims liability. The ULAE reserve on these claims is reduced as the claims are completed and the claims service expenses are paid.

9. ICBC projects future ULAE costs per claim exposure count for the different sub-coverages as follows:

- For EAB sub-coverages, ICBC has developed specific ULAE forecasts based on the projected claim exposure counts and expected average resources to service each claim. ICBC is unable to directly use historical information from accident benefits (AB) claims under the legal-based product for this purpose because more claims services resources will be required to service the EAB claims than the legal-based AB claims.
- BVDC claims and TPL-Property Damage (TPL-PD) claims are assumed to incur similar average ULAE costs as the legal-based property damage liability coverage.
- ICBC assumes the new TPL-OOP BI claims will incur similar average ULAE costs as the legal-based bodily injury claims.

10. The detailed analysis for the PY 2023 ULAE estimates is provided in Technical Appendix C.6.

Policy Year Summary of ULAE ($ 000's)

For Fiscal Loss Years 2024 to 2026
as of August 31, 2022

Fiscal Loss Year ULAE		EAB-MR (1)	EAB-ED (2)	EAB-PI (3)	EAB-DB (4)	BVDC (5)	TPL-PD (6)	TPL-OOP BI (7)	Total (8)	Proportion for PY 2023 (9)
(a)	FLY 2024	66,182	76,267	23,145	3,355	98,205	5,554	4,351	**277,060**	**50%**
(b)	FLY 2025	65,732	76,749	23,758	3,377	102,340	5,677	4,305	**281,938**	**100%**
(c)	FLY 2026	67,521	78,863	24,423	3,504	105,210	5,742	4,249	**289,512**	**50%**
From Technical Appendix		C.6.2 Column (1)	C.6.3 Column (1)	C.6.4 Column (1)	C.6.5 Column (1)	C.6.6 Column (1)	C.6.7 Column (1)	C.6.8 Column (1)	Sum of Column (1) to (7)	C.6.0 Section D
(d)	**PY2023 ULAE**	**132,583**	**154,314**	**47,542**	**6,806**	**204,047**	**11,326**	**8,605**	**565,224**	

Notes:
Policy Year 2023 ULAE by coverage in Column (1) to (7) is calculated as the ULAE for each fiscal loss year multiplied by the proportion applicable for PY 2023 in Column (9)

APPENDIX D.0

EXPENSE AND MISCELLANEOUS REVENUE

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A INTRODUCTION

1. This Appendix provides the calculations for the following expense and miscellaneous revenue components that are included in the required premium calculation shown in Appendix A.1:

- Road Safety and Loss Management (RSLM)
- General Expenses
  - Insurance Services
  - Administrative and Other
  - Non-insurance
- Broker Fees
- Miscellaneous Revenue

2. For the policy year (PY) 2023 actuarial indicated rate change, these components are derived based on their Basic portion of the financial forecasts for fiscal year (FY) 2023/24, FY 2024/25, and FY 2025/26 as shown in Chapter 6, Operating Expenses, Figure 6.1.

B ROAD SAFETY AND LOSS MANAGEMENT, GENERAL EXPENSES AND BROKER FEES

3. RSLM services include the costs for various road safety initiatives that ICBC undertakes on its own and with key partners, such as the Ministry of Public Safety and Solicitor General, police, Ministry of Transportation, and local municipalities, to help reduce the frequency and/or severity of automobile insurance claims. Road safety programs are further discussed in Chapter 8, Appendix 8G Road Safety of this Application. Loss management costs are related to the investigation and identification of fraudulent and exaggerated claims and coordination of litigation for fraud recoveries (see Chapter 7, Appendix 7B Claims Costs Management, Section D for details).

4. General expenses are operating expenses (other than claims services expenses), including insurance services expenses, administrative and other expenses, and non-insurance expenses.

- **Insurance services** expenses include costs related to product development, underwriting, promotion and administration of ICBC's insurance products. Insurance services expenses also include merchant fees, which are amounts paid to credit card service providers in consideration of their services when a credit card is used to pay for an insurance premium.

- **Administrative and other** expenses primarily represent shared costs for ICBC's business areas, including costs related to corporate governance, finance, human resource management, planning, corporate and information services.
- **Non-insurance** expenses are costs to support non-insurance activities ICBC undertakes on behalf of Government – namely, driver licensing, vehicle licensing and registration, and the transitional funding of compliance activities.[1] It also includes costs for non-insurance projects and minor enhancements to systems and processes.

5. Broker fees are paid to brokers for processing insurance transactions. Broker fees are primarily paid on a fixed fee per transaction basis but can also be paid based on a percentage of premium, also known as a variable broker fee. Variable broker fees are paid on certain Manual Basic products and were reported separately in the 2021 Revenue Requirements Application (2021 RRA), amounting to less than 0.1% of Required Premium (see Chapter 3, Appendix A.2, Column 8b of the 2021 RRA). In this Application, they are now included under broker fees. Broker fees also includes other fees paid to brokers for non-insurance transactions such as registration of vehicles and financial transactions related to ICBC payment plans and debt collection.

6. The calculation of the 24-month period of modelled expenses for PY 2023 is shown in Appendix D.1. In order to calculate the PY 2023 modelled expenses, forecasted fiscal year expenses from the 2022/23 Outlook[2] are allocated to PY 2023 based on when the expenses are recognized as costs in the policy period. For expenses that are recognized at the time of policy inception, PY 2023 modelled expenses are set equal to a weighted-average of the FY 2023/24 and FY 2024/25 forecast values (weights are shown in Appendix D.1 line (a)). For expenses that are recognized over the life of the policy, PY 2023 modelled expenses are set equal to a weighted-average of the FY 2023/24, FY 2024/25, and FY 2025/26 forecast values (weights are shown in Appendix D.1 line (b)).

7. PY 2023 modelled expenses are then allocated to coverage based on the coverage allocation factors as shown in Appendix D.1 line (c). The recognition of PY 2023 modelled expense cash flows (payment pattern) that were discussed in Technical Appendix A.0 of the 2021

[1] These activities are outlined in Service Agreements between ICBC and Government.
[2] As of Q2 of FY 2022/23.

RRA are now consolidated in Appendix E.0, Payment Patterns, Section D, and Technical Appendix E.0, Payment Patterns Data and Methodology, Section D.

C MISCELLANEOUS REVENUE

8. Miscellaneous revenue reduces the amount of required premium. Sources of miscellaneous revenue are:

- **Payment plan finance fees** which are calculated on the financed portion of the insurance premiums, and miscellaneous fees due on a financed policy. In the 2021 RRA, payment plan finance fees included the interest charged on the money borrowed to fund these policies. In this Application, ICBC's cost of financing is included in the calculation of the New Money Rate as portfolio leverage rather than grouped with payment plan finance fees. See Chapter 5 Investments, Section B for more detail on portfolio leverage.
- **Surcharge for short-term policies** is the total additional premium payable for those policies that are not issued for an annual term.
- **Driver Penalty Point (DPP) premium** is an ICBC program that charges additional premiums to drivers with driving offences or convictions. Customers that collect more than 3 points on their driving record during a 12-month period will pay such additional premium.
- **Driver Risk Premium (DRP)** is an ICBC program that charges additional premiums to drivers with serious driving offences or convictions.
- **Unlisted Driver Accident Premium (UDAP)** is a one-time financial consequence assessed against the registered owner of a vehicle or the lessee of a leased vehicle when an unlisted driver is responsible for an at-fault claim while operating the registered owner's or lessee's vehicle.
- **Graduated Licensing Program (GLP) road test fees**. GLP is a program governing new drivers, based on their driving experience and the result of testing.

9. PY 2023 miscellaneous revenue is shown in Appendix D.2. Revenue is allocated to each coverage based on the coverage allocation factors as shown in Appendix D.2, column (1). The recognition of the PY 2023 modelled miscellaneous revenue cash flows (payment pattern) that were discussed in Technical Appendix A.0, Required Premium of the 2021 RRA are now consolidated in Appendix E.0, Payment Patterns, Section D.

Policy Year 2023 Modelled Road Safety Loss Management, General Expenses, and Broker Fees
($ 000's)

	% of FY Expenses Attributable to PY 2023		
	2023/24	2024/25	2025/26
	(1)	(2)	(3)
(a) **Based on a Written Distribution**	100%	100%	0%
(b) **Based on an Earned Distribution**	50%	100%	50%

	Forecasted Expenses for FY			PY 2023 Modelled Expenses				Reference
	2023/24	2024/25	2025/26	Total	EAB	BVDC	TPL	
	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
(c) Coverage Allocation Factors				100.0%	63.4%	31.3%	5.3%	Appendix C.0, Figure C.0.1 column (5)
(d) Road Safety and Loss Management (RSLM)	46,561	47,477	48,308	94,038	59,633	29,466	4,939	col (7) = sumproduct row(a) and row(d)
(e) General Expenses - Administrative & Other	69,288	75,152	82,271	150,932	95,712	47,293	7,927	col (7) = sumproduct row(b) and row(e)
(f) General Expenses - Insurance Services (excluding Merchant Fees)	55,912	56,403	57,240	112,979	71,645	35,401	5,934	col (7) = sumproduct row(b) and row(f)
(g) General Expenses - Insurance Services - Merchant Fees	25,721	26,434	27,579	52,155	33,074	16,342	2,739	col (7) = sumproduct row(a) and row(g)
(h) General Expenses - Non-insurance	137,064	138,125	142,107	277,711	176,107	87,018	14,586	col (7) = sumproduct row(b) and row(h)
(i) Broker Fees	124,561	126,820	129,120	251,381	159,411	78,767	13,203	col (7) = sumproduct row(a) and row(i)

Notes:

(a) Weights are used to calculate PY 2023 modelled expenses from forecasted expenses for items recognized at the time of policy inception (i.e. written distribution).
RSLM, merchant fees, and broker fees use these proportions.
(b) Weights are used to calculate PY 2023 modelled expenses from forecasted expenses for items spread over the life of the policy (i.e. earned distribution).
All general expenses with the exception of merchant fees use these proportions.
Col (4) to (6), Rows (d) through (h) forecasts from Chapter 6, Figure 6.1.
Col (4) to (6), Row (i) from 2022/23 Outlook as of Q2 of FY2022/23.
(8) to (10) are calculated as Row (c) x Col (7)
(i) includes the total of per policy broker fees and variable broker fees.

Policy Year 2023 Modelled Miscellaneous Revenue
($ 000's)

PY 2023	Coverage Allocation Factors	Miscellaneous Revenue					
		Payment Plan Finance Fees	Surcharge for Short-Term Policies	Driver Penalty Point and Driver Risk Premium	Unlisted Driver Accident Premium	Graduated Licencing Program Road Test Fees and Other	Miscellaneous Revenue Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(a) EAB	63.4%	133,426	16,056	23,477	4,592	9,938	187,489
(b) BVDC	31.3%	65,928	7,934	11,601	2,269	4,911	92,642
(c) TPL	5.3%	11,051	1,330	1,944	380	823	15,528
(d) **Total**	**100.0%**	**210,404**	**25,320**	**37,022**	**7,241**	**15,672**	**295,659**

Notes:

(1) Coverage allocation factors from Appendix C.0, Figure C.0.1 column (5) are used to allocate (2) to (6) to each coverage.
(2), (3), (6) Source: 2022/23 Outlook as of Q2 of FY2022/23.
(4) Modelled DPP and DRP from internal analysis. Modelled DPP and DRP reflect the PY 2023 Basic rate change applied to DPP and DRP revenue.
(5) Modelled UDAP from internal analysis based on year to date billings.
(7) Sum of (2) through (6).

APPENDIX E.0

PAYMENT PATTERNS

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A INTRODUCTION

1. To determine the required premium ICBC must forecast the investment income earned on policyholder premiums associated with all Policy Year (PY) 2023 policies. Investment income is earned on premium revenue between the time premiums are collected and the time losses and expenses are paid. This investment income is referred to as “Investment Income on Policyholder Supplied Funds” and reduces the amount of required premium.

2. This Appendix discusses the payment patterns for the various components of the required premium shown in Appendix A.1, where a payment pattern is the flow of payments to and from ICBC over time. While some payments occur at policy inception (e.g., written premiums, broker fees), loss and allocated loss adjustment expense (ALAE) payments and unallocated loss adjustment expenses (ULAE) can occur many years or even decades after the policy is issued.

B LOSS AND ALLOCATED LOSS ADJUSTMENT EXPENSE

3. Loss and ALAE payment patterns describe the timing and amount of claims payments to customers (loss) and loss adjustment expenses that are assigned directly to specific claims (ALAE). Historical paid loss and ALAE data are examined to determine the payment patterns in order to project the percentage of PY 2023 incurred loss and ALAE to be paid in each successive period (quarter or year) until such time as all PY 2023 claims are paid and closed. Quarter to quarter payment percentages for the first 12 quarters are estimated and, thereafter, annual payment percentages are used for a total payout pattern spanning 50 years for Enhanced Accident Benefits - Enhanced Disability (EAB-ED), 37 years for EAB - Medical Rehabilitation (EAB-MR), and up to 20 years for the other coverages. The length of time over which the payments are expected has changed from the 2021 Revenue Requirements Application (2021 RRA) to reflect that the PY 2023 payment patterns cover a 24-month policy year.

4. The payment patterns across all sub-coverages compared to the 2021 RRA remain relatively stable. The EAB payment pattern is derived using MPI’s most recent claims data[1], whereas payment patterns for Basic Vehicle Damage Coverage (BVDC) and Third Party Liability – Property Damage (TPL-PD) and Third Party Liability – Out-of-Province Bodily Injury (TPL-OOP BI) are estimated from internal ICBC claim data.

[1] https://apps.mpi.mb.ca/Rate-Application/2023/2023_GRA.pdf - Part VII - Investments, Capital, Reserves & Risk Management, External Actuary Review 2023 General Rate Application, Actuarial Report on Manitoba Public Insurance Corporation Universal Compulsory Automobile Insurance as of March 31, 2022 (EAR Attachment B).

5. The steps and methodology that ICBC's actuaries follow to estimate the loss and ALAE payment patterns are discussed in Technical Appendix E.0. Details of the historical payment data and analysis by sub-coverage are provided in Technical Appendices E.1 to E.7. The selected incremental payment patterns are presented in Appendix E.1, which are then used in Technical Appendix A.1.1 through A.3.2 to allocate PY 2023 loss and ALAE to each future period.[2]

C UNALLOCATED LOSS ADJUSTMENT EXPENSES

6. ULAE payment patterns describe the timing and amount of internal claims servicing costs from the time a claim is opened to completion of claims handling activities. The timing of the ULAE payments differs from the timing of the loss and ALAE payments described in Section B, and is estimated separately in order to more accurately reflect the time value of money in the calculation of the required premium. For EAB-MR and EAB-ED, the loss and ALAE payment pattern is longer than the ULAE payment pattern because long-term loss and ALAE payments are expected to continue after claims handling is complete.

7. The ULAE payment pattern for each coverage is shown in Appendix E.2. For more information on the ULAE payment patterns, please see Technical Appendix E.0, Section C. For more information on ULAE, please see Appendix C.6 and Technical Appendix Set C.6.

D EXPENSE AND MISCELLANEOUS REVENUE

8. Expense and miscellaneous revenue payment patterns fall into one of two categories depending on when the expense or revenue is recognized, as shown in Figure E.0.1.

- **As Written**: Includes revenues and expenses that are recognized at the time of policy inception. These revenues and expenses are evenly distributed throughout each fiscal year of the 24-month policy period, from April 1, 2023 to March 31, 2025.
- **As Earned:** Includes revenues and expenses that are recognized over the entire life of the policy. These revenues and expenses are distributed over 36 months from April 1, 2023 to March 31, 2026 based on the earning pattern of the PY 2023 policies. The earning pattern of the PY 2023 policies is shown below in Figure E.0.2 and further explained in Technical Appendix E.0, Section D.

[2] A summary of loss and ALAE payments over each future period is shown in Technical Appendix A.4.1.

Figure E.0.1 – Expense and Miscellaneous Revenue Payment Patterns

Component	Category
Road Safety and Loss Management	As Written
General Expenses (excluding Merchant Fees)	As Earned
General Expenses - Merchant Fees	As Written
Broker Fees	As Written
Premium Tax	As Written
Miscellaneous Revenue	As Written

Figure E.0.2 – Fiscal Year Quarterly Weights for General Expenses Excluding Merchant Fees

Earning Period	Fiscal Year Quarterly Weights
Year 1 - Q1	6%
Year 1 - Q2	19%
Year 1 - Q3	31%
Year 1 - Q4	44%
Year 2 - Q1	25%
Year 2 - Q2	25%
Year 2 - Q3	25%
Year 2 - Q4	25%
Year 3 - Q1	44%
Year 3 - Q2	31%
Year 3 - Q3	19%
Year 3 - Q4	6%

E INVESTMENT INCOME ON CAPITAL AVAILABLE FOR RATE SETTING

9. Investment income on capital available for rate setting is assumed to generate income at a constant rate for each fiscal year of the 24-month policy period, from April 1, 2023 to March 31, 2025.

Loss & ALAE Incremental Payment Patterns as of August 31, 2022

	EAB-MR (including indexation)	EAB-ED (including indexation)	EAB-PI	EAB-DB	BVDC	TPL-PD	TPL-OOP BI
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Year 1-Q1	0.05%	0.02%	0.13%	0.13%	0.31%	0.16%	0.01%
Year 1-Q2	0.49%	0.21%	0.65%	0.65%	2.24%	1.17%	0.09%
Year 1-Q3	1.27%	0.64%	1.83%	1.83%	5.35%	2.78%	0.26%
Year 1-Q4	2.78%	1.43%	2.90%	2.90%	8.50%	4.43%	0.68%
Year 2-Q1	2.35%	0.97%	4.30%	4.30%	8.97%	7.31%	0.81%
Year 2-Q2	3.15%	1.36%	4.04%	4.04%	9.63%	7.26%	1.26%
Year 2-Q3	3.53%	1.84%	3.83%	3.83%	10.35%	6.91%	1.51%
Year 2-Q4	5.16%	2.67%	4.79%	4.79%	11.89%	7.22%	2.62%
Year 3-Q1	3.96%	1.85%	6.73%	6.73%	10.79%	10.91%	3.05%
Year 3-Q2	4.32%	2.05%	5.95%	5.95%	9.52%	9.86%	3.42%
Year 3-Q3	3.90%	2.10%	4.56%	4.56%	7.13%	7.89%	3.50%
Year 3-Q4	4.00%	2.13%	4.45%	4.45%	5.51%	6.55%	4.18%
Year 4	9.03%	5.98%	19.26%	19.26%	9.05%	19.24%	18.51%
Year 5	4.00%	4.43%	16.33%	16.33%	0.59%	5.24%	18.14%
Year 6	2.71%	3.80%	10.53%	10.53%	0.09%	1.58%	14.88%
Year 7	2.08%	3.32%	4.07%	4.07%	0.05%	0.78%	10.09%
Year 8	1.82%	2.92%	1.32%	1.32%	0.02%	0.40%	6.28%
Year 9	1.83%	2.70%	0.86%	0.86%		0.22%	4.18%
Year 10	1.93%	2.62%	0.68%	0.68%		0.08%	2.66%
Year 11	2.02%	2.55%	0.48%	0.48%			1.41%
Year 12	2.13%	2.46%	0.40%	0.40%			1.00%
Year 13	2.23%	2.39%	0.39%	0.39%			0.81%
Year 14	2.30%	2.37%	0.40%	0.40%			0.35%
Year 15	2.23%	2.32%	0.38%	0.38%			0.13%
Year 16	2.00%	2.22%	0.33%	0.33%			0.11%
Year 17	1.75%	2.13%	0.25%	0.25%			0.04%
Year 18	1.62%	2.06%	0.14%	0.14%			0.01%
Year 19	1.60%	2.03%	0.04%	0.04%			0.01%
Year 20	1.61%	1.99%					0.01%
Year 21	1.59%	1.94%					
Year 22	1.57%	1.88%					
Year 23	1.54%	1.82%					
Year 24	1.51%	1.76%					
Year 25	1.49%	1.70%					
Year 26	1.46%	1.64%					
Year 27	1.43%	1.58%					
Year 28	1.40%	1.52%					
Year 29	1.37%	1.47%					
Year 30	1.34%	1.41%					
Year 31	1.31%	1.35%					
Year 32	1.28%	1.30%					
Year 33	1.26%	1.24%					
Year 34	1.23%	1.19%					
Year 35	1.20%	1.14%					
Year 36	0.89%	1.09%					
Year 37	0.30%	1.04%					
Year 38		1.00%					
Year 39		0.95%					
Year 40		0.91%					
Year 41		0.87%					
Year 42		0.83%					
Year 43		0.79%					
Year 44		0.75%					
Year 45		0.71%					
Year 46		0.68%					
Year 47		0.65%					
Year 48		0.62%					
Year 49		0.45%					
Year 50		0.15%					
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:
(1) Technical Appendix E.1 Column (k) Incremental % Paid
(2) Technical Appendix E.2 Column (k) Incremental % Paid
(3) Technical Appendix E.3 Column (g) Incremental % Paid
(4) Technical Appendix E.4 Column (g) Incremental % Paid
(5) Technical Appendix E.5 Row (g) Selected Incremental % Paid
(6) Technical Appendix E.6 Row (g) Selected Incremental % Paid
(7) Technical Appendix E.7 Row (g) Selected Incremental % Paid

ULAE Incremental Payment Patterns as of August 31, 2022

	EAB-MR (1)	EAB-ED (2)	EAB-PI (3)	EAB-DB (4)	BVDC (5)	TPL-PD (6)	TPL-OOP BI (7)
Year 1-Q1	0.16%	0.08%	0.02%	0.33%	0.44%	0.35%	0.07%
Year 1-Q2	1.70%	0.89%	0.08%	1.70%	3.18%	2.48%	0.64%
Year 1-Q3	4.40%	2.75%	0.23%	4.80%	7.58%	5.93%	1.91%
Year 1-Q4	9.65%	6.11%	0.36%	7.58%	12.05%	9.42%	5.07%
Year 2-Q1	5.97%	3.66%	0.73%	8.63%	10.56%	10.68%	2.89%
Year 2-Q2	8.01%	5.11%	0.69%	8.11%	11.34%	10.61%	4.48%
Year 2-Q3	8.97%	6.92%	0.65%	7.70%	12.19%	10.10%	5.38%
Year 2-Q4	13.12%	10.01%	0.81%	9.62%	13.99%	10.54%	9.31%
Year 3-Q1	6.57%	5.84%	1.69%	8.79%	8.66%	9.29%	5.28%
Year 3-Q2	7.16%	6.47%	1.49%	7.77%	7.64%	8.40%	5.93%
Year 3-Q3	6.47%	6.61%	1.14%	5.95%	5.73%	6.72%	6.07%
Year 3-Q4	6.63%	6.72%	1.12%	5.81%	4.43%	5.58%	7.26%
Year 4	8.19%	13.69%	6.93%	11.36%	1.84%	7.54%	16.18%
Year 5	3.35%	7.42%	10.42%	4.64%	0.22%	1.41%	9.84%
Year 6	2.45%	5.40%	16.29%	2.43%	0.07%	0.37%	6.44%
Year 7	1.86%	3.90%	18.05%	1.55%	0.04%	0.22%	4.32%
Year 8	1.34%	2.61%	13.85%	1.05%	0.02%	0.15%	2.99%
Year 9	0.94%	1.65%	8.53%	0.72%	0.01%	0.10%	1.99%
Year 10	0.68%	1.08%	5.21%	0.48%	0.01%	0.05%	1.27%
Year 11	0.52%	0.79%	3.46%	0.33%	0.00%	0.02%	0.87%
Year 12	0.42%	0.60%	2.29%	0.22%	0.00%	0.01%	0.59%
Year 13	0.34%	0.46%	1.53%	0.15%	0.00%	0.01%	0.40%
Year 14	0.28%	0.35%	1.13%	0.10%	0.00%	0.00%	0.28%
Year 15	0.23%	0.27%	0.92%	0.07%	0.00%	0.00%	0.19%
Year 16	0.19%	0.21%	0.76%	0.05%	0.00%	0.00%	0.13%
Year 17	0.15%	0.16%	0.62%	0.03%	0.00%	0.00%	0.09%
Year 18	0.13%	0.12%	0.52%	0.02%	0.00%	0.00%	0.07%
Year 19	0.09%	0.08%	0.37%	0.01%	0.00%	0.00%	0.05%
Year 20	0.03%	0.03%	0.12%	0.00%	0.00%	0.00%	0.02%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:
(1) Technical Appendix C.6.1 Column (1)
(2) Technical Appendix C.6.1 Column (2)
(3) Technical Appendix C.6.1 Column (3)
(4) Technical Appendix C.6.1 Column (4)
(5) Technical Appendix C.6.1 Column (5)
(6) Technical Appendix C.6.1 Column (6)
(7) Technical Appendix C.6.1 Column (7)

APPENDIX F.0

INVESTMENT INCOME ON CAPITAL AVAILABLE FOR RATE SETTING

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A INTRODUCTION

1. Among the components of required premium presented in Appendix A.1, there are two sources of investment income which both benefit Basic policyholders: investment income on policyholder supplied funds (PHSF) and investment income on capital available for rate setting (CARS). Investment income on PHSF is discussed in Appendix A.0. This Appendix discusses investment income on CARS.

B CAPITAL AVAILABLE FOR RATE SETTING

2. CARS is now defined in *Special Direction IC2* as amended by Order in Council 666/2022, December 12, 2022 (B.C. Reg. 269/2022) and replaces what was referred to in previous Applications as Basic Equity. There is no change in how CARS is derived compared to past Applications, however the term CARS better describes the underlying value. CARS is defined in *Special Direction IC2* as the amount of universal compulsory vehicle insurance capital available after deducting the following:

   a. The effect of present value in relation to the corporation's universal compulsory vehicle insurance claims liabilities.

   b. Adjustments to reflect risks in relation to the corporation's universal compulsory vehicle insurance claims liabilities.

3. Capital available is adjusted to remove the effect of discounting ICBC's claims liabilities so that investment income is not double counted. Risk adjustments to ICBC's claims liabilities are also removed to ensure that the Policy Year (PY) 2023 rate indication analysis relies on the best estimate of claims costs, in accordance with Accepted Actuarial Practice (AAP).

4. There are two sources of risk adjustments: the Provision for Adverse Deviations (PfAD) and the provision to recognize ICBC's ongoing risks to its financial forecast. The PfAD is required under AAP for reporting in financial statements and is a provision to adjust the best estimate of the claims liabilities to a greater amount on account of the uncertainty inherent in the estimation process. While the PfAD is specific to address risk on the best estimate of the claims liabilities, the financial forecast provision is to account for a broader spectrum of adverse events. If these adverse events do not manifest in the fiscal period, then the financial forecast provision is released. Possible adverse events for which a financial forecast provision related to risk levels could be held include: uncertainty with inflation, uncertainty in the global investment markets,

uncertainty regarding changes in customers' mobility choices and driving behaviour, unfavourable emergence of large Bodily Injury claims from the legal-based product and outstanding litigation from the legal-based product. Both the PfAD and the financial forecast provision are removed in the actuarial indicated rate change analysis to produce a best estimate of the claims liabilities, as required under AAP.

5. The CARS used in the calculation is as at the fiscal year-end prior to the start of the policy period. In this case, FY 2023/24 is used for the first 12-month period of PY 2023 and FY 2024/25 is used for the second 12-month period of PY 2023. CARS for FY 2023/24 and FY 2024/25 are shown in Appendix F.1 line (d).

C INVESTMENT INCOME ON CAPITAL AVAILABLE FOR RATE SETTING

6. The investment income on CARS is calculated separately for each fiscal year (12-month period of PY 2023) and then summed to obtain the total for PY 2023. The fiscal year yield on CARS for FY 2023/24 and FY 2024/25 are determined in Chapter 5, Section C.

7. The investment income on CARS for PY 2023 is allocated to each coverage in Appendix F.2 using the coverage allocation factors.

Policy Year 2023 Capital Available for Rate Setting
($ 000's)

		FY 2023/24	FY 2024/25	Reference
	Capital Available			
(a)	Capital Available at Beginning of Period	2,110,475	2,256,045	
	Capital Available for Rate Setting			
(b)	Amount of Discount	(1,446,675)	(1,581,842)	
(c)	Amount of Risk Adjustment	1,196,664	1,413,092	
(d)	Capital Available for Rate Setting	1,860,464	2,087,296	(a) + (b) + (c)
	Investment Income on Capital Available for Rate Setting			
(e)	Yield on Capital Available for Rate Setting	4.77%	4.97%	
(f)	Investment Income on Capital Available for Rate Setting	88,765	103,772	(d) x (e)

Notes:
(a) Source: Forecast based on 2022/23 Outlook as of Q2 of FY 2022/23.
(b), (c) Source: Internal discounting analysis as of FY 2022/23 Q2 and 2022/23 Outlook as of Q2 of FY2022/23.
(e) The Yield on Capital Available for Rate Setting is the rate of return used to calculate investment income on Capital Available for Rate Setting and is discussed further in Chapter 5, Section C.

Policy Year 2023 Investment Income on Capital Available for Rate Setting (CARS) - Coverage Allocation
($ 000's)

			Coverage[1]			
		Total	EAB	BVDC	TPL	Reference
(a)	**Coverage Allocation Factors**	100.0%	63.4%	31.3%	5.3%	Appendix C.0, Figure C.0.1 column (5)
	Investment Income on CARS					
(b)	FY 2023/24	88,765	56,289	27,814	4,662	
(c)	FY 2024/25	103,772	65,806	32,516	5,450	
(d)	**PY 2023**	**192,537**	**122,095**	**60,329**	**10,112**	(b) + (c)

Notes:
[1] Investment income on CARS is the product of Total and the coverage proportion in (a).

TECHNICAL APPENDIX A.0
CALCULATION OF REQUIRED PREMIUM

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A INTRODUCTION

1. As discussed in Appendix A.0, the computation of required premium uses the discounted cash flow method. With this method, the full value components of required premium are discounted to reflect the time value of money, by reflecting the investment income expected to be earned between the time at which premiums are collected and the time at which the individual components comprising the required premium are either paid out or received.

2. The computation of required premium is shown in Technical Appendices A.1.1 to A.3.2. The full value of components are shown in Technical Appendices A.1.2, A.2.2, and A.3.2, while the components on a discounted basis are shown in Technical Appendices A.1.1, A.2.1, and A.3.1. The difference between the full value view and the discounted view is that the impact of discounting is captured separately in the full value view through the investment income on policy holder supplied funds (PHSF), whereas in the discounted view, the impact of discounting is captured directly within each component.

3. Technical Appendices A.1.2, A.2.2, and A.3.2 show the required premium components at full value for each Enhanced Care coverage (EAB, BVDC, and TPL respectively). The full value total cash flow (column 8) is the difference between the stream of cash outflows (claims related costs and expenses, shown in columns (1) to (5)) and the undiscounted stream of cash inflows (miscellaneous revenue in column (6) and investment income on capital available for rate setting (CARS) in column (7)). This view is similar to what was shown in Technical Appendices A.1.1 to A.2.4 of the 2021 RRA.

4. This process is repeated in Technical Appendices A.1.1, A.2.1, and A.3.1 (for EAB, BVDC, and TPL respectively) on a discounted basis to produce discounted total cash flow. These exhibits are a new addition to the Application. This is not a change to the methodology, but rather it is a change in presentation to better show how discounting for the time value of money impacts the various components of required premium. Each of the required premium components are discounted to April 1, 2024, the midpoint of the policy year, using the New Money Rate (see Chapter 5, Investments, Section D.1). Present value factors for each period are shown in column (9). As a final step, premium tax (4.4%) and the capital provision (7%) are separately loaded as fixed percentages of the required premium and added to the discounted total cash flow to produce required premium.

5. In the full value view (Technical Appendices A.1.2, A.2.2, and A.3.2), the impact of discounting is captured through the investment income on PHSF, shown in column (9).

Investment income on PHSF is the difference between the full value total cash flow and the discounted total cash flow. It is deducted from the full value total cash flow before the final calculation step, premium tax and capital provision loadings, to produce the same required premium amount as in the discounted view.

6. Technical Appendix A.4.1 shows a summary of the loss and allocated loss adjustment expense (ALAE) payment patterns and the estimated payments by period for each sub-coverage. Technical Appendix A.4.2 shows a similar view for unallocated loss adjustment expenses (ULAE).

B CALCULATION OF REQUIRED PREMIUM

7. The required premium using components discounted to the midpoint of the policy year is calculated from the following formula:

$$\boldsymbol{RP'} = \frac{L' + U' + R' + G' + B' - MR' - IC'}{1 - t - p}$$

Where:

RP	=	Required Premium
’	=	Present value indicator
L	=	Loss and ALAE payments
U	=	ULAE payments
R	=	Road Safety and Loss Management services
G	=	General Expense
B	=	Broker Fees
MR	=	Miscellaneous Revenue
IC	=	Investment Income on Capital Available for Rate Setting
t	=	Premium Tax Rate
p	=	Capital Provision

8. The required premium using full value components is calculated from the following formula:

$$\boldsymbol{RP} = \frac{L + U + R + G + B - MR - IC - IP}{1 - t - p}$$

Where:

IP	=	Investment Income on Policyholder Supplied Funds

9. The required premium calculation using components discounted to the midpoint of the policy year and using full value components with investment income on PHSF produces the same result.

$$\boldsymbol{RP'} = RP$$

C EXPLANATORY NOTES TO REQUIRED PREMIUM CALCULATIONS

10. Explanatory notes are provided below for the Technical Appendices listed in Figure A.0.1. Note that there are two presentations of columns (1) through (8), discounted and full value.

TA A.0.1 – List of Technical Appendices A.1.1 to A.3.2

Technical Appendix	Coverage	Valuation Basis
A.1.1	Enhanced Accident Benefits	Discounted to midpoint of policy year
A.1.2	Enhanced Accident Benefits	Full Value
A.2.1	Basic Vehicle Damage Coverage	Discounted to midpoint of policy year
A.2.2	Basic Vehicle Damage Coverage	Full Value
A.3.1	Third Party Liability	Discounted to midpoint of policy year
A.3.2	Third Party Liability	Full Value

11. **Column (1) - Loss and ALAE** – Shows the estimated total future indemnity payments and allocated expenses, net of recoveries from salvage and subrogation over the periods extending from the start of the policy year into the future for up to 50 years. The total full value amounts are shown in Appendices A.3 through A.5. The timing of these payments is based on the payment patterns which are summarized in Appendix E.1 and discussed in Appendix E.0, Section B. More detail on the payment patterns is provided in Technical Appendix E.0, Section B.

12. **Column (2) - ULAE** – The estimated future ULAE payments are spread over the payment periods extending from the start of the policy year into the future for up to 20 years. The total full value amounts are shown in Appendices A.3 through A.5. The timing of these payments is based on the payment patterns which are summarized in Appendix E.2 and discussed in Technical Appendix C.6.0. More detail on the ULAE payment patterns is provided in Technical Appendix E.0, Section C.

13. **Column (3) - Road Safety and Loss Management (RSLM)** – These costs are assumed to be evenly distributed throughout each fiscal year of the 24-month policy period as they are recognized at the time of policy inception, as discussed in Appendix E.0, Section D.

14. **Column (4) - General Expenses** – As a result of a payment timing difference for each expense item, the calculations for converting general expenses from a fiscal year basis to a policy year basis are split into two categories: general expenses excluding merchant fees and merchant fees (which are fees paid by ICBC when credit cards are used for premium payments).

15. General expenses excluding merchant fees are recognized over the entire life of the policy and are distributed over 36 months based on the earning pattern for policies in PY 2023. Merchant fee payments are assumed to be evenly distributed throughout each fiscal year of the 24-month policy period as they are recognized at the time of policy inception. The recognition pattern for both general expenses excluding merchant fees and merchant fees is discussed further in Appendix E.0 Section D, and Technical Appendix E.0 Section D.

16. **Column (5) - Broker Fees** – Basic broker fees are assumed to be evenly distributed throughout each fiscal year of the 24-month policy period as they are recognized at the time of policy inception.

17. **Column (6) - Miscellaneous Revenue** – Miscellaneous revenue consists of payment plan finance fees, short term surcharge, Driver Penalty Point and Driver Risk Premium, Unlisted Driver Accident Premium, and Graduated Licensing Program road test fees. Miscellaneous revenue is assumed to be received uniformly throughout each fiscal year of the 24-month policy period. The allocation of these amounts among the Basic insurance coverages is shown in Appendix D.2.

18. **Column (7) - Investment Income on Capital Available for Rate Setting (CARS)** – The amount of investment income on CARS allocated to each coverage is shown in Appendix F.2. CARS is assumed to generate income at a constant rate for each fiscal year as shown in Appendix F.1. These rates are referred to as the yield on CARS. See Chapter 5, Investments, Section D.2 for the detailed calculation.

19. **Column (8) - Total Cash Flow** – The total cash flow in any period is the sum of all costs in columns (1) through (5), less the sum of all revenues in columns (6) through (7), for that period.

20. **Column (9) - Present Value Factors** (Technical Appendices A.1.1, A.2.1, and A.3.1) – The present value factor is applied to each full value component on Technical Appendices A.1.2, A.2.2, and A.3.2 to obtain the discounted cash flows based on the New Money Rate (row 14).[1] The present value factor applied to each payment period is calculated from the midpoint of that payment period to the midpoint of the 24-month policy period.

[1] The New Money Rate is discussed in further detail in Chapter 5, Investments, Section B.

21. **Column (9) - Investment Income on Policyholder Supplied Funds (PHSF)** (Technical Appendices A.1.2, A.2.2, and A.3.2) – This column represents the impact from discounting. It is calculated as the difference between the full value total cash flows (column (8) on Appendices A.1.2, A.2.2, and A.3.2) and the discounted total cash flows (column (8) on Appendices A.1.1, A.2.1, and A.3.1).

22. **Column (10) - Premium Tax** – The premium tax dollars are computed as a percentage (row 13) of the required premium (column 12).

23. **Column (11)** - **Capital Provision** – This is the amount of capital provision that is required to be included in the actuarial indicated rate change as per *Special Direction IC2.* The capital provision is discussed in more detail in Chapter 4, Capital Management Plan. It is equal to 7% (row 15) of the required premium (column 12).

24. **Column (12) - Required Premium** – Required premium is the amount of premium required to provide for all losses and expenses anticipated to arise from the policy period, and to fund the capital provision as prescribed by *Special Direction IC2*. The required premium is calculated using the Discounted Cash Flow Method, as expressed by the formula in Section B above.

D PAYMENT PATTERNS

25. Technical Appendix A.4.1 shows the loss and ALAE payment patterns for each sub-coverage. Please refer to Appendix E.0, Section B for details on how these payment patterns are determined. The payment patterns are applied to PY 2023 loss and ALAE, shown in Appendices A.3 through A.5, to allocate loss and ALAE to each payment period.

26. Technical Appendix A.4.2 shows the ULAE payment patterns for each sub-coverage. Please refer to Appendix E.0, Section C for details on how these payment patterns are determined. The payment patterns are applied to PY 2023 ULAE, shown in Appendices A.3 through A.5, to allocate ULAE to each payment period.

Policy Year 2023 Required Premium - Discounted
Enhanced Accident Benefits

($ 000's)

Period (starting at policy year inception) [1]	Loss & ALAE Payments [2] (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Present Value Factor (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
	Costs					**Revenues**		**Required Premium Calculation**				
	Claims			**Expenses**								
Year 1 - Q1	1,761	389	7,750	9,738	20,733	24,540	14,775	1,055	1.04991			
Year 1 - Q2	15,446	3,912	7,643	20,366	20,446	24,201	14,571	29,041	1.03540			
Year 1 - Q3	41,641	10,739	7,537	30,698	20,164	23,867	14,369	72,543	1.02109			
Year 1 - Q4	85,768	23,072	7,433	40,741	19,885	23,537	14,171	139,191	1.00698			
Year 2 - Q1	75,467	14,398	7,475	46,619	19,966	23,336	16,337	124,251	0.99307			
Year 2 - Q2	93,844	18,988	7,371	45,975	19,690	23,013	16,112	146,743	0.97934			
Year 2 - Q3	105,402	22,603	7,269	45,339	19,418	22,695	15,889	161,448	0.96581			
Year 2 - Q4	148,528	32,279	7,169	44,713	19,150	22,382	15,669	213,787	0.95246			
Year 3 - Q1	121,356	17,960	0	36,694	0	0	0	176,009	0.93930			
Year 3 - Q2	125,814	19,192	0	25,848	0	0	0	170,853	0.92631			
Year 3 - Q3	112,275	18,018	0	15,294	0	0	0	145,587	0.91351			
Year 3 - Q4	112,533	18,106	0	5,028	0	0	0	135,667	0.90089			
Year 4	292,263	31,375						323,638	0.87008			
Year 5	169,537	17,417						186,954	0.82297			
Year 6	116,034	15,170						131,204	0.77841			
Year 7	76,569	12,642						89,211	0.73626			
Year 8	57,305	8,682						65,987	0.69640			
Year 9	51,009	5,201						56,209	0.65869			
Year 10	48,183	3,165						51,348	0.62303			
Year 11	45,649	2,105						47,754	0.58929			
Year 12	43,282	1,444						44,726	0.55739			
Year 13	41,484	1,003						42,487	0.52721			
Year 14	39,793	726						40,520	0.49866			
Year 15	36,596	547						37,143	0.47166			
Year 16	31,881	415						32,296	0.44612			
Year 17	27,481	312						27,793	0.42197			
Year 18	24,463	241						24,704	0.39912			
Year 19	22,661	156						22,817	0.37751			
Year 20	21,237	48						21,285	0.35707			
Year 21	19,723	0						19,723	0.33773			
Year 22	18,232	0						18,232	0.31945			
Year 23	16,836	0						16,836	0.30215			
Year 24	15,531	0						15,531	0.28579			
Year 25	14,314	0						14,314	0.27032			
Year 26	13,181	0						13,181	0.25568			
Year 27	12,127							12,127	0.24184			
Year 28	11,150							11,150	0.22874			
Year 29	10,244							10,244	0.21636			
Year 30	9,406							9,406	0.20464			
Year 31	8,631							8,631	0.19356			
Year 32	7,916							7,916	0.18308			
Year 33	7,256							7,256	0.17317			
Year 34	6,648							6,648	0.16379			
Year 35	6,089							6,089	0.15492			
Year 36	4,796							4,796	0.14653			
Year 37	2,882							2,882	0.13860			
Year 38	1,895							1,895	0.13110			
Year 39	1,711							1,711	0.12400			
Year 40	1,545							1,545	0.11728			
Year 41	1,394							1,394	0.11093			
Year 42	1,258							1,258	0.10493			
Year 43	1,134							1,134	0.09925			
Year 44	1,022							1,022	0.09387			
Year 45	921							921	0.08879			
Year 46	830							830	0.08398			
Year 47	747							747	0.07943			
Year 48	673							673	0.07513			
Year 49	465							465	0.07107			
Year 50	146							146	0.06722			
Total - Discounted [3]	**2,383,964**	**300,304**	**59,647**	**367,052**	**159,452**	**187,571**	**121,893**	**2,960,957**		**147,045**	**233,936**	**3,341,938**
Reference: Payment Pattern	E.1	E.2	E.0 Section D	E.0. Section D [4] TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E					

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:

(1) thru (7): The discounted cash flows are their full value counterparts in A.1.2 discounted by PV factors (10)
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (1 + New Money Rate) ^ (Midpoint of PY2023 - Midpoint of Period)
(10) = (8) / [1 - (13) - (15)] * (13)
(11) = (8) / [1 - (13) - (15)] * (15)
(12) = (8) + (10) + (11)

Notes:

[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to June 30, 2023, etc.)
[2] Enhanced Accident Benefits Loss and ALAE payments continue to year 50 as a result of the long tailed nature of these claims.
[3] Cash flows are discounted to the midpoint of PY 2023, i.e. Apr 1, 2024.
[4] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
(11) Capital provision uses a formula such that its amount is exactly 7% of required premium, net of premium tax.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Required Premium - Full Value
Enhanced Accident Benefits
($ 000's)

	Costs					Revenues		Required Premium Calculation				
	Claims			Expenses								
Period (starting at policy year inception) [1]	Loss & ALAE Payments [2] (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Investment Income on Policyholder Supplied Funds (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
Year 1 - Q1	1,677	370	7,382	9,275	19,747	23,374	14,072	1,005	(50)			
Year 1 - Q2	14,918	3,778	7,382	19,669	19,747	23,374	14,072	28,048	(993)			
Year 1 - Q3	40,781	10,517	7,382	30,064	19,747	23,374	14,072	71,044	(1,499)			
Year 1 - Q4	85,173	22,912	7,382	40,458	19,747	23,374	14,072	138,226	(965)			
Year 2 - Q1	75,994	14,498	7,527	46,945	20,105	23,499	16,452	125,118	868			
Year 2 - Q2	95,823	19,389	7,527	46,945	20,105	23,499	16,452	149,839	3,095			
Year 2 - Q3	109,134	23,404	7,527	46,945	20,105	23,499	16,452	167,164	5,716			
Year 2 - Q4	155,941	33,890	7,527	46,945	20,105	23,499	16,452	224,458	10,671			
Year 3 - Q1	129,198	19,120	0	39,065	0	0	0	187,384	11,375			
Year 3 - Q2	135,822	20,719	0	27,904	0	0	0	184,444	13,591			
Year 3 - Q3	122,904	19,724	0	16,742	0	0	0	159,370	13,784			
Year 3 - Q4	124,913	20,098	0	5,581	0	0	0	150,593	14,926			
Year 4	335,902	36,059						371,962	48,324			
Year 5	206,005	21,164						227,169	40,215			
Year 6	149,065	19,489						168,554	37,349			
Year 7	103,996	17,171						121,167	31,956			
Year 8	82,288	12,466						94,754	28,767			
Year 9	77,440	7,895						85,335	29,125			
Year 10	77,337	5,079						82,416	31,069			
Year 11	77,464	3,572						81,036	33,282			
Year 12	77,651	2,591						80,242	35,516			
Year 13	78,686	1,903						80,588	38,102			
Year 14	79,801	1,457						81,257	40,738			
Year 15	77,591	1,159						78,750	41,607			
Year 16	71,463	929						72,392	40,096			
Year 17	65,126	740						65,866	38,073			
Year 18	61,293	604						61,897	37,193			
Year 19	60,029	414						60,442	37,625			
Year 20	59,477	134						59,611	38,326			
Year 21	58,397	0						58,397	38,675			
Year 22	57,075	0						57,075	38,843			
Year 23	55,722	0						55,722	38,885			
Year 24	54,345	0						54,345	38,814			
Year 25	52,953	0						52,953	38,639			
Year 26	51,551	0						51,551	38,371			
Year 27	50,146							50,146	38,019			
Year 28	48,743							48,743	37,594			
Year 29	47,347							47,347	37,103			
Year 30	45,961							45,961	36,555			
Year 31	44,589							44,589	35,959			
Year 32	43,235							43,235	35,320			
Year 33	41,902							41,902	34,646			
Year 34	40,591							40,591	33,942			
Year 35	39,304							39,304	33,215			
Year 36	32,731							32,731	27,935			
Year 37	20,792							20,792	17,910			
Year 38	14,454							14,454	12,559			
Year 39	13,803							13,803	12,091			
Year 40	13,175							13,175	11,629			
Year 41	12,570							12,570	11,175			
Year 42	11,988							11,988	10,730			
Year 43	11,429							11,429	10,294			
Year 44	10,892							10,892	9,869			
Year 45	10,376							10,376	9,455			
Year 46	9,883							9,883	9,053			
Year 47	9,410							9,410	8,662			
Year 48	8,957							8,957	8,284			
Year 49	6,539							6,539	6,074			
Year 50	2,171							2,171	2,025			
Total - Full Value	**3,753,921**	**341,246**	**59,633**	**376,537**	**159,411**	**187,489**	**122,095**	**4,381,164**	**1,420,207**	**147,045**	**233,936**	**3,341,938**
Reference: Total Value	A.3 Row (h)	A.3 Row (i)	D.1 Row (d) Col (8)	D.1 Rows (e) to (h) Col (8)	D.1 Row (i) Col (8)	D.2 Row (a) Col (7)	F.2 Row (d)					
Reference: Payment Pattern	E.1	E.2	E.0 Section D	E.0. Section D [3] TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E					

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (8) - A.1.1 (8)
(10) = [(8) - (9)] / [1 - (13) - (15)] * (13)
(11) = [(8) - (9)] / [1 - (13) - (15)] * (15)
(12) = (8) - (9) + (10) + (11)

Notes:
[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to Jul 1, 2023, etc.)
[2] Enhanced Accident Benefits Loss and ALAE payments continue to year 50 as a result of the long tailed nature of these claims.
[3] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(3), (5), (6), and (7) are assumed to be evenly distributed throughout each of the two fiscal years as described in Technical Appendix A.0.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Required Premium - Discounted
Basic Vehicle Damage Coverage
($ 000's)

	Costs					Revenues		Required Premium Calculation				
	Claims			Expenses								
Period (starting at policy year inception) [1]	Loss & ALAE Payments (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Present Value Factor (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
Year 1 - Q1	6,065	945	3,829	4,812	10,245	12,126	7,300	6,470	1.04991			
Year 1 - Q2	43,041	6,709	3,776	10,063	10,103	11,958	7,200	54,535	1.03540			
Year 1 - Q3	101,332	15,796	3,724	15,168	9,963	11,793	7,100	127,091	1.02109			
Year 1 - Q4	158,835	24,759	3,673	20,131	9,826	11,630	7,002	198,591	1.00698			
Year 2 - Q1	165,240	21,402	3,693	23,035	9,866	11,531	8,073	203,633	0.99307			
Year 2 - Q2	174,928	22,657	3,642	22,717	9,729	11,371	7,961	214,341	0.97934			
Year 2 - Q3	185,474	24,023	3,592	22,403	9,595	11,214	7,851	226,022	0.96581			
Year 2 - Q4	209,973	27,196	3,542	22,093	9,462	11,059	7,743	253,465	0.95246			
Year 3 - Q1	187,981	16,604	0	18,131	0	0	0	222,716	0.93930			
Year 3 - Q2	163,552	14,446	0	12,772	0	0	0	190,770	0.92631			
Year 3 - Q3	120,872	10,676	0	7,557	0	0	0	139,105	0.91351			
Year 3 - Q4	92,100	8,135	0	2,484	0	0	0	102,720	0.90089			
Year 4	146,126	3,270						149,395	0.87008			
Year 5	9,004	372						9,376	0.82297			
Year 6	1,315	110						1,425	0.77841			
Year 7	691	55						746	0.73626			
Year 8	208	28						236	0.69640			
Year 9	0	15						15	0.65869			
Year 10	0	7						7	0.62303			
Year 11	0	3						3	0.58929			
Year 12	0	1						1	0.55739			
Year 13	0	0						0	0.52721			
Year 14	0	0						0	0.49866			
Year 15	0	0						0	0.47166			
Year 16	0	0						0	0.44612			
Year 17	0	0						0	0.42197			
Year 18	0	0						0	0.39912			
Year 19	0	0						0	0.37751			
Year 20	0	0						0	0.35707			
Year 21	0	0						0	0.33773			
Year 22	0	0						0	0.31945			
Year 23	0	0						0	0.30215			
Year 24	0	0						0	0.28579			
Year 25	0	0						0	0.27032			
Year 26	0	0						0	0.25568			
Total - Discounted [2]	**1,766,736**	**197,210**	**29,473**	**181,367**	**78,788**	**92,682**	**60,229**	**2,100,662**		**104,322**	**165,967**	**2,370,950**

Reference:				E.0. Section D [3]			
Payment Pattern	E.1	E.2	E.0 Section D	TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:
(1) thru (7): The discounted cash flows are their full value counterparts in A.2.2 discounted by PV factors (10)
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (1 + New Money Rate) ^ (Midpoint of PY2023 - Midpoint of Period)
(10) = (8) / [1 - (13) - (15)] * (13)
(11) = (8) / [1 - (13) - (15)] * (15)
(12) = (8) + (10) + (11)

Notes:
[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to June 30, 2023, etc.)
[2] Cash flows are discounted to the midpoint of PY 2023, i.e. Apr 1, 2024.
[3] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
(11) Capital provision uses a formula such that its amount is exactly 7% of required premium, net of premium tax.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Required Premium - Full Value
Basic Vehicle Damage Coverage
($ 000's)

	Costs					*Revenues*		*Required Premium Calculation*				
	Claims			Expenses								
Period (starting at policy year inception) [1]	Loss & ALAE Payments (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Investment Income on Policyholder Supplied Funds (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
Year 1 - Q1	5,777	901	3,647	4,583	9,757	11,549	6,953	6,163	(308)			
Year 1 - Q2	41,569	6,480	3,647	9,719	9,757	11,549	6,953	52,670	(1,865)			
Year 1 - Q3	99,239	15,469	3,647	14,855	9,757	11,549	6,953	124,465	(2,626)			
Year 1 - Q4	157,733	24,588	3,647	19,991	9,757	11,549	6,953	197,214	(1,377)			
Year 2 - Q1	166,394	21,552	3,719	23,196	9,934	11,611	8,129	205,055	1,422			
Year 2 - Q2	178,618	23,135	3,719	23,196	9,934	11,611	8,129	218,862	4,521			
Year 2 - Q3	192,041	24,874	3,719	23,196	9,934	11,611	8,129	234,024	8,002			
Year 2 - Q4	220,453	28,554	3,719	23,196	9,934	11,611	8,129	266,116	12,651			
Year 3 - Q1	200,130	17,677	0	19,303	0	0	0	237,109	14,394			
Year 3 - Q2	176,562	15,595	0	13,788	0	0	0	205,945	15,175			
Year 3 - Q3	132,315	11,687	0	8,273	0	0	0	152,275	13,170			
Year 3 - Q4	102,233	9,030	0	2,758	0	0	0	114,020	11,301			
Year 4	167,944	3,758						171,702	22,307			
Year 5	10,941	452						11,392	2,017			
Year 6	1,689	141						1,830	406			
Year 7	939	74						1,013	267			
Year 8	299	40						339	103			
Year 9	0	22						22	8			
Year 10	0	11						11	4			
Year 11	0	5						5	2			
Year 12	0	2						2	1			
Year 13	0	1						1	0			
Year 14	0	0						0	0			
Year 15	0	0						0	0			
Year 16	0	0						0	0			
Year 17	0	0						0	0			
Year 18	0	0						0	0			
Year 19	0	0						0	0			
Year 20	0	0						0	0			
Year 21	0	0						0	0			
Year 22	0	0						0	0			
Year 23	0	0						0	0			
Year 24	0	0						0	0			
Year 25	0	0						0	0			
Year 26	0	0						0	0			
Total - Full Value	**1,854,875**	**204,047**	**29,466**	**186,053**	**78,767**	**92,642**	**60,329**	**2,200,238**	**99,576**	**104,322**	**165,967**	**2,370,950**
Reference: Total Value	A.4 Row (h)	A.4 Row (i)	D.1 Row (d) Col (9)	D.1 Rows (e) to (h) Col (9)	D.1 Row (i) Col (9)	D.2 Row (b) Col (7)	F.2 Row (d)					
Reference: Payment Pattern	E.1	E.2	E.0 Section D	E.0. Section D [2] TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E					

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (8) - A.2.1 (8)
(10) = [(8) - (9)] / [1 - (13) - (15)] * (13)
(11) = [(8) - (9)] / [1 - (13) - (15)] * (15)
(12) = (8) - (9) + (10) + (11)

Notes:
[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to Jul 1, 2023, etc.)
[2] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(3), (5), (6), and (7) are assumed to be evenly distributed throughout each of the two fiscal years as described in Technical Appendix A.0.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Required Premium - Discounted
Third Party Liability
($ 000's)

	Costs					Revenues		Required Premium Calculation				
	Claims			Expenses								
Period (starting at policy year inception) [1]	Loss & ALAE Payments (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Present Value Factor (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
Year 1 - Q1	275	48	642	807	1,717	2,032	1,224	232	1.04991			
Year 1 - Q2	1,980	348	633	1,687	1,693	2,004	1,207	3,130	1.03540			
Year 1 - Q3	4,746	853	624	2,543	1,670	1,977	1,190	7,269	1.02109			
Year 1 - Q4	7,873	1,514	616	3,374	1,647	1,949	1,174	11,900	1.00698			
Year 2 - Q1	12,336	1,448	619	3,861	1,654	1,933	1,353	16,632	0.99307			
Year 2 - Q2	12,794	1,555	611	3,808	1,631	1,906	1,334	17,157	0.97934			
Year 2 - Q3	12,489	1,552	602	3,755	1,608	1,880	1,316	16,810	0.96581			
Year 2 - Q4	14,424	1,900	594	3,703	1,586	1,854	1,298	19,056	0.95246			
Year 3 - Q1	20,150	1,416	0	3,039	0	0	0	24,605	0.93930			
Year 3 - Q2	18,938	1,354	0	2,141	0	0	0	22,433	0.92631			
Year 3 - Q3	16,056	1,173	0	1,267	0	0	0	18,496	0.91351			
Year 3 - Q4	14,972	1,132	0	416	0	0	0	16,520	0.90089			
Year 4	51,043	1,954						52,997	0.87008			
Year 5	30,241	829						31,070	0.82297			
Year 6	20,233	464						20,697	0.77841			
Year 7	12,663	291						12,954	0.73626			
Year 8	7,359	191						7,550	0.69640			
Year 9	4,587	120						4,706	0.65869			
Year 10	2,701	72						2,772	0.62303			
Year 11	1,316	46						1,362	0.58929			
Year 12	883	29						912	0.55739			
Year 13	677	19						695	0.52721			
Year 14	274	12						286	0.49866			
Year 15	98	8						105	0.47166			
Year 16	78	5						83	0.44612			
Year 17	30	3						33	0.42197			
Year 18	8	2						10	0.39912			
Year 19	8	2						10	0.37751			
Year 20	4	1						4	0.35707			
Year 21	0	0						0	0.33773			
Year 22	0	0						0	0.31945			
Year 23	0	0						0	0.30215			
Year 24	0	0						0	0.28579			
Year 25	0	0						0	0.27032			
Year 26	0	0						0	0.25568			
Total - Discounted [2]	**269,231**	**18,340**	**4,940**	**30,400**	**13,206**	**15,535**	**10,096**	**310,487**		**15,419**	**24,531**	**350,437**

Reference:				E.0. Section D [3]			
Payment Pattern	E.1	E.2	E.0 Section D	TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:

(1) thru (7): The discounted cash flows are their full value counterparts in A.3.2 discounted by PV factors (10)
(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (1 + New Money Rate) ^ (Midpoint of PY2023 - Midpoint of Period)
(10) = (8) / [1 - (13) - (15)] * (13)
(11) = (8) / [1 - (13) - (15)] * (15)
(12) = (8) + (10) + (11)

Notes:

[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to June 30, 2023, etc.)
[2] Cash flows are discounted to the midpoint of PY 2023, i.e. Apr 1, 2024.
[3] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
(11) Capital provision uses a formula such that its amount is exactly 7% of required premium, net of premium tax.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Required Premium - Full Value
Third Party Liability
($ 000's)

	Costs					Revenues		Required Premium Calculation				
	Claims		Expenses									
Period (starting at policy year inception) [1]	Loss & ALAE Payments (1)	Claims Service Expense (ULAE) (2)	Road Safety and Loss Management (RSLM) (3)	General Expenses (4)	Broker Fees (5)	Miscellaneous Revenue (6)	Investment Income on Capital Available for Rate Setting (7)	Total Cash Flow (8)	Investment Income on Policyholder Supplied Funds (9)	Premium Tax (10)	Capital Provision (11)	Required Premium (12)
Year 1 - Q1	262	45	611	768	1,636	1,936	1,166	221	(11)			
Year 1 - Q2	1,912	336	611	1,629	1,636	1,936	1,166	3,023	(107)			
Year 1 - Q3	4,648	836	611	2,490	1,636	1,936	1,166	7,119	(150)			
Year 1 - Q4	7,818	1,503	611	3,351	1,636	1,936	1,166	11,818	(83)			
Year 2 - Q1	12,422	1,458	623	3,888	1,665	1,946	1,363	16,748	116			
Year 2 - Q2	13,063	1,588	623	3,888	1,665	1,946	1,363	17,519	362			
Year 2 - Q3	12,931	1,607	623	3,888	1,665	1,946	1,363	17,406	595			
Year 2 - Q4	15,144	1,995	623	3,888	1,665	1,946	1,363	20,007	951			
Year 3 - Q1	21,453	1,507	0	3,236	0	0	0	26,196	1,590			
Year 3 - Q2	20,444	1,462	0	2,311	0	0	0	24,217	1,784			
Year 3 - Q3	17,576	1,284	0	1,387	0	0	0	20,247	1,751			
Year 3 - Q4	16,619	1,257	0	462	0	0	0	18,338	1,817			
Year 4	58,665	2,246						60,910	7,913			
Year 5	36,747	1,007						37,753	6,683			
Year 6	25,993	596						26,589	5,892			
Year 7	17,199	396						17,595	4,640			
Year 8	10,567	275						10,841	3,291			
Year 9	6,963	182						7,145	2,439			
Year 10	4,335	115						4,450	1,678			
Year 11	2,233	78						2,311	949			
Year 12	1,583	52						1,636	724			
Year 13	1,284	35						1,319	624			
Year 14	550	24						574	288			
Year 15	207	16						223	118			
Year 16	175	11						186	103			
Year 17	70	8						78	45			
Year 18	19	6						25	15			
Year 19	21	5						26	16			
Year 20	10	2						12	8			
Year 21	0	0						0	0			
Year 22	0	0						0	0			
Year 23	0	0						0	0			
Year 24	0	0						0	0			
Year 25	0	0						0	0			
Year 26	0	0						0	0			
Total - Full Value	**310,912**	**19,931**	**4,939**	**31,186**	**13,203**	**15,528**	**10,112**	**354,529**	**44,042**	**15,419**	**24,531**	**350,437**
Reference: Total Value	A.5 Row (h)	A.5 Row (i)	D.1 Row (d) Col (10)	D.1 Rows (e) to (h) Col (10)	D.1 Row (i) Col (10)	D.2 Row (c) Col (7)	F.2 Row (d)					
Reference: Payment Pattern	E.1	E.2	E.0 Section D	E.0. Section D [2] TA E.0 Section D	E.0 Section D	E.0 Section D	E.0 Section E					

Assumptions:

(13) Premium Tax Rate	4.40%	
(14) New Money Rate	5.72%	Chapter 5, Section D.1
(15) Capital Provision %	7.00%	Special Direction IC2

Calculation Notes:

(8) = sum (1) thru (5) - sum (6) thru (7)
(9) = (8) - A.3.1 (8)
(10) = [(8) - (9)] / [1 - (13) - (15)] * (13)
(11) = [(8) - (9)] / [1 - (13) - (15)] * (15)
(12) = (8) - (9) + (10) + (11)

Notes:

[1] Since PY 2023 begins on Apr 1, 2023, the periods in this column reflect a starting point of Apr 1, 2023 (e.g., the first quarter represents the period from Apr 1, 2023 to Jul 1, 2023, etc.)
[2] Payment patterns for general expenses excluding merchant fees are described in TA E.0 Section D. Payment patterns for merchant fees are described in Appendix E.0 Section D.
(3), (5), (6), and (7) are assumed to be evenly distributed throughout each of the two fiscal years as described in Technical Appendix A.0.
(4) General expenses are split into two categories: general expense excluding merchant fees and merchant fees. General expense excluding merchant fees are assumed to be fully paid within three years, consistent with the earning pattern of the policies purchased in a policy period, and merchant fees are assumed to be recognized at the time of policy inception as described in Technical Appendix E.0.
See Technical Appendix A.0 for a guide to this Appendix

Policy Year 2023 Loss & ALAE Payment Patterns and Payments ($ 000's)

	Payment Patterns							Payments						
Period	**EAB-MR**	**EAB-ED**	**EAB-PI**	**EAB-DB**	**BVDC**	**TPL-PD**	**TPL-OOP BI**	**EAB-MR**	**EAB-ED**	**EAB-PI**	**EAB-DB**	**BVDC**	**TPL-PD**	**TPL-OOP BI**
Year 1 - Q1	0.05%	0.02%	0.13%	0.13%	0.31%	0.16%	0.01%	901	268	391	118	5,777	247	15
Year 1 - Q2	0.49%	0.21%	0.65%	0.65%	2.24%	1.17%	0.09%	9,295	3,013	2,005	603	41,569	1,777	135
Year 1 - Q3	1.27%	0.64%	1.83%	1.83%	5.35%	2.78%	0.26%	24,089	9,325	5,663	1,704	99,239	4,243	405
Year 1 - Q4	2.78%	1.43%	2.90%	2.90%	8.50%	4.43%	0.68%	52,842	20,695	8,944	2,691	157,733	6,743	1,075
Year 2 - Q1	2.35%	0.97%	4.30%	4.30%	8.97%	7.31%	0.81%	44,579	14,154	13,268	3,992	166,394	11,134	1,288
Year 2 - Q2	3.15%	1.36%	4.04%	4.04%	9.63%	7.26%	1.26%	59,830	19,764	12,475	3,754	178,618	11,066	1,997
Year 2 - Q3	3.53%	1.84%	3.83%	3.83%	10.35%	6.91%	1.51%	66,980	26,757	11,836	3,561	192,041	10,533	2,398
Year 2 - Q4	5.16%	2.67%	4.79%	4.79%	11.89%	7.22%	2.62%	97,980	38,720	14,791	4,450	220,453	10,995	4,149
Year 3 - Q1	3.96%	1.85%	6.73%	6.73%	10.79%	10.91%	3.05%	75,227	26,935	20,783	6,254	200,130	16,624	4,829
Year 3 - Q2	4.32%	2.05%	5.95%	5.95%	9.52%	9.86%	3.42%	82,095	29,821	18,376	5,529	176,562	15,027	5,418
Year 3 - Q3	3.90%	2.10%	4.56%	4.56%	7.13%	7.89%	3.50%	74,118	30,471	14,079	4,236	132,315	12,028	5,549
Year 3 - Q4	4.00%	2.13%	4.45%	4.45%	5.51%	6.55%	4.18%	76,025	30,997	13,753	4,138	102,233	9,989	6,630
Year 4	9.03%	5.98%	19.26%	19.26%	9.05%	19.24%	18.51%	171,657	86,874	59,476	17,896	167,944	29,318	29,347
Year 5	4.00%	4.43%	16.33%	16.33%	0.59%	5.24%	18.14%	76,057	64,330	50,440	15,177	10,941	7,983	28,763
Year 6	2.71%	3.80%	10.53%	10.53%	0.09%	1.58%	14.88%	51,525	55,247	32,511	9,782	1,689	2,412	23,581
Year 7	2.08%	3.32%	4.07%	4.07%	0.05%	0.78%	10.09%	39,495	48,147	12,572	3,783	939	1,196	16,003
Year 8	1.82%	2.92%	1.32%	1.32%	0.02%	0.40%	6.28%	34,577	42,398	4,084	1,229	299	615	9,952
Year 9	1.83%	2.70%	0.86%	0.86%	0.00%	0.22%	4.18%	34,814	39,162	2,662	801	-	335	6,628
Year 10	1.93%	2.62%	0.68%	0.68%	0.00%	0.08%	2.66%	36,579	38,042	2,088	628	-	120	4,215
Year 11	2.02%	2.55%	0.48%	0.48%	0.00%	0.00%	1.41%	38,441	37,081	1,493	449	-	-	2,233
Year 12	2.13%	2.46%	0.40%	0.40%	0.00%	0.00%	1.00%	40,388	35,656	1,235	372	-	-	1,583
Year 13	2.23%	2.39%	0.39%	0.39%	0.00%	0.00%	0.81%	42,419	34,686	1,216	366	-	-	1,284
Year 14	2.30%	2.37%	0.40%	0.40%	0.00%	0.00%	0.35%	43,782	34,425	1,225	369	-	-	550
Year 15	2.23%	2.32%	0.38%	0.38%	0.00%	0.00%	0.13%	42,424	33,629	1,182	356	-	-	207
Year 16	2.00%	2.22%	0.33%	0.33%	0.00%	0.00%	0.11%	37,916	32,207	1,029	310	-	-	175
Year 17	1.75%	2.13%	0.25%	0.25%	0.00%	0.00%	0.04%	33,209	30,919	767	231	-	-	70
Year 18	1.62%	2.06%	0.14%	0.14%	0.00%	0.00%	0.01%	30,787	29,956	423	127	-	-	19
Year 19	1.60%	2.03%	0.04%	0.04%	0.00%	0.00%	0.01%	30,404	29,474	116	35	-	-	21
Year 20	1.61%	1.99%	0.00%	0.00%	0.00%	0.00%	0.01%	30,527	28,950	-	-	-	-	10
Year 21	1.59%	1.94%	0.00%	0.00%	0.00%	0.00%	0.00%	30,257	28,140	-	-	-	-	-
Year 22	1.57%	1.88%	0.00%	0.00%	0.00%	0.00%	0.00%	29,768	27,307	-	-	-	-	-
Year 23	1.54%	1.82%	0.00%	0.00%	0.00%	0.00%	0.00%	29,265	26,456	-	-	-	-	-
Year 24	1.51%	1.76%	0.00%	0.00%	0.00%	0.00%	0.00%	28,750	25,595	-	-	-	-	-
Year 25	1.49%	1.70%	0.00%	0.00%	0.00%	0.00%	0.00%	28,225	24,728	-	-	-	-	-
Year 26	1.46%	1.64%	0.00%	0.00%	0.00%	0.00%	0.00%	27,691	23,860	-	-	-	-	-
Year 27	1.43%	1.58%	0.00%	0.00%	0.00%	0.00%	0.00%	27,151	22,995	-	-	-	-	-
Year 28	1.40%	1.52%	0.00%	0.00%	0.00%	0.00%	0.00%	26,605	22,138	-	-	-	-	-
Year 29	1.37%	1.47%	0.00%	0.00%	0.00%	0.00%	0.00%	26,057	21,290	-	-	-	-	-
Year 30	1.34%	1.41%	0.00%	0.00%	0.00%	0.00%	0.00%	25,505	20,455	-	-	-	-	-
Year 31	1.31%	1.35%	0.00%	0.00%	0.00%	0.00%	0.00%	24,953	19,636	-	-	-	-	-
Year 32	1.28%	1.30%	0.00%	0.00%	0.00%	0.00%	0.00%	24,402	18,834	-	-	-	-	-
Year 33	1.26%	1.24%	0.00%	0.00%	0.00%	0.00%	0.00%	23,851	18,050	-	-	-	-	-
Year 34	1.23%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	23,303	17,287	-	-	-	-	-
Year 35	1.20%	1.14%	0.00%	0.00%	0.00%	0.00%	0.00%	22,758	16,545	-	-	-	-	-
Year 36	0.89%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	16,906	15,826	-	-	-	-	-
Year 37	0.30%	1.04%	0.00%	0.00%	0.00%	0.00%	0.00%	5,663	15,128	-	-	-	-	-
Year 38	0.00%	1.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	14,454	-	-	-	-	-
Year 39	0.00%	0.95%	0.00%	0.00%	0.00%	0.00%	0.00%	-	13,803	-	-	-	-	-
Year 40	0.00%	0.91%	0.00%	0.00%	0.00%	0.00%	0.00%	-	13,175	-	-	-	-	-
Year 41	0.00%	0.87%	0.00%	0.00%	0.00%	0.00%	0.00%	-	12,570	-	-	-	-	-
Year 42	0.00%	0.83%	0.00%	0.00%	0.00%	0.00%	0.00%	-	11,988	-	-	-	-	-
Year 43	0.00%	0.79%	0.00%	0.00%	0.00%	0.00%	0.00%	-	11,429	-	-	-	-	-
Year 44	0.00%	0.75%	0.00%	0.00%	0.00%	0.00%	0.00%	-	10,892	-	-	-	-	-
Year 45	0.00%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	-	10,376	-	-	-	-	-
Year 46	0.00%	0.68%	0.00%	0.00%	0.00%	0.00%	0.00%	-	9,883	-	-	-	-	-
Year 47	0.00%	0.65%	0.00%	0.00%	0.00%	0.00%	0.00%	-	9,410	-	-	-	-	-
Year 48	0.00%	0.62%	0.00%	0.00%	0.00%	0.00%	0.00%	-	8,957	-	-	-	-	-
Year 49	0.00%	0.45%	0.00%	0.00%	0.00%	0.00%	0.00%	-	6,539	-	-	-	-	-
Year 50	0.00%	0.15%	0.00%	0.00%	0.00%	0.00%	0.00%	-	2,171	-	-	-	-	-
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**1,900,076**	**1,452,021**	**308,884**	**92,940**	**1,854,875**	**152,383**	**158,529**
Reference	E.1 Col (1)	E.1 Col (2)	E.1 Col (3)	E.1 Col (4)	E.1 Col (5)	E.1 Col (6)	E.1 Col (7)	A.3 Row (h) Col (1) x E.1 Col (1)	A.3 Row (h) Col (2) x E.1 Col (2)	A.3 Row (h) Col (3) x E.1 Col (3)	A.3 Row (h) Col (4) x E.1 Col (4)	A.4 Row (h) Col (1) x E.1 Col (5)	A.5 Row (h) Col (1) x E.1 Col (6)	A.5 Row (h) Col (2) x E.1 Col (7)

Policy Year 2023 ULAE Payment Patterns and Payments ($ 000's)

	Payment Patterns							Payments						
Period	EAB-MR	EAB-ED	EAB-PI	EAB-DB	BVDC	TPL-PD	TPL-OOP BI	EAB-MR	EAB-ED	EAB-PI	EAB-DB	BVDC	TPL-PD	TPL-OOP BI
Year 1 - Q1	0.16%	0.08%	0.02%	0.33%	0.44%	0.35%	0.07%	218	122	8	23	901	39	6
Year 1 - Q2	1.70%	0.89%	0.08%	1.70%	3.18%	2.48%	0.64%	2,251	1,373	39	116	6,480	281	55
Year 1 - Q3	4.40%	2.75%	0.23%	4.80%	7.58%	5.93%	1.91%	5,833	4,249	109	327	15,469	671	164
Year 1 - Q4	9.65%	6.11%	0.36%	7.58%	12.05%	9.42%	5.07%	12,794	9,430	172	516	24,588	1,067	436
Year 2 - Q1	5.97%	3.66%	0.73%	8.63%	10.56%	10.68%	2.89%	7,916	5,648	347	587	21,552	1,209	249
Year 2 - Q2	8.01%	5.11%	0.69%	8.11%	11.34%	10.61%	4.48%	10,624	7,886	326	552	23,135	1,202	386
Year 2 - Q3	8.97%	6.92%	0.65%	7.70%	12.19%	10.10%	5.38%	11,894	10,677	310	524	24,874	1,144	463
Year 2 - Q4	13.12%	10.01%	0.81%	9.62%	13.99%	10.54%	9.31%	17,398	15,450	387	655	28,554	1,194	801
Year 3 - Q1	6.57%	5.84%	1.69%	8.79%	8.66%	9.29%	5.28%	8,704	9,015	803	598	17,677	1,053	455
Year 3 - Q2	7.16%	6.47%	1.49%	7.77%	7.64%	8.40%	5.93%	9,499	9,981	710	529	15,595	952	510
Year 3 - Q3	6.47%	6.61%	1.14%	5.95%	5.73%	6.72%	6.07%	8,576	10,199	544	405	11,687	762	522
Year 3 - Q4	6.63%	6.72%	1.12%	5.81%	4.43%	5.58%	7.26%	8,797	10,375	531	396	9,030	633	624
Year 4	8.19%	13.69%	6.93%	11.36%	1.84%	7.54%	16.18%	10,865	21,128	3,294	773	3,758	854	1,392
Year 5	3.35%	7.42%	10.42%	4.64%	0.22%	1.41%	9.84%	4,442	11,455	4,952	316	452	160	847
Year 6	2.45%	5.40%	16.29%	2.43%	0.07%	0.37%	6.44%	3,245	8,335	7,744	165	141	42	554
Year 7	1.86%	3.90%	18.05%	1.55%	0.04%	0.22%	4.32%	2,461	6,025	8,579	106	74	24	371
Year 8	1.34%	2.61%	13.85%	1.05%	0.02%	0.15%	2.99%	1,782	4,027	6,586	72	40	18	257
Year 9	0.94%	1.65%	8.53%	0.72%	0.01%	0.10%	1.99%	1,248	2,544	4,055	49	22	11	171
Year 10	0.68%	1.08%	5.21%	0.48%	0.01%	0.05%	1.27%	901	1,669	2,477	33	11	6	110
Year 11	0.52%	0.79%	3.46%	0.33%	0.00%	0.02%	0.87%	692	1,213	1,645	22	5	3	75
Year 12	0.42%	0.60%	2.29%	0.22%	0.00%	0.01%	0.59%	556	929	1,091	15	2	1	51
Year 13	0.34%	0.46%	1.53%	0.15%	0.00%	0.01%	0.40%	453	712	727	10	1	1	35
Year 14	0.28%	0.35%	1.13%	0.10%	0.00%	0.00%	0.28%	370	544	536	7	0	0	24
Year 15	0.23%	0.27%	0.92%	0.07%	0.00%	0.00%	0.19%	302	415	438	5	-	-	16
Year 16	0.19%	0.21%	0.76%	0.05%	0.00%	0.00%	0.13%	246	318	362	3	-	-	11
Year 17	0.15%	0.16%	0.62%	0.03%	0.00%	0.00%	0.09%	201	243	294	2	-	-	8
Year 18	0.13%	0.12%	0.52%	0.02%	0.00%	0.00%	0.07%	167	190	246	2	-	-	6
Year 19	0.09%	0.08%	0.37%	0.01%	0.00%	0.00%	0.05%	114	124	175	1	-	-	5
Year 20	0.03%	0.03%	0.12%	0.00%	0.00%	0.00%	0.02%	36	39	58	0	-	-	2
Year 21	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 23	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 24	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 25	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 26	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 27	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 28	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 29	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 30	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 31	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 32	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 34	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 35	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 36	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 37	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 38	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 39	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 40	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 41	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 42	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 43	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 44	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 45	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 46	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 47	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 48	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 49	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Year 50	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-	-	-	-	-	-
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**132,583**	**154,314**	**47,542**	**6,806**	**204,047**	**11,326**	**8,605**
Reference	E.2 Col (1)	E.2 Col (2)	E.2 Col (3)	E.2 Col (4)	E.2 Col (5)	E.2 Col (6)	E.2 Col (7)	A.3 Row (i) Col (1) x E.2 Col (1)	A.3 Row (i) Col (2) x E.2 Col (2)	A.3 Row (i) Col (3) x E.2 Col (3)	A.3 Row (i) Col (4) x E.2 Col (4)	A.4 Row (i) Col (1) x E.2 Col (5)	A.5 Row (i) Col (1) x E.2 Col (6)	A.5 Row (i) Col (2) x E.2 Col (7)

Selected Groups for the Exposure Models and the Average Premium Models

Selected Groups	Selected Models	
	Simple Regression Using Time	Judgemental Trend [2]
PERSONAL WRITTEN RISK EXPOSURE [1]		
Motorcycles (Rate Classes 310-324, 710-724)	7 year regression (2013-03 to 2020-02)	
Lower Mainland (Territory D)	4 year regression (2016-03 to 2020-02)	
Maple Ridge and Fraser Valley (Territories E, H)	4 year regression (2016-03 to 2020-02)	
All Other Personal Vehicles	4 year regression (2016-03 to 2020-02)	
PERSONAL AVERAGE PREMIUM AT CURRENT RATE LEVEL [3]		
Motorcycles (Rate Classes 310-324, 710-724)	33 month regression (2019-10 to 2022-06)	
Lower Mainland (Territory D)	33 month regression (2019-10 to 2022-06)	
Maple Ridge and Fraser Valley (Territories E, H)	33 month regression (2019-10 to 2022-06)	
All Other Personal Vehicles	33 month regression (2019-10 to 2022-06)	
COMMERCIAL WRITTEN RISK EXPOSURE [1]		
Long Haul Delivery (Rate Classes 420-436, 450-466)	5 year regression (2015-03 to 2020-02)	
Taxi (Rate Classes 690-695)		Set equal to "All Other Commercial Vehicles" Trend
All Other Commercial Vehicles	3 year regression (2017-03 to 2020-02)	
COMMERCIAL AVERAGE PREMIUM AT CURRENT RATE LEVEL [4]		
Long Haul Delivery (Rate Classes 420-436, 450-466)	24 month regression (2020-07 to 2022-06)	
Taxi (Rate Classes 690-695)		Set equal to "All Other Commercial Vehicles" Trend
All Other Commercial Vehicles	24 month regression (2020-07 to 2022-06)	
OTHER LINES OF BUSINESS WRITTEN RISK EXPOSURE [1]		
Trailer (Rate Classes 510-514, 550-552)	5 year regression (2015-03 to 2020-02)	
Off-Road Vehicles (Rate Class 36) [5]		Judgment 5%
Temporary Operating Permit (Rate Classes 850-861)		Judgment 0%
Manual Basic		Set equal to "All Other Commercial Vehicles" Trend
OTHER LINES OF BUSINESS AVERAGE PREMIUM AT CURRENT RATE LEVEL		
Trailer (Rate Classes 510-514, 550-552)		Judgment 0%
Off-Road Vehicles (Rate Class 36)		Judgment 0%
Temporary Operating Permit (Rate Classes 850-861)		Set equal to "All Other Personal Vehicles" Trend
Manual Basic		Set equal to "All Other Commercial Vehicles" Trend

[1] Data for March 2020 onwards has been excluded from the risk exposure analysis to remove the impacts from COVID-19.

[2] Judgemental trends are selected either by setting equal to a related exposure group, or setting to 0% if ICBC believes the trend should be 0%

[3] Average premium trends for Personal are selected using all the available data after Rate Design, excluding the first month due to potential data issues

[4] Average premium trends for Commercial are selected using the available complete-year data after Rate Design, due to effects of high seasonality in Commercial

[5] The risk exposure growth rate of 5% for Off-Road Vehicles was selected judgmentally to reflect the decline in historical Off-Road Vehicle growth rates and the expectation that the trend will move towards the lower Personal trend over time.

TECHNICAL APPENDIX C.0
CLAIMS RESERVING ANALYSIS

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A INTRODUCTION

1. The reserving analysis estimates the historical incurred claim counts, and incurred loss and allocated loss adjustment expenses (ALAE) for the different coverages. The estimation of unallocated loss adjustments expenses is provided separately in Appendix Set C.6.

2. For Enhanced Accident Benefits (EAB) claims, the analysis combines ICBC's limited experience from the first year of the Enhanced Care product with relevant external information, primarily from Manitoba Public Insurance (MPI). This analysis is described and shown in Technical Appendix Set C.1. The analysis for the non-EAB claims follows the same general structure used in the 2021 Revenue Requirements Application (RRA), and is described and shown in Technical Appendix Set C.2 for the Basic Vehicle Damage Coverage (BVDC) claims, and in Technical Appendix Set C.3 for Third Party Liability (TPL) claims. The data and methodology used in the analysis are generally consistent with past RRAs, with relevant exceptions for each coverage being noted below, or in the technical appendix describing the analysis for each coverage, as appropriate.

3. The results of the reserving analysis estimated in this Technical Appendix Set C are used to forecast claims frequencies and severities for future years, as further explained in Appendix Set C. This represents a consolidation of all claims-related content into Appendix Set C and Technical Appendix Set C in contrast to the presentation in the 2021 RRA where the estimation of incurred loss and ALAE was located in Appendix Set D and Technical Appendix Set D and claims forecasting was located in Appendix Set C.

4. The selected incurred losses and ALAE, and selected recoveries refer to ICBC's best estimate of the amounts which ultimately will be paid on claims within each fiscal loss year (FLY). ICBC's actuarial analysis of counts, frequencies, and severities are stated on a claim exposure basis.[1] Unless noted otherwise, references to loss amounts within this Appendix set should be understood as being net of recovery amounts, and references to incurred count or incurred severity should be understood as excluding claims completed with no amount (CNA).[2]

[1] Claim exposures represent the part of a claim raised against one specific coverage component by a claimant. A claim exposure is created for each claimant making a demand against a particular coverage. A claim may contain multiple claim exposures related to a single coverage group. The number of claim exposures and the number of claimants under a coverage are generally the same.

[2] A completed claim is a claim where all adjusting activity has been completed. A claim may be completed before all payments are made, distinct from a closed claim, for which all payments have been made.

B OVERVIEW OF ICBC'S ACTUARIAL RESERVING METHODOLOGY

B.1 ACTUARIAL METHODS FOR CLAIM EXPOSURE COUNTS

5. The incurred claim exposure counts are analyzed using an actuarial method, referred to by actuaries as the Incurred Count Development Method. In this method, the actuaries examine the number of claim exposures (excluding CNA) from each FLY at annual intervals, and calculate count development factors, which represent the year-to-year changes in a given FLY's claim exposure count.[3] The actuaries forecast future count development according to accepted actuarial practice by determining the best estimate count development factors using ICBC's historical experience.

B.2 ACTUARIAL METHODS FOR LOSS AND ALAE AMOUNTS

6. The incurred loss and ALAE amounts are analyzed using three actuarial methods which are referred to by actuaries as the Incurred Development Method, the Paid Development Method, and the Bornhuetter-Ferguson Method. Each of these methods calls for a review of historical loss development patterns to determine loss development factors.

7. In the Incurred Development Method, the actuaries examine the case incurred loss and ALAE amounts for claims from each FLY at annual intervals, and calculate loss development factors, which represent the year-to-year changes in a given FLY's case incurred amounts.[4] The actuaries forecast future case incurred loss development according to accepted actuarial practice by determining the best estimate loss development factors using ICBC's historical experience. Proper application of this method requires that the timing and level of case reserves, as well as the rates of closure and payment of claims, should be relatively consistent over time in order to produce unbiased estimates of the incurred loss and ALAE amounts; and where that does not hold true, that adjustments are made to the assumptions to remove the bias that otherwise would exist.

[3] Claims from a fiscal loss year (FLY) means claims where the loss occurs within a period beginning on April 1 of one year and ending on March 31 of the following year. Within these technical appendices, FLYs are labelled based on the calendar year associated with their ending month. For example, FLY 2022 encompasses claims occurring in the period from April 2021 through March 2022, and would be labelled as FLY 2022.

[4] Case incurred loss and ALAE includes paid loss and ALAE, net of recovered amounts (unless noted otherwise), plus case reserves established for expected future payments on specific known claims.

8. Similarly, the application of the Paid Development Method relies on paid loss and ALAE amounts for claims for each FLY at annual intervals, and loss development factors which represent the year-to-year changes in a given FLY's paid loss and ALAE amounts.[5] The actuaries forecast future paid loss and ALAE development according to accepted actuarial practice by determining loss development factors using ICBC's historical experience that, when applied to paid loss and ALAE amounts, provide for future loss development for each FLY. Proper application of this method requires that the timing of paid loss and ALAE amounts should be relatively consistent over time in order to produce unbiased estimates of the incurred loss and ALAE amounts, and where that does not hold true, that adjustments are made to the assumptions to remove the bias that otherwise would exist.

9. The Bornhuetter-Ferguson Method weights the estimate of incurred loss and ALAE for each FLY resulting from either the Paid Development Method or the Incurred Development Method with a separately derived prior estimate of the expected incurred loss and ALAE amount for that FLY. The weights are credibility factors based on the maturity of the experience. The more mature the experience, the less credibility is given to the separately derived prior estimate of the expected incurred loss and ALAE amount. The expected incurred loss and ALAE amount is determined through an examination of the frequency and severity of claims underlying the incurred loss amounts for sufficiently mature FLYs.

B.3 ACTUARIAL METHODS FOR RECOVERY AMOUNTS

10. Where recovery amounts are analyzed separately, this is done using three methods: the Paid Recovery Development Method, the Incremental Recovered Amount to Incurred Loss Method, and the Bornhuetter-Ferguson Method.

11. The Paid Recovery Development Method is similar to the Paid Development Method discussed above. The actuaries forecast future paid recovery development according to accepted actuarial practice by determining the best estimate loss development factors for future development for each FLY. Proper application of this method requires that the timing of paid recovery amounts should be relatively consistent over time in order to produce unbiased estimates of the incurred recovery amounts, and where that does not hold true, that adjustments are made to the assumptions to remove the bias that otherwise would exist.

[5] The paid loss and ALAE amount on a claim is the actual amount of coverage benefits and expenses already paid by ICBC, net of recovered amounts (unless noted otherwise).

12. The Incremental Recovered Amount to Incurred Loss Method examines the historical pattern of the ratios of incremental recovered amounts to incurred loss and ALAE and uses a selected ratio for each development period to forecast future incremental recovered amounts. Proper application of this method requires that the incremental recovered amount ratios from the historical experience, the timing and level of recovery payments, and their relation to the loss and ALAE amounts, be relatively consistent over time, and where that does not hold true, that adjustments are made to the assumptions to remove the bias that otherwise would exist.

13. The Bornhuetter-Ferguson Method weights the estimate from the Incremental Recovered Amount to Incurred Loss Method with a separately derived prior estimate of the expected incurred recovery amount. The weights are credibility factors based on the maturity of the experience. The more mature the experience, the less credibility is given to the separately derived prior estimate of the expected incurred recovery amount. An expected recovery severity is determined through an examination of the underlying incurred recovery severities, and the expected incurred recovery amount is derived by multiplying the expected recovery severity by the incurred count.

B.4 CONSIDERATIONS IN THE APPLICATION OF ACTUARIAL METHODS

14. Many of the actuarial assumptions used in the methods described above rely on established historical patterns in the claims statistics. The actuaries consider circumstances under which the past claims experience may lack pertinence for the selection of assumptions about the future claims experience, and have made appropriate assumptions or adjustments to the methods where necessary in order to determine the best estimate cost of claims. Such circumstances include changes in claim closure rates; changes in supplier and claimant behaviours, including those resulting from the COVID-19 pandemic; and changes in the claims management system and business processes, including those required to address the change to the Enhanced Care product, which have affected the handling and coding of claims. These circumstances, where features of the historical data may cause a change in the relationship between past and future claims experience underlying the standard actuarial methods, are discussed in more detail in Technical Appendices C.1.0, C.2.0 and C.3.0.

15. Within each coverage, large claims may occur that represent a meaningful portion of the total case incurred loss and ALAE amounts for a particular FLY. The impact of large claims on the development patterns may be significant, and needs to be considered in determining the best estimate incurred loss and ALAE. In this Application, ICBC has adopted a consistent approach

across coverages for identifying and adjusting for the impact of unusually large claims in the reserving analysis. This represents a change from the 2021 RRA where the potential impact of large claims was considered and adjusted more independently within the analysis of each coverage.

16. The thresholds for identifying unusually large claim exposures for adjustment in the reserving analysis have been determined for each sub-coverage based on a review of quantitative and qualitative factors. These thresholds, which are used in the August 2022 reserve analysis, are shown in Figure C.0.1 below.

Figure TA C.0.1 – Large Claim Exposure Thresholds for Reserving Analysis

Sub-Coverage	Threshold
EAB-MR	$2,000,000
EAB-ED	$1,400,000
EAB-PI	$500,000
EAB-DB	$1,000,000
BVDC	$250,000
TPL-PD	$1,500,000
TPL-BI OOP	$1,500,000

17. For claim exposures that exceed the threshold, explicit adjustments are made to remove the full case incurred amounts from the historical data prior to the application of development assumptions, in order to avoid those large claims having undue influence on the estimate of future loss and ALAE amounts. The case incurred amount of the large claims, which is judged to be the best estimate of the incurred loss and ALAE for those large claim exposures, is then added back to the results of a method in order to arrive at the incurred loss and ALAE estimate. This adjustment methodology is consistent with the adjustment methodology described in 2021 RRA, Technical Appendix D.0 Summary of Analysis, for AB-MR and AB-WB.

18. After the completion of the claims reserving analysis in this Application, it was found that the large claims adjustments for the historical claims data used in the BVDC reserving analysis were overstated. While the BVDC data applies a limit of $200,000 to vehicle damage amounts from ICBC's historical claims under the legal-based insurance product (as discussed in Technical

Appendix C.2), the large claims adjustments were calculated based on the full value of the historical claims. This affects the net case incurred values for BVDC and the BVDC severity trend used in the claims forecast analysis, in total resulting in an understatement of the BVDC costs for PY 2023 by $4 million. Due to the timing of this discovery, and its insignificant size, the BVDC analysis for PY 2023 continues to rely on the overstated adjustments for large claims, and these amounts are shown in Technical Appendices C.2.3.3, C.2.3.5, and C.2.4.1.

B.5 ALTERNATIVE METHODS USED FOR EAB RESERVING

19. Following the introduction of the Enhanced Care product on May 1, 2021, ICBC has now received a significant number of claims under the new EAB coverage. While many of these claims have been resolved, particularly those involving comparatively minor injuries, many also have ongoing treatment and compensatory payments, such that the majority of costs for FLY 2022 remains outstanding. It will require many years for the full costs of FLY 2022 claims to be observed within ICBC's data, and as a result ICBC cannot fully rely on those actuarial methods that require a consistent and full history of claims data. In this Application, the actuaries apply alternative methods for the estimation of incurred claim exposure counts and incurred loss and ALAE, as outlined below.

20. The claim exposure counts are generally analyzed using the incurred count development method, making use of EAB claims count data for FLY 2022, and historical development experience from Accident Benefits claims under the legal-based system. Since ICBC does not have historical permanent impairment claims, an alternative method is used for this sub-coverage, based on its relative propensity to Basic crash claims.

21. The loss and ALAE amounts are generally analysed by combining the estimated incurred counts with an estimated severity for claims in each EAB sub-coverage. In order to estimate claims severities for the EAB sub-coverages, the actuaries consider MPI historical data, to the extent that it is expected to be relevant to BC. Discussion on MPI historical claims data, and the adjustments to make it relevant for use in estimating EAB claims in BC, can be found in Sections B and C of Technical Appendix C.1.0, respectively. For death benefit claims, although the benefits have been enhanced, the timing of costs are expected to be relatively similar to that under the legal-based system in British Columbia, and the actuaries use data from both legal-based death benefits claims (pre-Enhanced Care) and the first year of Enhanced Care claims to estimate a starting point for forecasting claim severity.

22. The incurred loss and ALAE for FLY 2022 is presented on a full value basis, which includes the cost of expected future increases to claimants based on increases to the BC consumer price index (referred to as indexation impacts, and described in Section C.4 of Technical Appendix C.1.0). This represents a change from 2021 RRA where the costs were presented at the current cost (non-indexed) level.

23. The methodology and assumptions are described in Technical Appendix C.1.0, with detailed calculations provided separately in Excel format.

C CLAIMS DATA USED FOR ACTUARIAL RESERVING ANALYSIS

C.1 DATA SOURCES

24. Loss and ALAE amounts (including paid loss and ALAE, case reserves, and recoveries) and claim exposure count data as of August 31, 2022 are extracted from ICBC's enterprise data warehouse, organized into an appropriate format, combined, and downloaded into spreadsheets. The data is gross of reinsurance recoveries.

25. While ICBC continues to maintain claims prior to Claims Transformation (which introduced a new claims system and business processes over the period from November 2013 through April 2014) in a legacy system for claims management, the data for these legacy claims has been migrated from the legacy claims database and is now stored in the enterprise data warehouse, which provides a single source for all claims data with consistent data definitions and a single Basic/Optional split algorithm. As of August 31 2022, approximately 3% of all open claims remain in the legacy system.

26. ICBC relies on MPI historical ultimate claimant loss and count data as published in MPI's 2023 General Rate Application (GRA), and the data underlying MPI's 2023 GRA that is confidential to MPI and confidential signatories of their regulatory process to analyze the EAB sub-coverages as explained in Section B of Technical Appendix C.1.0.

C.2 DATA VALIDATION AND CONTROLS

27. ICBC has numerous controls in place to maintain confidence in the reliability and sufficiency of the data used for actuarial valuation and ratemaking analyses. The claim exposure count, loss and ALAE data used in each analysis are verified to be consistent with other financial

records of ICBC through reconciliation of loss amount and claim exposure count data with accounting records and operational reports. Key claims statistics are also monitored at a high level in order to identify and investigate any areas of change from established patterns.

28. The actuaries also monitor significant events both internal and external to ICBC that could impact data reliability. In addition, ICBC's internal audit department periodically reviews the completeness of data and the accuracy and control of the algorithm used to assign claims costs to Basic insurance and Optional insurance (discussed further in Section C.5 below).

29. In connection with the March 2022 (2021/22 fiscal period end) actuarial valuation, ICBC's external actuary requested certain data quality tests to be performed by ICBC's appointed auditor. These tests included the following procedures:

1) Tests regarding the completeness and accuracy of the claims data, including the new BVDC and out-of-province bodily injury datasets, a reconciliation of amounts paid in the 2021/22 fiscal period and amounts remaining unpaid at the end of the 2021/22 fiscal period, to records underlying the audited financial statements for the 2021/22 fiscal period, as well as sample testing of certain attributes, including date of loss.
2) Tests regarding the completeness and accuracy of the claim exposure count data, including sample testing of certain attributes, including date of loss.
3) Tests of the separation of claims data into Basic insurance and Optional insurance components, including a review of the work done by ICBC's internal audit department on the separate Basic insurance and Optional insurance claims data.

30. For the March 2022 actuarial valuation, a satisfactory report was received from the appointed auditor on the results of the work they performed.

C.3 DATA CHANGES

31. The following represent changes in how data is presented from prior filings. Reasons for these changes include data availability, presentation of data and simplicity of obtaining the data. Unless stated, these data deviations would not have significant impact on the analysis of incurred claims estimates.

32. **Historical Data used to represent BVDC claims** – There were a small number of hit-and-run claims that existed in the legacy claims management system that were difficult to

identify accurately. The previous Revenue Requirements Application used an approximation to remove these claims. The current process no longer removes these claims due to the complexity of the process and its insignificant impact (for the recent fiscal loss years).

33. **Sales Tax Recorded as Recovery -** Sales tax amounts collected in connection with the sale of salvage and which are incorrectly recorded in the claims management system as being part of the recovered amount on claims for a period ending in June 2017 are no longer being removed from the historical data selected to represent BVDC. The claims management system has been recording recovered amounts correctly for BVDC claims, as well as the historical data for the most recent fiscal loss years. For earlier years, the affected amounts are small in relation to recovered amounts, and have no significant impact on the actuarial analysis for BVDC. Therefore, this adjustment was removed to streamline the actuarial analysis.

34. **Combining Manual Basic with Plate Owner Loss and ALAE amounts** - In previous RRAs, Manual Basic loss and ALAE amounts were analyzed separately for Plate Owner and Manual Basic policies, whereas in this Application the Manual Basic claims and Plate Owner claims are analyzed together on a combined basis. Combining the two policy types in the analysis created efficiencies and streamlined the actuarial analysis, while not materially impacting the overall results. When tested on the current Basic insurance coverages' historical loss and ALAE amounts, the estimated impact of the combination was primarily seen to affect bodily injury liability claims, which are largely eliminated under Enhanced Care.

C.4 USE OF LEGAL-BASED CLAIMS DATA FOR BVDC AND TPL COVERAGES

35. Consistent with the 2021 RRA and ICBC's regular second-quarter reserve analysis, the analysis of BVDC and TPL claims relies on historical claim data that has been selected to best represent each of the coverages. Details of the claims data used to represent each of the coverages are discussed in Technical Appendix C.2 for BVDC claims, and Technical Appendix C.3 for TPL claims. The claims data used to represent each of the BVDC and TPL coverages are:

- Basic Vehicle Damage Coverage (BVDC): Historical vehicle Property Damage (PD) claims that occurred in BC, excluding Hit-and-Run claims.

- Third Party Liability – Property Damage (TPL–PD): Historical vehicle PD claims that occurred outside of BC, other-than-vehicle PD claims, and claims for customer vehicles under garage service operator care.

- Third Party Liability – Out-of-Province Bodily Injury (TPL–OOP BI): Historical Bodily Injury claims that occurred outside of BC.

36. This historical data is generated for BVDC and TPL coverages in order to provide appropriate historical claims statistics and development patterns for use within the actuarial methods that are applied to claims incurred on and after May 1, 2021, under the Enhanced Care product.

C.5 FULL FISCAL YEAR OUTLOOK OF CLAIMS DATA

37. In order to maintain consistency in the reserve analysis from one period to another, the actuaries construct the claims data used for the actuarial methods so that it is aligned with the fiscal year. This includes a projection of the claims data from August 31, 2022 to March 31, 2023, which is the end of the current fiscal year. The result of the projection is referred to as outlook claims data as of the end of the fiscal year. This represents a change from the presentation in the 2021 RRA, but is consistent with the Bodily Injury segment analysis that is undertaken as part of the reserve review and was filed as supplementary information to the 2019 RRA. This approach allows for more consistent selection of assumptions by removing impacts from seasonality which may differ at different valuation dates.

38. To construct the outlook claims data as of March 31, 2023, the data to August 31, 2022 is combined with a prior expectation of counts and payments over the course of the 2023 fiscal year, taking into consideration the experience to-date and relevant information from consultation with internal subject matter experts. The prior expected values used in projecting the data to March 31, 2023 are derived from the March 2022 reserve review.

C.6 BASIC/OPTIONAL SPLIT OF CLAIMS

39. **Third Party Liability** – The initial coding of TPL claims does not distinguish between the portion of an individual claim covered under the compulsory Basic insurance policy and that portion borne by the Optional third party extension coverage. For this reason, ICBC has constructed separate databases for Basic insurance TPL and Optional insurance TPL by means of a computer algorithm. For each claim, the algorithm separates the indemnity loss amount into

its Basic insurance and Optional insurance components, primarily according to the underlying Basic TPL policy limit, and then further breaks the claim into its BI and PD parts, according to the coverage coding. These separate databases for Basic insurance and Optional insurance claims permit the actuaries to analyze the Basic BI and PD loss and ALAE amounts directly using actuarial methods.

a. **ALAE and Additional Payments** – Some of the costs associated with claims are not subject to the TPL policy limit, and must be allocated into Basic and Optional coverage amounts. In particular, this is the case for ALAE costs paid to investigate and defend a claim, as well as Additional Payments as defined in the *Insurance (Vehicle) Act*. Additional payments consisting of court order interest, third party costs and third party disbursements are to be paid by ICBC in addition to the indemnity payments, and are not subject to policy limits. The algorithm assigns ALAE payments and Additional Payments to Basic insurance, except when Optional insurance loss payments have been made on a claim. In that case, the algorithm splits the ALAE payments and Additional Payments between Basic insurance and Optional insurance in proportion to the Basic and Optional paid loss, respectively.

b. **Case Reserves** – Case reserves are set separately for expected indemnity loss, ALAE, and Additional Payment amounts. Case reserves for indemnity loss are added to the paid loss amount and compared to the Basic TPL policy limit, with any amounts in excess of the limit being assigned to Optional insurance. Case reserves for ALAE and Additional Payment amounts are allocated, based on the proportion of the Basic case reserves for indemnity loss to the total case reserves for indemnity loss.

40. **Transitional Hit-and-Run Claims** – With the introduction of Enhanced Care, vehicle damages caused by unidentified drivers (hit-and-run crashes) are no longer covered under Basic insurance coverage.[6] However, for a period following May 1, 2021, ICBC at its discretion has provided payments for hit-and-run vehicle damage to ICBC customers in certain circumstances. These transitional claims, related to hit-and-run crashes and with no applicable coverage, continue to be recorded in the claims system as Basic claims and therefore are categorized initially under BVDC. To avoid overstating the Basic claims costs, these claims are identified and

[6] Basic coverage continues, however, to provide compensation for non-vehicle property damage, as well as for injuries and death resulting from hit-and-run crashes.

removed through adjustment to the BVDC data that is used for the reserving analysis, removing them to be part of the Optional insurance data.

41. **Bulk Cost Allocation** – Due to the unique way that bulk claims costs are handled and the modernization of systems from Claims Transformation, there are three distinct approaches used to allocate bulk claim costs. These approaches vary with the three time periods during which different levels of detail of bulk claims data were available. This is consistent with the approach described in the 2021 RRA.

a. Bulk claims data prior to 2014 are directly assigned to coverages using kind of loss (KOL) codes. Bulk costs for each coverage are then split to Basic and Optional in proportion to the Plate Owner claims costs for that coverage.

b. As a result of Claims Transformation, KOL codes are no longer available for bulk claims data beginning from 2014. Bulk claim costs from 2014 through FLY 2018 have been allocated to coverages in proportion to the distribution of KOL codes seen in 2013. Bulk costs for each coverage are then split into Basic and Optional in proportion to the Plate Owner claim costs for that coverage.

c. Bulk claim costs are now assigned categories based on supplier coding. For bulk claims costs on loss years aged at least three years (FLY 2019 through FLY 2021), a Basic/Optional split is calculated based on the proportion of Basic and Optional claims costs for Plate Owner claims associated with each category. Bulk costs for FLY 2022 and later are split into Basic and Optional in proportion to the calculated total bulk costs of those previous three years.

42. **Manual Basic** – While Manual claims data is combined with Plate Owner data in the actuarial analyses, Manual claims are still required to be allocated into Basic and Optional insurance components. The allocation of Manual claims is done on an individual claim basis based on which of four categories the associated policy falls under, as detailed in Figure C.0.2 below.

Figure TA C.0.2 – Summary of Claim Assignments for Manual Basic

Category	Description
1	All component coverages are Basic insurance.
2	All component coverages are Optional insurance.
3	AB, statutory Hit-and-Run claims and Underinsured Motorist Protection (UMP) are Basic insurance. All other component coverages except TPL (BI and PD) are Optional insurance. TPL component coverages apply Basic-Optional split logic as described in paragraph 39.
4	Garage policy – AB, Hit-and-Run, UMP and TPL limit of $1,000,000 are Basic. Collision coverage with $1,000 deductible and Specified Perils coverage on non-owned vehicles are Basic insurance. All other component coverages, lower deductible on Collision or excess TPL limit are Optional insurance.

TECHNICAL APPENDIX C.1.0

ENHANCED ACCIDENT BENEFITS CLAIMS RESERVING ANALYSIS

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A INTRODUCTION

1. The actuaries estimate loss costs for EAB claims using a frequency/severity approach. This approach involves estimating the claim exposure frequency and the average cost or severity for each fiscal loss year (FLY). By multiplying the frequency by the severity, estimated loss costs for the experience period are determined.

2. This technical appendix documents the methods and assumptions used in the Enhanced Accident Benefits (EAB) reserving analyses on frequency and severity. Details of the methodology for the different sub-coverages: Enhanced Medical Rehabilitation (EAB-MR), Enhanced Disability Benefits (EAB-ED), Permanent Impairment (EAB-PI), and Enhanced Death Benefits (EAB-DB) are provided in the sections below and in the tables filed in Excel format and attached to this Technical Appendix.

- **Frequency.** The actuaries use patterns from ICBC historical claims count data (both Enhanced Care and pre-Enhanced Care) from FLY 2006 to FLY2022, and rely on reported EAB claims count data for FLY 2022 in order to establish a starting point for estimating claims frequencies for the EAB sub-coverages (except for EAB-PI) for FLY 2022. For EAB-PI, an approach based on the propensity to incur permanent impairment claims relative to Basic Vehicle Damage Coverage (BVDC) claims is used.

- **Severity.** In order to establish a starting point for estimating claims severities for EAB sub-coverages (except for EAB-DB) for FLY 2022, ICBC considers Manitoba Public Insurance (MPI) historical data, to the extent that it is expected to be relevant to British Columbia. For EAB-DB, the actuaries use data from both legal-based death benefits claims (pre-Enhanced Care) and the first year of Enhanced Care claims to establish a starting point for forecasting claims severity.

3. This technical appendix is organized as follows:

- Section B – MPI Historical Claims Data – Explains how MPI historical ultimate claimant count and loss data, as published in MPI's 2023 General Rate Application[1] (MPI 2023 GRA), are used to derive MPI historical severities.

[1] https://apps.mpi.mb.ca/Rate-Application/2023/2023_GRA.pdf

- Section C – ICBC EAB Severities – Describes in detail the steps to adjust MPI historical severities derived in Section B to determine the FLY 2022 EAB non-indexed and indexed severities, which are used as the spring-off points for the reserving analyses of severities for ICBC's EAB sub-coverages.

- Section D – EAB-MR Selections – Explains the methodologies for estimation of EAB-MR incurred frequency and severity.

- Section E – EAB-ED Selections – Explains the methodologies for estimation of EAB-ED incurred frequency and severity

- Section F – EAB-PI Selections – Explains the methodologies for estimation of EAB-PI incurred frequency and severity

- Section G – EAB-DB Selections – Explains the methodologies for estimation of EAB-DB incurred frequency and severity

B MPI HISTORICAL CLAIMS DATA

4. As detailed in Technical Appendices C.1.0.1 to C.1.0.4, ICBC uses MPI severity data in its reserving analysis similar to the methodology used in the December 2020 Ernst & Young Enhanced Accident Benefits Costing Report that was included in the 2021 Revenue Requirements Application (RRA), Chapter 3, Appendix C.4.0 (2020 EY EAB Report), as summarized below:

MPI Claims Data	Used for ICBC EAB Severity Analysis
MPI Accident Benefits Other – Indexed	EAB-MR
MPI Weekly Indemnity	EAB-ED
MPI Accident Benefits Other – Non-Indexed	Combined EAB-PI and EAB-DB

5. In the MPI 2023 GRA, MPI presents its historical severities at current benefit levels. This means that year-over-year changes in its historical severities for indexed benefits, such as Accident Benefits Other – Indexed, do not reflect the impact of annual inflationary adjustments to the benefit levels. Changes in MPI's historical severities thus only reflect the impacts from changes in the mix of claimants, types of medical treatments utilized, etc.

6. MPI claims data in Technical Appendix C.1.0.1 to C.1.0.4 are based on the publicly posted MPI 2023 GRA, with the referenced sources and pages provided.

7. MPI's Ultimate Severities in Technical Appendix C.1.0.1 and Ultimate Loss Costs in Technical Appendices C.1.0.2, C.1.0.3, and C.1.0.4 are calculated by ICBC based on MPI's data, but they are not explicitly presented and can not be found directly in MPI 2023 GRA in the format presented in the Technical Appendices C.1.0.1 to C.1.0.4. The formula for Ultimate Loss Cost is as follows:

$$\boldsymbol{Ultimate\ Loss\ Cost} = \frac{Ultimate\ Losses}{Risk\ Exposure} = \frac{Claimant\ Counts}{Risk\ Exposure} \times \frac{Ultimate\ Losses}{Claimant\ Counts}$$

$$= Frequency \times Severity$$

C ICBC EAB SEVERITIES

8. MPI's historical severities are used as a starting point for determining ICBC's EAB severities due to the similarity between the EAB coverages and that provided by MPI.

9. For the EAB sub-coverages, ICBC has adjusted MPI's severities for enhancements introduced over time by MPI, similar to the approach used in the 2021 RRA, because the EAB sub-coverages are similar to the associated MPI coverages inclusive of these enhancements. Further adjustments are then applied to the MPI severities to account for the BC specific differences from MPI's product pertinent to EAB coverages. Once the historical MPI severities are adjusted for these differences, they are brought to the cost level underlying FLY 2022, using trends selected from the historical year-over-year changes in MPI's severities. A severity at the FLY 2022 level is then selected to be used as a spring-off point from which ICBC's EAB severities are forecasted. EAB-ED is treated slightly differently in that the collateral benefits adjustment is applied to the selected average severity at the FLY 2022 level as the last step to generate a spring-off point from which EAB-ED severities are forecasted. The collateral benefits adjustment reflects that ICBC is the second payer for wage loss replacement benefits except when such deduction is prohibited from the other insurance policies, compared to MPI being first payer in all cases. This process is described for each EAB sub-coverage in the sections below.

C.1 EAB-MR SEVERITY

10. Similar to the approach used in the 2021 RRA, MPI's historical Accident Benefits Other – Indexed severities are used as a surrogate to forecast ICBC's EAB-MR severity instead of using ICBC's historical Medical Rehabilitation (AB-MR) severities, as the latter do not reflect the significantly enhanced limits under Enhanced Care or the additional benefits being introduced.

11. ICBC EAB-MR benefits are unlimited according to the *Enhanced Accident Benefits Regulation*, whereas MPI has a limit of $7,500,000. Given the very low likelihood of individual claims exceeding $7,500,000, ICBC believes that there would not be any meaningful difference in the estimates from using MPI Accident Benefits Other - Indexed severities based on unlimited or limited medical and rehabilitation expenses. Adjustments to MPI's historical Accident Benefits Other – Indexed severities are summarized as follows and described in more detail in sections C.1.1 to C.1.3:

Adjustments to MPI's Historical Accident Benefits Other – Indexed Severities

I.	**Personal Injury Protection Plan Enhancement (PIPP)**	Adjustment to MPI's historical severities to reflect enhancements they've introduced over the years for catastrophically injured claimants, to bring them to a comparable benefit level to EAB
II.	**Provincial Health Service adjustment**	Adjustment to reflect differences in how MPI and ICBC make payments to their respective provincial health services for medical costs borne from motor vehicle accidents
III.	**Trend**	The historical severities are brought forward to the FLY 2022 level

C.1.1 SEVERITY ADJUSTMENT I – PIPP ENHANCEMENT

12. MPI enhanced their benefits for catastrophically injured claimants in 2009 and made further enhancements in 2011 and 2015. The additional costs of these enhancements are tracked separately in the MPI 2023 GRA as PIPP enhancement costs. ICBC's Enhanced Accident Benefits actuarial estimates reflect that the benefits provided under EAB-MR coverage are similar to MPI's current product including these enhancements.

13. MPI PIPP Enhancement Factor is shown in Technical Appendix C.1.0.5, column (3). Across FLYs 2013 to 2022, MPI PIPP enhancement increases the Accident Benefits Other - Indexed loss costs on average by a factor of 1.031. This adjustment factor is applied to

MPI's Accident Benefits Other - Indexed severities without PIPP enhancement to bring them to severities with PIPP enhancement level as shown in Technical Appendix C.1.0.6, column (2).

C.1.2 SEVERITY ADJUSTMENT II – PROVINCIAL HEALTH SERVICE ADJUSTMENT

14. MPI's severities do not include payments made to the Manitoba Health Service Commission (MHSC) as they are treated as an unallocated loss adjustment expense (ULAE). ICBC's payments to the Medical Services Plan (MSP) are allocated to respective individual claims and thus are a part of allocated loss adjustment expenses (ALAE). A second adjustment factor is thus applied to reflect these additional costs in the forecast EAB-MR severity. Technical Appendix C.1.0.7 shows MPI's projected MHSC costs and the implied adjustment factor for these costs. An average loading factor is selected based on FLYs 2022 to 2027. Applying this adjustment factor of 47.70%, the resulting MPI severities after adjustment are shown in Technical Appendix C.1.0.8, column (2).

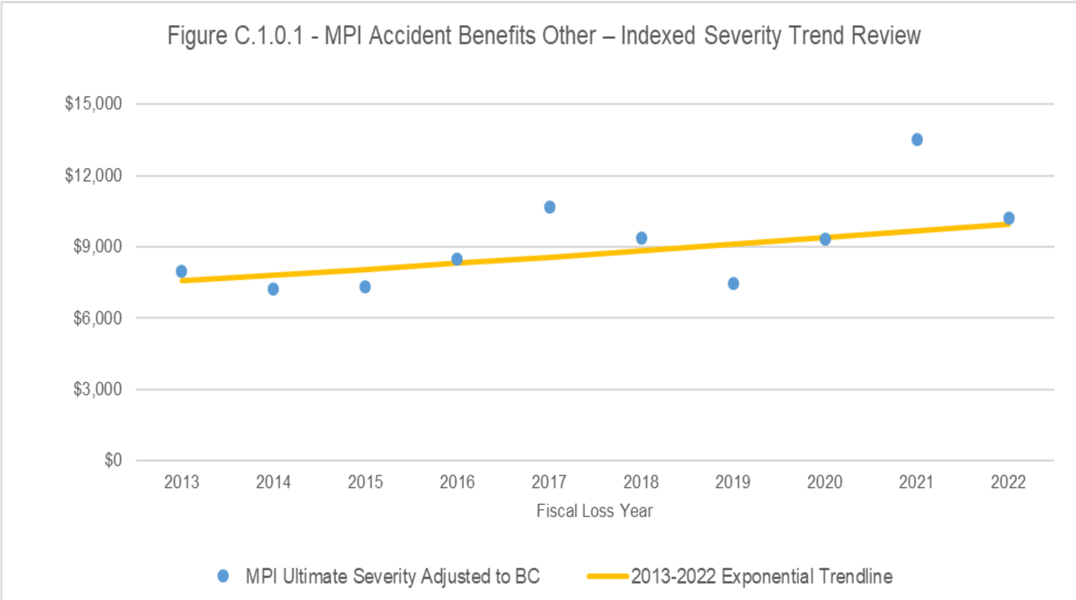
C.1.3 SEVERITY ADJUSTMENT III – TREND

15. Figure C.1.0.1 below shows the trend in MPI's Accident Benefits Other - Indexed severity, excluding the impact of annual inflationary impacts to the benefit levels as noted earlier. A ten-year period from FLY 2013 to 2022 is reviewed and an exponential trend line is fit to the severities based on MPI's FLY 2013 to 2022 data points, excluding FLYs 2020 and 2021 to remove the potential influence of COVID-19 on claims costs. This suggests that MPI's Accident Benefits Other – Indexed severity has been increasing at a rate of 3.1% per year, prior to accounting for annual inflationary impacts to the benefit levels over this period.

16. Using the selected trend of 3.1%, the historical severities are brought forward to the FLY 2022 level as shown in Figure C.1.0.2.

17. A spring-off point is then selected to represent the average severity level for FLY 2022. This point is used as the starting point to forecast EAB-MR severity. The spring-off point is selected as the average of the adjusted severities from the latest six fiscal loss years, excluding the lowest and highest years. This selection balances stability and responsiveness by including six recent historical years while limiting the impact of extreme values observed at the low and high end. This results in a selected severity spring-off point of $10,780 as shown below in Figure C.1.0.2, column (4).

Figure C.1.0.1 – MPI Accident Benefits Other – Indexed Severity Trend Review



MPI Ultimate Severity Adjusted to BC from TA C.1.0.8 column (2).
2013-2022 Exponential Trendline from fitted exponential regression on MPI Ultimate Severity Adjusted to BC excluding FLYs 2020 and 2021.

Figure C.1.0.2 – MPI Accident Benefits Other – Indexed Severities at FLY 2022 Cost Level

Fiscal Loss Year	MPI Ultimate Claimant Severity Adjusted to BC (1)	Trend Factor (2)	Adjusted MPI Ultimate Claimant Severity Trended to FLY 2022 (3) = (1) x (2)
2013	$7,962	1.312	$10,449
2014	$7,228	1.273	$9,203
2015	$7,340	1.235	$9,068
2016	$8,464	1.199	$10,145
2017	$10,661	1.163	$12,399
2018	$9,392	1.128	$10,598
2019	$7,442	1.095	$8,148
2020	$9,330	1.062	$9,910
2021	$13,505	1.031	$13,919
2022	$10,212	1.000	$10,212

	(4)
Selected spring-off point: Average 2017-2022 excluding high and low	$10,780

(1) From Technical Appendix C.1.0.8 column (2).
(2) = (1+ selected trend of 3.1%) ^ (2022 – FLY).

C.2 EAB-ED SEVERITY

18. Similar to the 2021 RRA, MPI's historical Weekly Indemnity severities are used as a surrogate to forecast ICBC's EAB-ED severity instead of using ICBC's historical Weekly Benefits (AB-WB) severities, as the latter do not reflect the additional categories of claimants who are eligible for the benefits or the increased limits of the benefits under Enhanced Care.

19. Adjustments to MPI's historical Weekly Indemnity severities are summarized as follows and described in more detail in sections C.2.1 to C.2.4:

Adjustments to MPI's Historical Weekly Indemnity Severities

I.	**PIPP Enhancement**	Adjustment to MPI's historical severities to reflect enhancements MPI has introduced over the years for catastrophically injured claimants, to bring them to a comparable benefit level to EAB.
II.	**Population and wage adjustments**	Adjustments to reflect differences in average employment income, tax rates, and mix of claims between British Columbia and Manitoba.
III.	**Trend**	The historical severities are brought forward to the FLY 2022 level by applying trend factors.
IV.	**Collateral benefits**	Adjustment to reflect that ICBC is the second payer for wage loss replacement benefits except when such deduction is prohibited from the other insurance policies, compared to MPI being first payer in all cases.

C.2.1 SEVERITY ADJUSTMENT I – PIPP ENHANCEMENT

20. ICBC's EAB actuarial estimates reflect that the benefits provided under EAB-ED sub-coverage are similar to MPI's current product, including the PIPP enhancement. The MPI PIPP Enhancement Factor is shown in Technical Appendix C.1.0.9, column (3). Across FLYs 2013 to 2022, MPI PIPP enhancement increases the Weekly Indemnity loss costs on average by a factor of 1.016. This adjustment factor is applied to MPI's Weekly Indemnity severities without PIPP enhancement to bring them to severities with PIPP enhancement level as shown in Technical Appendix C.1.0.10, column (2).

C.2.2 SEVERITY ADJUSTMENT II – POPULATION AND WAGE ADJUSTMENTS

21. With the expansion of eligible claimants under EAB including students, minors, non-earners, etc., and known and observable differences in average wage levels between Manitoba and British Columbia, an adjustment is made to bring the MPI claimant severities to reflect British Columbia's population and wage levels. Manitoba's average net incomes by claimant category are compared to BC to determine wage adjustment factors. For example, a full-time worker in British Columbia averaged $59,298 in net income in 2020, compared to an average of $49,621 for Manitoba, producing a relative wage adjustment factor of $59,298 ÷ $49,621 = 1.20. Similar adjustment factors are determined for the other claimant categories including part-time and temporary workers, students and minors. Using the adjusted severities by claimant category as described above, and the mix of EAB-ED claim exposures reported to ICBC, the overall severity across all claimants adjusted to British Columbia is compared to the overall severity from MPI to determine the adjustment factor shown in Technical Appendix C.1.0.11, column (3).

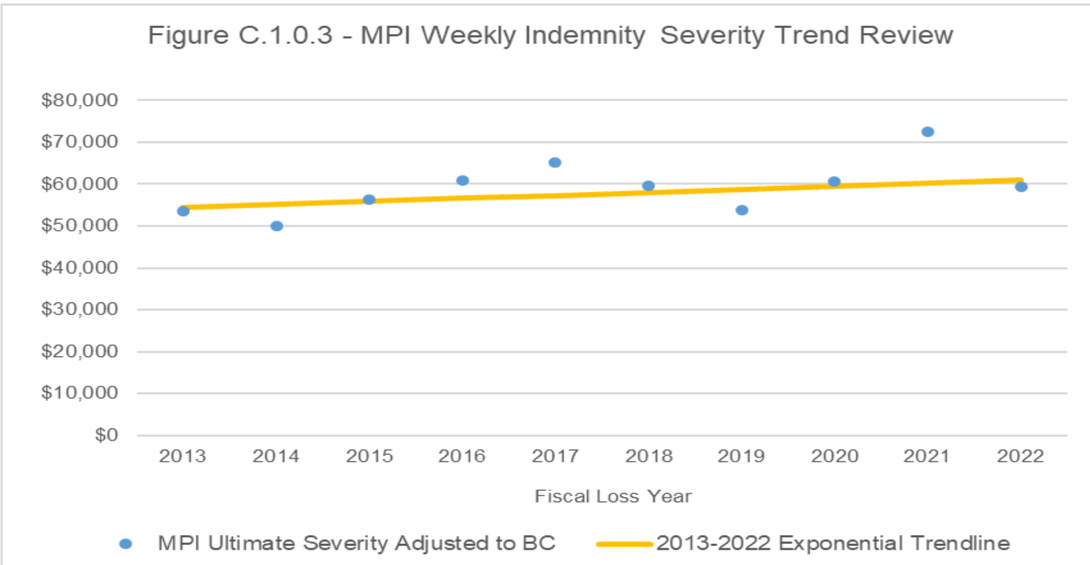
22. The selected adjustment factor for population and wage differences between Manitoba and British Columbia is 1.197 based on the observed period from FLYs 2016 to 2019 as shown in Technical Appendix C.1.0.11, row (a). The figures provided by MPI are case incurred, meaning they have not been developed to their ultimate level, thus the values for FLYs 2020 and 2021 may not be reflective of the ultimate cost level given their relative immaturity. Therefore, an average of the latest 4 years offset by 2 years is selected to remove any influence from the latest 2 years. Severities adjusted to BC population and wage level are shown in Technical Appendix C.1.0.12, column (2).

C.2.3 SEVERITY ADJUSTMENT III – TREND

23. Figure C.1.0.3 below shows the trend in MPI's Weekly Indemnity severity, excluding the impact of annual inflationary impacts to the benefit levels as noted earlier. A ten-year period from FLY 2013 to 2022 is reviewed and an exponential trend line is fit to the severities based on the FLY 2013 to 2022 data points, excluding FLYs 2020 and 2021 to remove the potential impact of the COVID-19 pandemic on claims costs. This suggests MPI's Weekly Indemnity severity has been increasing at a rate of 1.3% prior to accounting for annual inflationary impacts to the benefit levels.

24. Using the selected trend of 1.3%, the historical severities are brought forward to the FLY 2022 level as shown in Figure C.1.0.4. To represent the selected average severity level for FLY 2022 as shown in Figure C.1.0.4 column (4), an average of the adjusted severities from the latest six fiscal loss years, excluding the lowest and highest years is selected. This selection balances stability and responsiveness by including six recent historical years while limiting the impact of extreme values observed at the low and high end.

Figure C.1.0.3 – MPI Weekly Indemnity Severity Trend Review



MPI Ultimate Severity Adjusted to BC from TA C.1.0.12 column (2).
2013-2022 Exponential Trendline from fitted Exponential Regression on MPI Ultimate Severity Adjusted to BC excl. FLYs 2020 and 2021.

Figure C.1.0.4 – MPI Weekly Indemnity Severities at FLY 2022 Cost Level

Fiscal Loss Year	MPI Ultimate Claimant Severity Adjusted to BC (1)	Trend Factor (2)	Adjusted MPI Ultimate Claimant Severity Trended to FLY 2022 (3) = (1) x (2)
2013	$53,588	1.118	$59,935
2014	$49,893	1.105	$55,113
2015	$56,211	1.091	$61,325
2016	$60,757	1.077	$65,465
2017	$65,180	1.064	$69,362
2018	$59,603	1.051	$62,643
2019	$53,874	1.038	$55,923
2020	$60,733	1.025	$62,263
2021	$72,412	1.013	$73,318
2022	$59,252	1.000	$59,252

	(4)
Selected: Average 2017-2022 excluding high and low	$63,380

(1) From Technical Appendix C.1.0.12 column (2).

(2) = (1+ selected trend of 1.3%) ^ (2022 – FLY).

C.2.4 SEVERITY ADJUSTMENT IV – COLLATERAL BENEFITS

25. Another difference from MPI's PIPP is that ICBC's EAB generally act as second payer, meaning available recovery from other sources of benefits such as Employment Insurance (EI) and private group disability plans are deducted from ICBC's ED benefits. The MPI claimant severities are therefore further adjusted to account for the portion of BC claims that is covered by other benefit providers.

26. The process to determine this adjustment is presented in Figure C.1.0.5. Per ICBC's internal analysis, EI pays an average of $1,957 per claimant during the disability period. Aside from EI, other sources of benefits are found to pay 20% of the remaining income replacement and indemnity benefits, whereas ICBC pays 80%. Since non-earners do not have EI and/or other sources of benefits, the collateral benefits adjustment is only applicable for earners. ICBC's claims experience to-date shows that 93% of EAB-ED claim exposures are earners, and 7% are non-earners, and these proportions are used as the weights to calculate the overall collateral benefits reduction factor of 79%. This represents a change from the approach used in the 2020 EY EAB Report in the 2021 RRA, which was based on assumptions regarding the proportion of workers with a group disability plan and the percentage of earnings covered by such plans, which generated a collateral benefits reduction factor of 85%. These assumptions are no longer required because ICBC has sufficient experience under Enhanced Care to estimate this adjustment. The lower reduction factor in this Application of 79% as compared to the 85% reduction factor in 2021 RRA has the effect of lowering the EAB-ED severity estimate, all else being equal.

27. Before making the collateral benefits adjustment, the average MPI claimant severity at the FLY 2022 cost level, including PIPP enhancements and adjusted to reflect BC population and wage levels, is $63,380. After making the collateral benefits adjustment, the selected EAB-ED severity for FLY 2022 is $49,979, which is the spring-off point as shown in Figure C.1.0.5, row (g).

Figure C.1.0.5 – Collateral Benefits Reduction Factor

Calculation of Collateral Benefits Reduction Factor		
(a)	FLY 2022 EAB-ED severity before Collateral Benefits Adjustment	$63,380
(b)	Average EI benefit payment	$1,957
(c) = (a) - (b)	Severity after EI payment	$61,423
(d)	Proportion of income replacement and indemnity benefits ICBC pays	80%
(e)	Proportion of earners	93%
(f) =1 - (e)	Proportion of non-earners	7%
(g) = (c) x (d) x (e) + (a) x (f)	**FLY 2022 EAB-ED Severity After Adjustment**	**$49,979**
(h) = (g) / (a)	Collateral Benefits Reduction Factor	79%

(a) From Figure C.1.0.4 column (4).
(b), (d) From ICBC's internal analysis.
(e) From ICBC's internal database.

C.3 COMBINED EAB-PI AND EAB-DB SEVERITY

28. EAB-PI is a new benefit introduced under Enhanced Care, so ICBC does not have historical permanent impairment data. ICBC's historical Death Benefits (AB-DB) claims do not include experience for the enhancement introduced under EAB, namely the increase in benefit levels for the lump sum payments to the surviving spouse and/or dependants as well as the introduction of the Grief Counselling and Permanent Impairment benefits. MPI's historical Accident Benefits Other – Non-Indexed severity is therefore used as a surrogate to forecast the combined EAB-PI and EAB-DB severity. MPI Accident Benefits Other – Non-Indexed is a combination of permanent impairment and death benefits, so this section describes the determination of the combined EAB-PI and EAB-DB severity. In later sections, the split of the combined EAB-PI and EAB-DB severity into separate EAB-PI and EAB-DB severities is described (Sections F.2 and G.2 respectively).

29. Adjustments to MPI's historical Accident Benefits Other – Non-Indexed severities are summarized as follows and described in more detail in Sections C.3.1 to C.3.3:

Adjustments to MPI's Historical Accident Benefits Other – Non-Indexed Severities

I.	**PIPP Enhancement**	Adjustment to MPI's historical severities to reflect enhancements MPI has introduced over the years for catastrophically injured claimants, to bring them to a comparable benefit level to EAB.
II.	**Wage Adjustments**	Adjustments to reflect differences in average employment income between BC and Manitoba.
III.	**Trend**	The historical severities are brought forward to the FLY 2022 level.

C.3.1 SEVERITY ADJUSTMENT I – PIPP ENHANCEMENT

30. ICBC's EAB actuarial estimates reflect that the benefits provided under the EAB-PI sub-coverage are similar to MPI's current product including these enhancements. MPI PIPP Enhancement Factor is shown in Technical Appendix C.1.0.13, column (3). Across FLYs 2013 to 2022, MPI PIPP enhancement increases the Accident Benefits Other – Non-Indexed loss costs on average by a factor of 1.091. This adjustment factor is applied to MPI's Accident Benefits Other – Non-Indexed severities without PIPP enhancement to bring them to the severities with PIPP enhancement level as shown in Technical Appendix C.1.0.14, column (2).

C.3.2 SEVERITY ADJUSTMENT II – WAGE ADJUSTMENT

31. The lump sum payment to the surviving spouse/dependants is based on the deceased's gross income, thus an adjustment is applied to account for differences in average income between the provinces. Per Statistics Canada, British Columbia's 2020 average gross income of $47,200 is higher than Manitoba's $44,200 by a factor of 1.068.[2] This factor is used to adjust the MPI severities to the BC average income level as shown in Technical Appendix C.1.0.15.

C.3.3 SEVERITY ADJUSTMENT III – TREND

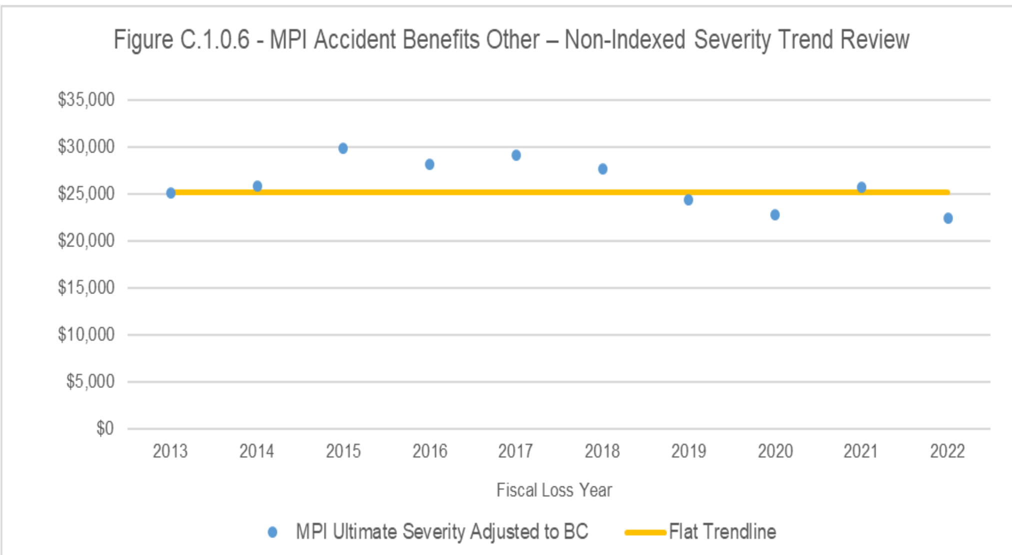
32. Figure C.1.0.6 below shows MPI's historical Accident Benefits Other – Non-Indexed severity. A ten-year period from FLY 2013 to 2022 is reviewed. This suggests MPI's Accident Benefits Other – Non-Indexed severity has been decreasing. A flat trend is selected. Using the

[2] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1110024001

selected trend of 0%, the historical severities are brought forward to the FLY 2022 level as shown in Figure C.1.0.7.

33. The spring-off point is selected as the average of the adjusted severities from the latest six FLYs, excluding the lowest and highest years. This selection balances stability and responsiveness by including six recent historical years while limiting the impact of extreme values observed at the low and high end. This results in a selected severity of $25,154 as shown on column (4) in Figure C.1.0.7.

Figure C.1.0.6 – MPI Accident Benefits Other – Non-Indexed Severity Trend Review



MPI Ultimate Severity Adjusted to BC from TA C.1.0.15 column (2).
Flat Trendline is selected.

Figure C.1.0.7 – MPI Accident Benefits Other – Non-Indexed Severities at FLY 2022 Cost Level

Fiscal Loss Year	MPI Ultimate Claimant Severity Adjusted to BC (1)	Trend Factor (2)	Adjusted MPI Ultimate Claimant Severity Trended to FLY 2022 (3) = (1) x (2)
2013	$25,115	1.000	$25,115
2014	$25,802	1.000	$25,802
2015	$29,844	1.000	$29,844
2016	$28,121	1.000	$28,121
2017	$29,112	1.000	$29,112
2018	$27,704	1.000	$27,704
2019	$24,434	1.000	$24,434
2020	$22,807	1.000	$22,807
2021	$25,672	1.000	$25,672
2022	$22,460	1.000	$22,460
			(4)
Selected spring-off point: Average 2017-2022 excluding high and low			$25,154

(1) From Technical Appendix C.1.0.15 column (2).
(2) (1+selected trend of 0%) ^ (2022 – FLY).

C.4 INDEXATION

34. Benefits for the EAB-MR and EAB-ED sub-coverages under Enhanced Care are updated annually based on the BC consumer price index (CPI). This means payments to a claimant will increase over time. For example, for customers collecting Income Replacement benefits under the EAB-ED sub-coverage, their benefits are calculated as a percentage of their Gross Yearly Employment Income. These benefits are increased annually with BC CPI inflation, so that generally the real value of the benefits does not erode over time.

35. EAB-MR and EAB-ED are subject to indexation because payments are made over an extended period of time, whereas EAB-PI and EAB-DB are lump sum payments that are not subject to indexation. As discussed in section B above, the spring-off points calculated for each sub-coverage in the sections above are stated at current benefit levels (i.e., not indexed). According to the *Enhanced Accident Benefits Regulation* the BC benefit limits must be adjusted with the BC CPI for the fiscal year beginning on April 1, 2022 (fiscal year (FY) 2023) and for each fiscal year after that, capped to a maximum of 6.0%. The BC CPI inflation of 2.8% for calendar year 2021 will apply to FY 2023, and forecasts of BC CPI inflation have been assumed to apply to subsequent fiscal years, as shown in Figure C.1.0.8 below. The BC CPI inflation forecast has increased since the 2021 RRA, where a 2.0% inflation rate was assumed for all years.

Figure C.1.0.8 – BC Consumer Price Index Inflation

Fiscal Year	BC CPI Inflation (1)	BC CPI Inflation Capped (2)
2023	2.8%	2.8%
2024	7.0%	6.0%
2025	3.9%	3.9%
2026	2.4%	2.4%
2027	2.2%	2.2%
2028+	2.0%	2.0%

(1) From Table on page 50 of September 2022 BC Budget.
(2) 6.0% cap applied to column (1).

36. Indexation adjustments are applied to the future loss and ALAE payments for FLY 2022. The calculation is outlined below, and presented in Technical Appendix C.1.0.16. The final EAB severities (both indexed and non-indexed) are shown in Figure C.1.0.9.

37. EAB-MR and EAB-ED severities (non-indexed) are distributed to the future years in which payments will be made, based on loss development factors from MPI. The BC CPI inflation forecast is then used to calculate an indexation factor for each payment year. Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year. The non-indexed severity amounts are combined with the indexation factor to generate indexed severity amounts for each payment year. For a given claim, the payments taking place in the first year are not impacted by indexation, but payments in subsequent years are increased by the applicable indexation factor. The final indexed severity is then calculated as the sum of the payment year indexed severity amounts.

Figure C.1.0.9 – EAB Severity Summary

	Severity ($)	EAB-MR (1)	EAB-ED (2)	EAB-PI&DB (3)
(a)	FLY 2022 Non-Indexed	10,780	49,979	25,154
(b)	FLY 2022 Indexed	13,290	67,701	n/a

(1a) FLY 2022 Non-Indexed Severity - from Figure C.1.0.2 column (4).
(2a) FLY 2022 Non-Indexed Severity - from Figure C.1.0.5 row (g).
(3a) FLY 2022 Non-Indexed Severity - from Figure C.1.0.7 column (4).
(1b) FLY 2022 Indexed Severity - from Technical Appendix C.1.0.16 (14b).
(2b) FLY 2022 Indexed Severity - from Technical Appendix C.1.0.16 (15b).

D EAB-MR SELECTIONS

38. Sections D.1 and D.2 explain the methods and assumptions used in the EAB-MR reserving analysis.

39. Technical Appendix set C.1.1 shows the calculations for incurred count, incurred severity, incurred loss and allocated loss adjustment expenses (ALAE), and incurred frequency for FLY 2022 (11 months EAB-MR) as summarized in Figure C.1.0.10.

Figure C.1.0.10 – Final Selections for EAB-MR

Technical Appendix	Description	Selection
C.1.1.1	Summary	
C.1.1.2.1 to C.1.1.2.3	Incurred Count Development Method (AB-MR data)	Baseline assumption (average 4) to 108 months is selected

40. Incurred loss and ALAE is calculated as the product of the selected incurred count and the selected incurred severity, described in the following sections. Incurred frequency is calculated as the ratio of incurred count to risk exposure. Note that count and risk exposure for FLY 2022 only include the 11 months of experience under Enhanced Care (from May 1, 2021 to March 31, 2022).

D.1 EAB-MR COUNT SELECTIONS

41. The actuaries analyze incurred count using the incurred count development method. The historical Medical Rehabilitation (AB-MR) count development is used as a surrogate to forecast count development for the EAB-MR sub-coverage because the reporting pattern for medical and

rehabilitation claims under Enhanced Care in BC is expected to be reasonably similar to that for medical and rehabilitation claims under the legal-based product.

42. The baseline selection for AB-MR count development factors is the average of the four most recent values. The use of a baseline helps maintain consistency in the selected development factors from one reserve review to another. The baseline selection is used for all development periods to 108 months in the August 2022 reserving analysis, as summarized in Figure C.1.0.10.

D.2 EAB-MR SEVERITY SELECTIONS

43. The selected incurred severity for FLY 2022 (11 months) is based on the MPI severity, with appropriate adjustments, as described in Section C above. The selected incurred severity is shown in Technical Appendix C.1.1.1, column (3).

E EAB-ED SELECTIONS

44. Sections E.1 and E.2 explain the methods and assumptions used in the EAB-ED reserving analysis. Since the EAB-ED reserving analysis relies in part on the results of the AB-WB (legal-based) reserving analysis, Section E.3 describes that analysis.

45. Technical Appendix set C.1.2 shows the calculations for incurred count, incurred severity, incurred loss and ALAE, and incurred frequency for FLY 2022 (11 months EAB-ED) as summarized in Figure C.1.0.11.

Figure C.1.0.11 – Final Selections for EAB-ED

Technical Appendix	Description	Selection
C.1.2.1	Summary	
C.1.2.2.1 to C.1.2.2.3	Incurred Count Development Method (AB-WB data)	Development assumptions are the same as AB-WB (described in Figure C.1.0.12)
C.1.2.3.1	Summary of Estimates of Incurred Loss and ALAE	Incurred severity from Figure C.1.0.9

46. Incurred loss and ALAE is calculated as the product of the selected incurred count and the selected incurred severity, described in the following sections. Incurred frequency is calculated as the ratio of incurred count to earned risk exposure. Note that count and risk

exposure for FLY 2022 only include the 11 months of experience under Enhanced Care (from May 1, 2021 to March 30, 2022).

E.1 EAB-ED COUNT SELECTIONS

47. The actuaries analyze incurred count using the incurred count development method. The historical Weekly Benefits (AB-WB) count development is used as a surrogate to forecast count development for the EAB-ED sub-coverage, because the reporting pattern for EAB-ED claims under Enhanced Care in BC is expected to be reasonably similar to that for AB-WB claims under the legal-based product.

48. The baseline selection for AB-WB count development factors is the average of the four most recent values. The use of a baseline helps maintain consistency in the selected development factors from one reserve review to another. The baseline is selected in the August 2022 reserving analysis as summarized in Figure C.1.0.11.

E.2 EAB-ED SEVERITY SELECTIONS

49. The selected incurred severity for FLY 2022 (11 months) is based on the MPI severity, with appropriate adjustments, as described in Section C above. The selected incurred severity is shown in Technical Appendix C.1.2.1, column (4).

E.3 AB-WB LOSS AND ALAE ANALYSIS

50. This Section explains the actuarial reserving analysis applied to ICBC's historical AB-WB data. The results of the AB-WB analysis are used to determine a severity trend due to factors other than price inflation, which is applied in the forecast of EAB-ED costs for policy year 2023 as discussed in Section E of Appendix C.1.0, and referred to as the non-inflationary trend. The non-inflationary trend reflects the underlying trend for changes in mix assuming the same non-inflationary pressure that is influencing costs within the AB-WB coverage is expected to continue in the first few years under EAB-ED.

51. The actuaries analyze the AB-WB loss and ALAE amounts using the Incurred Development Method, the Paid Development Method, and the Bornhuetter-Ferguson Method.

These methods are described in Technical Appendix C.0 and the numerical tables are provided in Technical Appendix Set C.1.2, which is filed separately in Excel format.

52. There are three features of the historical WB data that may cause assumptions inherent to the three methods listed above used for estimation of the amounts of incurred loss and ALAE not to hold. These features are:

- **Cleanup of Inactive Claim Exposures** – In FY 2019, efforts were undertaken to reduce the number of inactive accident benefits claim exposures, on both a one-time and ongoing basis. This resulted in a reduction of pending AB-WB claims across a number of fiscal loss years, including the movement of some claims from open to closed with no amount (CNA) status. Where the pending claims carried case reserves, this also produced a reduction in case incurred amounts. This effect can be seen to produce unusually low development factors in FY 2019 both for counts and case incurred amounts, in Technical Appendices C.1.2.2.2 and C.1.2.3.4 respectively (24-to-36 months for FLY 2018, 36-to-48 months for FLY 2017, 48-to-60 months for FLY 2016, et cetera).

- **Structured Settlements** – Between June 2010 and May 2016, ICBC purchased 262 WB structured settlements for claimants who are expected to be disabled for life. Under these structured settlements, claimants receive guaranteed disability payments until the age of 65. Disability payments cease if a claimant is either no longer disabled or dies. The cost of purchasing these structured settlements has been paid in full to the provider life insurance companies at the time of purchase; however, ICBC remains financially responsible for these claims and continues to account for the full liability on its balance sheet.

- **Large Claims** – The large claims threshold for the AB-WB reserving analysis is $750,000. For claim exposures that exceed the threshold, the full case incurred amount is removed from the triangle data used for LDFs selection in Technical Appendix C.1.2.3.3, and included in the selected incurred loss and ALAE in Technical Appendix C.1.2.3.1. There are three large claims that occurred in FLYs 2014, 2015 and 2020 respectively which represent a meaningful portion of each respective FLY total AB-WB case incurred loss and ALAE amounts. The FLY 2014 claim is closed with payment in excess of $0.8 million. The FLY 2015 claim is closed with payment in excess of $0.3 million. The

FLY 2020 claim is valued in excess of $0.9 million in expected AB-WB payments as of August 31, 2022.

53. In accordance with accepted actuarial practice, in those cases where the assumptions inherent to a method do not hold, adjustments have been made so that the assumptions do hold true, or the results of the method are not used. These adjustments are discussed in more detail below.

54. **Actuarial Response – Incurred Count Development Method** – Future count development is not expected to follow the same pattern seen in the FY 2019 data, which was affected by the cleanup of the inactive claim exposures. The average of the three most recent development factors (Average 3) is selected to avoid reliance on the low factors in FY 2019, as summarized in Figure C.1.0.12.

55. **Actuarial Response – Incurred Development Method –** Claims with structured settlements are excluded and analyzed separately, and an explicit adjustment is made to provide for the impact of the large outstanding claims in the historical data. Future loss development is not expected to follow the same pattern seen in the FY 2019 data, which was affected by the cleanup of the inactive claim exposures. The average of the three most recent development factors (Average 3) is selected to avoid reliance on the low factors in FY 2019, as summarized in Figure C.1.0.12.

56. As a result of the requirement to account for the outstanding payments to claimants under a structured settlement, the total liability for the structured settlement claims is estimated separately as shown in Technical Appendix C.1.2.3.13. Historical data related to claims with structured settlements is removed from the analysis as shown in Technical Appendix C.1.2.3.2, column (2). Technical Appendix C.1.2.3.3 (2) shows both structured settlements and large claims amounts in triangle format. The total liability of the structured settlement claims is then added back to the incurred loss estimate from the Incurred Development Method. This is consistent with the methodology used in the 2021 RRA.

57. In applying the Incurred Development Method to loss and ALAE amounts, the impact of the large claims on the case incurred loss and ALAE amounts is meaningful, and needs to be considered in determining the best estimate incurred loss and ALAE. An explicit adjustment has been made to remove the amount of the large claims to avoid the large claims having undue

influence on the estimate of the future loss and ALAE amounts. The case incurred amounts of the large claims, which are judged to be the best estimates of the incurred loss and ALAE for the large claims, are then added back to the estimate, as shown in Technical Appendix C.1.2.3.2, to arrive at the incurred loss and ALAE amount. This is consistent with the adjustment applied in the 2021 RRA.

58. **Actuarial Response – Paid Development Method –** Explicit adjustments are made to provide for the impact of structured settlements and large claims in the historical data.

59. As a result of the requirement to account for the outstanding payments to claimants under a structured settlement, the purchase price for each structured settlement is removed from the paid loss and ALAE data. Scheduled payments made under each purchased annuity contract up to March 31, 2023 are then added back to the data (see Technical Appendix C.1.2.3.8 for further detail of these adjustments in triangle format). This is consistent with the methodology used in the 2021 RRA.

60. Explicit adjustments are made to the paid loss and ALAE amounts on specific large claims. This is because the case incurred loss and ALAE for those large claims is judged to be the best estimate of the incurred loss and ALAE for those large claims rather than an estimate derived from the product of the cumulative paid loss and ALAE amount and the selected loss development factor. An explicit adjustment has been made to FLYs 2014, 2015 and 2020. This is consistent with the adjustment applied in the 2021 RRA.

61. Technical Appendix Set C.1.2 shows the calculations for incurred count, incurred severity, incurred loss and ALAE, and incurred frequency for AB-WB from FLYs 2006 to 2022 (1 month) from the reserving selections summarized in Figure C.1.0.12.

62. The baseline selection for AB-WB count development factors and AB-WB loss development factors is the average of the four most recent values. The use of a baseline helps maintain consistency in the selected development factors from one reserve review to another. Departures from the baseline selection are made when circumstances warrant and are discussed in the following figure.

63. The Technical Appendices referred to in Figure C.1.0.12 are filed separately in Excel format.

Figure C.1.0.12 – Final Selections for AB-WB

Technical Appendix	Description	Selection
C.1.2.1	Summary	
C.1.2.2.1 to C.1.2.2.3	Incurred Count Development Method	• Baseline is used from 24 to 36 months.[1] • “Average 3” is used from 36 to 96 months[1] to rely on the period following the cleanup of inactive claim exposures. • Baseline is used from 96 to 120 months.[1]
C.1.2.3.1	Summary of Estimates of Incurred Loss and ALAE	• Average of Incurred and Paid Development Methods for FLYs 2019 and prior.[2] • Average of Paid Development Method and Paid Bornhuetter-Ferguson Method for FLYs 2020 to 2022 (1 month).[2]
C.1.2.3.2 to C.1.2.3.5	Incurred Development Method	• “Average 3” is used from 24 to 72 months[3] to rely on the period following the cleanup of inactive claim exposures. • Baseline is used from 72 to 216 months.[3]
C.1.2.3.6 to C.1.2.3.11	Paid Development Method	• Baseline is used from 24 to 216 months.[4] • A tail factor of 1.0532 is used for 216 months to ultimate.[4]
C.1.2.3.12	Paid Bornhuetter-Ferguson Method	• Expected loss and ALAE for a FLY is the product of incurred count and incurred severity. Incurred severity for FLYs 2006 through 2019 is from an exponential trend of indicated incurred severities from FLYs 2006 to 2016, incurred severity for FLY 2020 is based on a separate Rate Affordability Action Plan (RAAP) severity estimate, incurred severity for FLY 2021 and FLY 2022 are based on that of FLY 2020 trended forward by 1 and 1.5 years respectively using the exponential trend.
C.1.2.3.13	Structured Settlement Claimants	

1) This represents a change from the 2021 RRA where “Average 2” is used from 17 to 29 months, “Average 1” is used from 29 to 41 months, “Average 6” excluding high and low factors” is used from 41 to 113 months.
2) This represents a change from the 2021 RRA where the selections are average of Incurred and Paid Development Methods for FLYs 2014 and prior, Paid Development Method for FLYs 2015 to 2016, Paid Bornhuetter-Ferguson Method for FLYs 2017 to 2020.
3) This represents a change from the 20121 RRA where the “Average 2” is used from 17 to 29 months, Baseline is used from 29 to 41 months, “Average 3” is used from 41 to 53 months, “Average 2” is used from 53 to 65 months, “Average 1” is used from 65 to 77 months, Baseline is used from 77 to 209 months.
4) This represents a change from the 2021 RRA where “Average 2” is used from 17 to 29 months, “Average 1” is used from 29 to 41 months, Baseline from 41 to 209 months, a tail factor of 1.048 is used for 209 months to ultimate.

F EAB-PI SELECTIONS

64. Sections F.1 and F.2 explain the methods and assumptions used in the EAB-PI reserving analysis.

65. Analyzing EAB-PI and EAB-DB separately enables ICBC to refine the analysis and support a separate cost forecast for each of these sub-coverages. This represents a change from the approach in the 2021 RRA where EAB-PI and EAB-DB were analyzed on a combined basis due to the nature of MPI Accident Benefits Other – Non-Indexed data which combines MPI's permanent impairment and death benefits.

66. Technical Appendix Set C.1.3 shows the calculations for incurred count, incurred severity, incurred loss and ALAE, and incurred frequency for FLY 2022 (11 months EAB-PI) from the reserving selections summarized in Figure C.1.0.13.

Figure C.1.0.13 – Final Selections for EAB-PI

Technical Appendix	Description	Selection
C.1.3.1	Summary	
C.1.3.2.1 to C.1.3.2.2	Summary of Estimates of Incurred Count	Incurred count using propensity to BVDC approach
C.1.3.3.1 to C.1.3.3.3	Summary of Estimates of Incurred Loss and ALAE	EAB-PI and EAB-DB combined incurred severity from Figure C.1.0.9

F.1 EAB-PI COUNT SELECTIONS

67. EAB-PI is a new benefit without a corresponding coverage before Enhanced Care. To determine the FLY 2022 (11 months) incurred count for EAB-PI, a propensity to BVDC approach is used with the following formulae.

$$\boldsymbol{EAB\text{-}PI\ incurred\ count} = Propensity\ to\ BVDC \times BVDC\ incurred\ count$$

$$\boldsymbol{Propensity\ to\ BVDC} = \frac{combined\ EAB\text{-}PI\ and\ EAB\text{-}DB\ modeled\ frequency \times EAB\text{-}PI\ proportion}{BVDC\ modeled\ frequency}$$

68. The propensity of EAB-PI claim exposures to BVDC claim exposures can be viewed as representing the proportion of Basic crash claims that result in a permanent impairment. This ratio

is 4.5%, calculated from the original forecasts[3] for EAB-PI and EAB-DB (combined) frequency and BVDC frequency, accounting for the proportion of EAB-PI claims within the combined EAB-PI and EAB-DB claims.[4]

F.2 EAB-PI SEVERITY SELECTIONS

69. The spring-off point for FLY 2022 in Figure C.1.0.9 is a combined EAB-PI and EAB-DB severity. This section discusses how it is split into separate EAB-PI and EAB-DB (discussed in Section G.2) severities.

70. EAB-PI severity for FLY 2022 (11 months) is derived from the combined severity for EAB-PI and EAB-DB, and the individual EAB-DB severity. This calculation uses the following formulae. The combined EAB-PI and EAB-DB severity is from Figure C.1.0.9. EAB-DB severity is from Technical Appendix C.1.4.1. The details of the calculations are shown in Technical Appendix C.1.3.3.1.

$$\boldsymbol{EAB\text{-}PI\ incurred\ severity} = (Combined\ EAB\text{-}PI\ and\ EAB\text{-}DB\ incurred\ loss\ and\ ALAE - EAB\text{-}DB\ incurred\ count\ \times EAB\text{-}DB\ incurred\ severity)\ \div EAB\text{-}PI\ incurred\ count$$

$$\boldsymbol{Combined\ EAB\text{-}PI\ and\ EAB\text{-}DB\ incurred\ loss\ and\ ALAE} = (EAB\text{-}PI\ incurred\ count + EAB\text{-}DB\ incurred\ count) \times combined\ EAB\text{-}PI\ and\ EAB\text{-}DB\ incurred\ severity$$

Combined EAB-PI and EAB-DB incurred severity from Figure C.1.0.9 column (3) row (a).
EAB-DB incurred severity is from Technical Appendix C.1.4.1 column (14).
EAB-PI incurred count is discussed in Section F.1.
EAB-DB incurred count is from Technical Appendix C.1.4.1 column (12).

G EAB-DB SELECTIONS

71. Sections G.1 and G.2 explain the methods and assumptions used in the EAB-DB reserving analysis. Similar timing is expected between the costs of death benefits claims under the Enhanced Care product (EAB-DB) and those under the previous legal-based product

[3] FLY 2022 modeled frequency are found in 2021 RRA Appendix C.1 – Loss Trend Models and Data, Frequency table, column 2021/22.
[4] The proportion of permanent impairment claims is 88.8% of the combined permanent impairment and death benefit claims, according to data underlying the MPI 2023 GRA. The original MPI data being referenced is confidential to MPI and confidential signatories of their regulatory process.

(AB-DB). Accordingly, the analysis is primarily undertaken on the EAB-DB and AB-DB claims combined, before ultimately determining the separate amounts for each product.

72. Analyzing EAB-DB separately from EAB-PI enables ICBC to refine the analysis and support a separate forecast for each of these sub-coverages. This represents a change from the approach in the 2021 RRA where EAB-PI and EAB-DB were analyzed on a combined basis due to the nature of MPI Accident Benefits Other – Non-Indexed data which combines MPI's permanent impairment and death benefits.

73. Technical Appendix Set C.1.4 shows the calculations for incurred count, incurred severity, incurred loss and ALAE, and incurred frequency for FLY 2022 (11 months EAB-DB) from the reserving selections summarized in Figure C.1.0.14.

Figure C.1.0.14 – Final Selections EAB-DB and AB-DB

Technical Appendix	Description	Selection
C.1.4.1	Summary	
C.1.4.2.1 to C.1.4.2.3	Incurred Count Development Method	Baseline assumption (average 6) to 120 months is selected.
C.1.4.3.1	Summary of Estimates of Incurred Loss and ALAE	Incurred Development Method for fiscal loss years (FLYs) 2006-2022.
C.1.4.3.2 to C.1.4.3.4	Incurred Development Method	Baseline assumption (average 6) to 120 months is selected.
C.1.4.3.5 to C.1.4.3.7	Paid Development Method	Baseline assumption (average 6) to 120 months is selected.

74. Incurred count and incurred loss and ALAE for EAB-DB and AB-DB are calculated on a combined basis for FLY 2022 (12 months) by the application of the actuarial methods, as described in the following sections. The EAB-DB estimate for FLY 2022 (11 months) is then determined by subtracting the amount associated with AB-DB claims for FLY 2022 (1 month). Incurred frequency is calculated as the ratio of incurred count to earned risk exposure. Incurred severity is calculated as the ratio of incurred loss and ALAE to incurred count.

G.1 EAB-DB COUNT SELECTIONS

75. The actuaries analyze the incurred count for death benefits (combining EAB-DB and AB-DB) using the incurred count development method.

76. The baseline selection for death benefits count development factors is the average of the six most recent values. Six years is used as the baseline for death benefits because the factors in this sub-coverage are generally more volatile than those in other coverages. The use of a baseline helps maintain consistency in the selected development factors from one reserve review to another. The baseline is selected in the August 2022 reserving analysis as summarized in Figure C.1.0.14.

77. The selected incurred count for EAB-DB for FLY 2022 (11 months) is determined from the combined incurred count for death benefits for FLY 2022 (12 months) by subtracting the number of AB-DB claims made for FLY 2022 (1 month). This calculation is shown in Technical Appendix C.1.4.1, column (12). Since the nature of death benefits claims is such that they are reported fairly quickly, the actuaries find the number of reported AB-DB claims as of August 2022 from accidents that occurred in the month of April 2021 to be a reasonable estimate of the incurred AB-DB claims.

G.2 EAB-DB LOSS AND ALAE ANALYSIS

78. The actuaries analyze the loss and ALAE amounts for death benefits (combining EAB-DB and AB-DB) using the Incurred Development Method and the Paid Development Method.

79. The baseline selection for death benefits loss and ALAE development factors is the average of the six most recent values. Six years is used as the baseline for death benefits because the factors in this sub-coverage are generally more volatile than those in other coverages. The baseline is selected in the August 2022 reserving analysis as summarized in Figure C.1.0.14.

80. The selected incurred loss and ALAE for EAB-DB for FLY 2022 (11 months) is determined from the combined incurred loss and ALAE for death benefits for FLY 2022 (12 months) by subtracting the case incurred loss and ALAE amount for AB-DB claims made for FLY 2022 (1 month). The case incurred loss and ALAE amount is judged to be the best estimate of the incurred AB-DB claims for April 2021. The calculation is shown in Technical Appendix C.1.4.1, column (13).

81. ICBC actuaries assume that FLY 2022 (1 month) AB-DB is fully developed as it develops and settles fairly quickly with less uncertainty due to the short tail nature of this coverage.

Therefore, FLY 2022 (1 month) AB-DB reported severity is assumed to equal incurred severity as calculated in Technical Appendix C.1.4.1, column (9).

TECHNICAL APPENDIX C.2.0

BASIC VEHICLE DAMAGE COVERAGE CLAIMS RESERVING ANALYSIS

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A INTRODUCTION

1. Basic Vehicle Damage Coverage (BVDC) provides Basic first party coverage for damage to an ICBC customer's vehicle when it is caused by another vehicle. The coverage is subject to a limit of $200,000 in damage, and excludes vehicle damages caused by unidentified drivers (hit-and-run crashes).

2. This technical appendix explains the data and methodology used in the reserving analysis for BVDC.

- Section B provides more detail of the claims data used.
- Section C explains the selection of methods and assumptions used in the estimation of claims costs for BVDC.

3. The actuaries analyze the loss and allocated loss adjustment expense (ALAE) amounts for BVDC using the Incurred Development Method and the Paid Development Method. The analysis of the recovered amounts uses the Incremental Recovered Amount to Incurred Loss Method. Each of these methods calls for a review of historical loss development patterns. These methods are described in Technical Appendix C.0, and the numerical tables are provided in Technical Appendix Set C.2, which is filed separately in Excel format.

B BVDC CLAIMS DATA

4. BVDC was not in effect over the period before May 1, 2021. However, in order to support the application of actuarial methods, historical data from claims under the legal-based insurance product that would have been paid under BVDC is used to supplement the BVDC data. The data that has been selected is ICBC's historical vehicular Property Damage (PD) claims that occurred in BC, excluding hit-and-run claims. Historical loss data since May 1, 2021 indicates that the volume of data under BVDC is very similar to the historical vehicle PD data. Hit-and-run claims are excluded from the historical claims data because they are not covered by BVDC.

5. **Notable Features in the Historical Data** – In some instances, there are features of the historical data which may cause the assumptions inherent to the appropriate application of the standard methods used for estimation of the amounts of incurred loss and ALAE not to hold.

There is one such instance relevant to the data selected to represent BVDC, which is discussed below.

6. **Data Feature – Delayed Repairs** – The time from when a vehicle damage claim is reported to when the vehicle is repaired can be referred to as the cycle time for a repair. Within the past year, the cycle time for vehicle repairs has increased significantly. Factors affecting this increase are emerging shortages of skilled technicians in the repair industry, as well as parts shortages due to the disruption in supply chains related to the economic impacts of the COVID-19 pandemic.

C BVDC SELECTIONS

7. The baseline selection for BVDC count development factors and loss and ALAE development factors is the average of the four most recent values. The use of a baseline helps maintain consistency in the selected loss development factors from one reserve review to another. Departures from the baseline selection are made when circumstances warrant. Examples of such circumstances are: a change in the claims settlement environment, a change in the handling or setting of case reserves, or an emerging trend in the statistical data used in the analysis. Final selections in the August 2022 reserving analysis are described in Figure C.2.0.1 below, and departures from the baseline are discussed following that figure.

Figure TA C.2.0.1 – Final Selections for BVDC

Technical Appendix	Description	Selection
C.2.1	Summary	
C.2.2.1 to C.2.2.3	Incurred Count Development Method	• Baseline from 24 to 108 months.
C.2.3.1	Summary of Estimates of Incurred Loss and ALAE Gross of Recovery Amounts	• Average of the Incurred Development Method and the Paid Development Method for all Fiscal Loss Years (FLYs).
C.2.3.2 to C.2.3.4	Incurred Development Method	• "Average 1" is used for 24 to 36 months. • "Average 2" is used from 36 to 48 months. • Baseline from 48 to 132 months.
C.2.3.5 to C.2.3.7	Paid Development Method	• Baseline from 24 to 132 months.
C.2.4.1 to C.2.4.3	Incremental Recovered Amount to Incurred Loss	• "Average 2" is used for 24 to 36 months • Baseline from 36 to 216 months

8. The Incurred Development Method uses the most recent factor for the period from 24 to 36 months and the average of the two most recent factors for the period from 36 to 48 months to account for a change in the environment for material damage claims handling. There was a greater reduction in case reserves than usual during fiscal year (FY) 2022, during a period of longer repair cycle times and following a period of low intake due to impacts of the COVID-19 pandemic. Historically, a larger amount of case reserves would have been released gradually over later periods, reducing the overall case incurred development. With this gradual release no longer occurring to the same degree, higher development factors can be seen in FY 2023 for FLY 2021 (24 to 36 months) and to a lesser degree for FLY 2020 (36 to 48 months). As current indicators of delayed repairs show this influence to be continuing, these higher development factors are given more weight in the selection.

9. The Incremental Recovered Amount to Incurred Loss and ALAE Method uses the average of the two most recent ratios for the period from 24 to 36 months. Because of the shortage and higher costs of vehicle and parts, there was an increased demand to purchase salvage. This has led to quicker turnaround time for vehicle salvage and recovery for FLYs 2021 and 2022 within the first two years of development, as compared to historical patterns. As more salvage is sold, there will be less salvage remaining for later development periods (in particular the 24 to 36 month period), which is represented by the selection of a lower incremental factor.

10. Some of the selected factors (for later development periods) are based on information from FLYs prior to 2006, which is not shown in the technical appendices.

TECHNICAL APPENDIX C.3.0

THIRD PARTY LIABILITY CLAIMS RESERVING ANALYSIS

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A INTRODUCTION

1. Third Party Liability (TPL) coverage under the Enhanced Care model provides TPL coverage for damages caused by ICBC's insured customer where the legislated limitation on lawsuits is not applied. This can include injuries and vehicle damage arising from vehicle crashes outside of the province, damage to property other than vehicles, and damage to customer vehicles while under a garage service operator's care.

2. The actuaries analyze the loss and allocated loss adjustment expenses (ALAE) amounts for TPL claims by considering it as two sub-coverages:

- TPL-Property Damage (TPL-PD): A combination of vehicle Property Damage (PD) claims that occur outside of BC, other-than-vehicle PD claims, and claims for customer vehicles while under garage service operator's care.
- TPL-Out-of-Province Bodily Injury (TPL-OOP BI): BI claims that occur outside of British Columbia.

3. This represents a change from the analysis done in the 2021 Revenue Requirements Application (2021 RRA) where the analyses of TPL-PD claims for vehicle damage and non-vehicle damage were separated. Since each of the components individually has a low volume of claims, they are combined into a single analysis as the TPL-PD sub-coverage. In addition, claims data for garage service operator's care of customer vehicles was part of the Manual Basic analysis in the 2021 RRA, but instead is now included as part of TPL-PD because the Manual Basic and Plate Owner claims are now analyzed together on a combined basis.

4. This technical appendix explains the data and methodology used in the reserving analysis for the TPL coverage.

- Section B provides more detail of the claims data used to analyze each of the TPL sub-coverages.
- Sections C and D explain the selection of methods and assumptions used in the estimation of claims costs for each sub-coverage.

B TPL CLAIMS DATA

5. Historical data from claims under the legal-based insurance product that was in place in BC until May 1, 2021 is used to supplement the TPL data under Enhanced Care, to support the application of actuarial methods. Data has been selected that corresponds with claims under each of TPL-PD and TPL-OOP BI as follows:

- For TPL-PD, for the period before May 1, 2021, the claims data used is historical TPL- PD data for claims that occurred outside of BC, other-than-vehicle PD claims, and claims for customer vehicles while under garage service operator’s care that would have been paid had the Enhanced Care coverage been in effect.

- For TPL-OOP BI, for the period before May 1, 2021, the claims data used is historical BI data for claims that occurred outside of BC that would have been paid had the Enhanced Care coverage been in effect.

6. **Notable Features in the Historical Data** – In some instances, there are features of the historical data that may cause the assumptions inherent to the appropriate application of the standard methods used for estimation of the amounts of incurred loss and ALAE not to hold. There is one such instance relevant to the TPL claims data, which is discussed below.

7. **Impacts of the COVID-19 pandemic on the mix of claims** – Impacts of the COVID-19 pandemic resulted in a change in the mix of claims for the TPL-PD sub-coverage. With travel restrictions and limited border travel, there were fewer out-of-province claims as a percentage of total TPL-PD claims. As seen in Figure C.3.0.1, Fiscal Loss Years (FLYs) 2021 and 2022 have a lower proportion of out-of-province PD claims.

Figure TA C.3.0.1 – TPL-PD Mix of Claims at 17 Months of Development

Fiscal Loss Year	Out-of-Province PD	Other-Than-Vehicle	Customer Vehicle Under Garage Service Operator's Care
2016	26%	65%	8%
2007	24%	67%	9%
2018	27%	64%	9%
2019	26%	64%	10%
2020	26%	65%	9%
2021	15%	77%	7%
2022	11%	83%	6%

C TPL-PD SELECTIONS

8. TPL-PD loss and ALAE amounts are analyzed in two parts: loss and ALAE excluding recovery amounts, and recovery amounts. The recovery amounts include salvage, subrogation, and claim repayments.

9. The loss and ALAE amounts are analyzed using the Incurred Development Method, the Paid Development Method and the Bornhuetter-Ferguson method. Recovered amounts are analyzed using the Paid Recovery Development method, and the Incremental Recovered Amount to Incurred Loss Method. Each of these methods calls for a review of historical loss development patterns. These methods are described in Technical Appendix C.0, and the numerical tables are provided in Technical Appendix Set C.3.1, which is filed separately in Excel format.

10. The baseline selection for TPL–PD count development factors and loss and ALAE development factors (excluding recovery) is the average of the four most recent values. The baseline for recovery development factors is the average of the six most recent values. The use of a baseline helps maintain consistency in the selected loss development factors from one reserve review to another. Departures from the baseline selection are made when circumstances warrant. Examples of such circumstances are: a change in the claims settlement environment, a change in the handling or setting of case reserves, or an emerging trend in the statistical data used in the analysis. Final selections in the August 2022 reserving analysis are described in Figure C.3.0.2 below, and departures from the baseline are discussed following that figure.

Figure TA C.3.0.2 – Final Selections for TPL-PD

Technical Appendix	Description	Selection
C.3.1.1	Summary	
C.3.1.2.1 to C.3.1.2.3	Incurred Count Development Method	• Baseline from 24 to 84 months.
C.3.1.3.1	Summary of Estimates of Incurred Loss and ALAE Gross of Recovery Amounts	• Average of the Incurred Development Method and the Paid Development Method for FLYs 2021 and prior. • Average of the Incurred Development Method and Paid Bornhuetter-Ferguson for FLY 2022.
C.3.1.3.2 to C.3.1.3.4	Incurred Development Method	• "Average 6 excluding high and low" is used from 24 to 36 months. • "Average 3" is used from 72 to 84 months. • Baseline from 36 to 72 and 84 to 108 months.
C.3.1.3.5 to C.3.1.3.7	Paid Development Method	• "Average 6 excluding high and low factors" is used from 84 to 96 months. • Baseline from 24 to 84 and 96 to 108 months.
C.3.1.3.8	Paid Bornhuetter-Ferguson Method	• Expected loss and ALAE for a FLY is the product of count and severity where severity is from an exponential trend of indicated severities from FLYs 2012 to 2021.
C.3.1.4.1	Summary of Estimates of Incurred Recovery Amounts	• Incremental Recovered Amount to Incurred Loss and ALAE Method for FLYs 2021 and prior. • Paid Recovery Development Method for FLY 2022.
C.3.1.4.2 C.3.1.4.4	Paid Recovery Development Method	• "Average 6 excluding high and low factors" is used from 48 to 72 months. • "Average 6 excluding high and low factors" is used from 120 to 132 months. • Baseline from 24 to 48, 72 to 120, and 132 to 204 months.
C.3.1.4.5 to C.3.1.4.7	Incremental Recovered Amount to Incurred Loss Method	• "Average 6 excluding high and low factors" is used from 48 to 72 months. • "Average 6 excluding high and low factors" is used from 120 to 132 months. • Baseline from 24 to 48, 72 to 120, and 132 to 204 months.

11. The Incurred Development Method uses the average of the six most recent factors excluding the highest and lowest factors for the period from 24 to 36 months to exclude the development factor from FLY 2021 that was affected by the impacts of the COVID-19 pandemic.

The average of the three most recent factors is used from 72 to 84 months to reduce the impact of an unusually high factor from FLY 2014.

12. The Paid Development Method uses the average of the six most recent factors excluding the highest and lowest factors for the period from 84 to 96 months to reduce the impact of an unusually high factor from FLY 2014.

13. The incurred loss and ALAE gross of recovery estimates for FLYs 2021 and prior are based on the average of the Incurred Development Method and the Paid Development Method. The incurred loss and ALAE gross of recovery estimate for FLY 2022 is based on the average of the Incurred Development Method and the Paid Bornhuetter-Ferguson Method, as the unpaid amounts are still high at 24 months of development.

14. The Paid Recovery Method uses the average of the six most recent factors excluding the highest and lowest factors for the period from 48 to 72 months to reduce the impact of unusually high factors that have been observed within the last six years. The average of the six most recent factors excluding the highest and lowest factors is also used for the period from 120 to 132 months in order to reduce the impact of an unusual factor from FLY 2010 in a period where the recovered amounts decreased.

15. The Incremental Recovered Amount to Incurred Loss and ALAE Method uses the average of the six most recent ratios excluding the highest and lowest ratios for the period from 48 to 72 months to reduce the impact of unusually high ratios that have been observed within the last six years. The average of the six most recent ratios excluding the highest and lowest ratios is also used for the period from 120 to 132 months in order to exclude the negative ratio from FLY 2010.

16. The incurred recovery estimate uses the Incremental Recovered Amount to Incurred Loss and ALAE method for FLYs 2021 and prior. FLY 2022 uses the Paid Recovery Method as this method will better account for the different mix of claims seen for the year.

17. Some of the selected factors (for later development periods) are based on information from FLYs prior to 2006, which is not shown in the technical appendices.

D TPL-OOP BI SELECTIONS

18. The actuaries analyze the loss and ALAE amounts for TPL-OOP BI using the Incurred Development Method, the Paid Development Method, and the Bornhuetter-Ferguson Method. Each of these methods calls for a review of historical loss development patterns. These methods are described in Technical Appendix C.0, and the numerical tables are provided in Technical Appendix Set C.3.2, which is filed separately in Excel format.

19. The baseline selection for TPL-OOP BI count development factors and loss and ALAE development factors is the average of the six most recent values. The use of a baseline helps maintain consistency in the selected loss development factors from one reserve review to another. Departures from the baseline selection are made when circumstances warrant. Examples of such circumstances are: a change in the claims settlement environment, a change in the handling or setting of case reserves, or an emerging trend in the statistical data used in the analysis. Final selections in the August 2022 reserving analysis are described in Figure C.3.0.3 below.

Figure TA C.3.0.3 – Final Selections for TPL-OOP BI

Technical Appendix	Description	Selection
C.3.2.1	Summary	
C.3.2.2.1 to C.3.2.2.3	Incurred Count Development Method	• Baseline from 24 to 120 months
C.3.2.3.1	Summary of Estimates of Incurred Loss and ALAE	• Average of the Incurred Development Method and Paid Development Method for FLYs 2018 and prior. • Average of the Incurred Bornhuetter-Ferguson (BF) and Paid BF Method for FLYs 2019 to 2022.
C.3.2.3.2 to C.3.2.3.4	Incurred Development Method	• Baseline from 24 to 216 months.
C.3.2.3.5 to C.3.2.3.7	Paid Development Method	• Baseline from 24 to 216 months.
C.3.2.3.8	Incurred Bornhuetter-Ferguson Method	• Expected loss and ALAE for a FLY 2009 is the product of count and severity where severity is from an exponential trend of indicated severities from FLYs 2009 to 2018.
C.3.2.2.9	Paid Bornhuetter-Ferguson Method	• Expected loss and ALAE for a FLY is the product of count and severity where severity is from an exponential trend of indicated severities from FLYs 2009 to 2018.

20. The incurred loss and ALAE estimates for FLYs 2018 and prior are based on the average of the Incurred Development Method and the Paid Development Method. The incurred loss and ALAE estimates for FLYs 2019 to 2022 are based on the average of the Paid and Incurred Bornhuetter-Ferguson Methods, as the unpaid amounts are still significant at 60 months of development.

21. Some of the selected factors (for later development periods) are based on information from FLYs prior to 2006, which is not shown in the technical appendices.

TECHNICAL APPENDIX C.6.0

UNALLOCATED LOSS ADJUSTMENT EXPENSES FORECAST METHODOLOGY

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A INTRODUCTION

1. This Technical Appendix explains the detailed forecasting methodology for Unallocated Loss Adjustment Expenses (ULAE). ICBC uses the Johnson Method with alternative weightings to derive the expected amount of ULAE by taking the product of weighted claim exposure counts in each year and the average ULAE cost per weighted claim exposure count for the appropriate fiscal loss year. Different weighting is used for each coverage. Details of weighted claim exposure counts and average ULAE cost are illustrated in the following sections.

B WEIGHTED CLAIM EXPOSURE COUNTS

2. In order to estimate the amount of claim servicing effort expended for each year, a weighted claim exposure count is obtained based on the number of claims opening, remaining open, and completing in each historical year. Weighted claim exposure counts for future fiscal years are derived by applying selected reported and closure patterns to projected incurred claim exposure counts. This approach is consistent with previous revenue requirements applications (RRAs).

3. Mango and Allen[1] suggested in their paper on the weightings of ULAE that 40% of ULAE are incurred when a claim opens, 25% for maintenance while a claim stays open, and the remaining 35% at the time of completion of a claim. ICBC follows this approach for Basic Vehicle Damage Coverage (BVDC) and Third Party Liability (TPL) claims (both TPL-Property Damage (TPL-PD) and TPL-Out-of-Province Bodily Injury (TPL-OOP BI). BVDC, TPL-PD and TPL-OOP BI claims are assumed to be handled similarly as the corresponding historical legal-based claims.

4. For Enhanced Accident Benefits (EAB) claims, ICBC studied the required job functions to service these claims. Compared to other coverages, EAB claims involve a lengthy and complicated recovery process and extend much further into the future. Thus, the majority of the work effort is expended during the opening of the claims when the injury is first reported and being assessed and during the maintenance of the claim to support the injured customer's treatment and recovery. ICBC estimates that 35% of ULAE will be incurred when a claim opens, 60% for maintenance while an EAB claim stays open, and the remaining 5% at the time of completion of a claim.

[1] Donald Mango and Craig Allen, Two Alternative Methods for Calculating the Unallocated Loss Adjustment Expense Reserve, Casualty Actuarial Society Forum Fall 1999 Edition. Accessed on December 5, 2018, https://www.casact.org/pubs/forum/99fforum/99ff233.pdf.

5. The weighted claim exposure counts for each fiscal loss year and period of development are shown in the uppermost triangles of Technical Appendices C.6.2 through C.6.8. The projection of weighted claim exposure counts is then estimated for future years.

C AVERAGE ULAE COST PER CLAIM EXPOSURE COUNT

6. Historical ULAE costs are used as the base for deriving future ULAE costs per claim exposure count, where applicable. In accordance with the BCUC-approved financial allocation methodology, ULAE costs are allocated to the Basic insurance line of business and by coverage based on the claims handling roles and functions with which these costs are associated. This approach is consistent with previous RRAs. The calculations are shown in Technical Appendix C.6.11.

7. More claim services resources will be required to service the EAB claims than the legal-based Accident Benefits (AB) claims. Thus, historical ULAE costs on AB claims cannot be used directly to project ULAE costs required for EAB claims. Based on the projected EAB claim exposure counts and expected average resources to service each claim, ICBC has developed specific claims expense forecasts in fiscal years 2024 to 2026 for EAB claims. Average ULAE cost for Medical Rehabilitation, Enhanced Disability, Permanent Impairment and Death Benefits coverages are derived based on historical relative ULAE costs for Medical Rehabilitation, Weekly Benefits, and Death Benefits claims. This relies on the assumption that the relative ULAE costs among the EAB coverages are similar to those among the AB coverages. The historical average ULAE costs as well as the projected ULAE costs per weighted claim exposure count are shown in Technical Appendix C.6.9 for both AB and EAB coverages.

8. BVDC claims and TPL-PD claims are assumed to incur similar average ULAE costs as the corresponding legal-based PD claims. Similarly, the actuaries assume that the TPL-OOP BI claims will incur similar average ULAE costs as the legal-based bodily injury (BI) claims. Trended 2022 values are calculated from fitted exponential regression curves with Fiscal Year 2017 to 2022 data. To smooth historical volatility, future average ULAE costs are projected based on trended 2022 values. Future average ULAE costs are expected to increase over time, and a trend rate is applied in each year to account for inflationary increases, including the effect of anticipated general wage increases and individual length of service increases. The trend assumptions are consistent with compensation cost increases discussed in Chapter 6 of this Application. The historical average ULAE costs as well as the projected ULAE costs per weighted claim exposure

count are shown in Technical Appendix C.6.10 for legal-based and Enhanced Care BI and PD coverages on a combined basis.

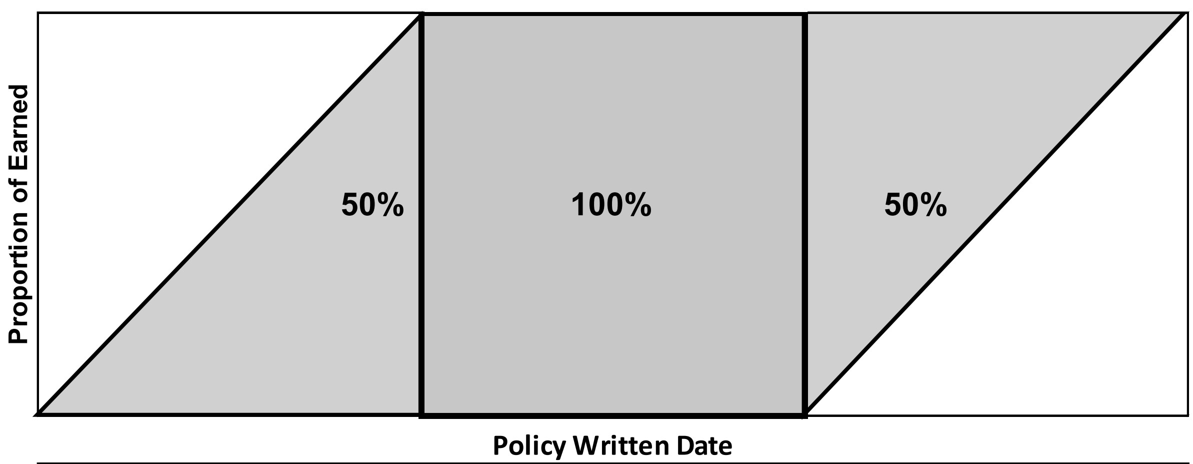
9. For long term changes in average ULAE cost, a trend rate of 2.0% is selected.

10. After the completion of the ULAE analysis in this Application, it was found that the average ULAE costs for TPL-OOP BI were derived using outdated data and assumptions. A long term trend of 2.6% was inadvertently applied, instead of the 2.0% trend that was selected. This results in an overstatement of the ULAE costs for PY 2023 by $104,000. Due to the timing of this discovery and its immaterial impact, the ULAE forecast for PY 2023 continues to rely on the outdated calculations and the 2.6% trend, and these amounts are shown in Technical Appendix C.6.10.

D ULAE COSTS AND PAYMENT PATTERN

11. ULAE costs for PY 2023 is the sum of projected ULAE payments in all future periods to service claims from policies written in PY 2023. These claims are distributed over three fiscal loss years (FLY 2024, 2025 and 2026) or 36 months from April 1, 2023 to March 31, 2026 based on the earning pattern of the PY 2023 policies as illustrated in Figure C.6.0.1:

Figure C.6.0.1 - Earning Pattern for ULAE Associated with PY 2023 Policies



Policy Year 2023	**Policy Year 2023**	**Policies written in PY 2023 are in force up to Mar 30, 2026**
Fiscal Loss Year 2024 **Apr 1, 2023 to Mar 31, 2024**	**Fiscal Loss Year 2025** **Apr 1, 2024 to Mar 31, 2025**	**Fiscal Loss Year 2026** **Apr 1, 2025 to Mar 31, 2026**

12. ULAE costs for each fiscal loss year are derived by taking the product of weighted claim exposure counts of that fiscal loss year in each development period and the average ULAE cost

per weighted claim exposure count for the corresponding fiscal year. ULAE costs for PY 2023 are the sum of 50% of FLY 2024 costs, 100% of FLY 2025 costs and 50% of FLY 2026 costs as shown in Appendix C.6.1.

13. The payment patterns of each fiscal year are estimated by taking the ratio of ULAE payments in each development period over the total ULAE payments of the fiscal loss year. The payment patterns of ULAE for PY 2023 by coverages are estimated by taking the weighted average fiscal year 2024 to 2026 payment patterns using 50%/100%/50% weights for FLY 2024 to FLY 2026. The weighted results are off-balanced to 100% for PY 2023 payment patterns. The payment pattern calculations are shown in the lower tables of Technical Appendices C.6.2 through C.6.8 and are summarized in Technical Appendix C.6.1.

ULAE incremental Payment Pattern
as of August 31, 2022

	EAB-MR (1)	EAB-ED (2)	EAB-PI (3)	EAB-DB (4)	BVDC (5)	TPL-PD (6)	TPL-OOP BI (7)
Year 1	15.91%	9.83%	0.69%	14.41%	23.25%	18.18%	7.68%
Year 2	36.08%	25.70%	2.88%	34.05%	48.08%	41.94%	22.06%
Year 3	26.83%	25.64%	5.44%	28.32%	26.46%	30.01%	24.54%
Year 4	8.19%	13.69%	6.93%	11.36%	1.84%	7.54%	16.18%
Year 5	3.35%	7.42%	10.42%	4.64%	0.22%	1.41%	9.84%
Year 6	2.45%	5.40%	16.29%	2.43%	0.07%	0.37%	6.44%
Year 7	1.86%	3.90%	18.05%	1.55%	0.04%	0.22%	4.32%
Year 8	1.34%	2.61%	13.85%	1.05%	0.02%	0.15%	2.99%
Year 9	0.94%	1.65%	8.53%	0.72%	0.01%	0.10%	1.99%
Year 10	0.68%	1.08%	5.21%	0.48%	0.01%	0.05%	1.27%
Year 11	0.52%	0.79%	3.46%	0.33%	0.00%	0.02%	0.87%
Year 12	0.42%	0.60%	2.29%	0.22%	0.00%	0.01%	0.59%
Year 13	0.34%	0.46%	1.53%	0.15%	0.00%	0.01%	0.40%
Year 14	0.28%	0.35%	1.13%	0.10%	0.00%	0.00%	0.28%
Year 15	0.23%	0.27%	0.92%	0.07%	0.00%	0.00%	0.19%
Year 16	0.19%	0.21%	0.76%	0.05%	0.00%	0.00%	0.13%
Year 17	0.15%	0.16%	0.62%	0.03%	0.00%	0.00%	0.09%
Year 18	0.13%	0.12%	0.52%	0.02%	0.00%	0.00%	0.07%
Year 19	0.09%	0.08%	0.37%	0.01%	0.00%	0.00%	0.05%
Year 20	0.03%	0.03%	0.12%	0.00%	0.00%	0.00%	0.02%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
From Technical Appendix	C.6.2 Row (d)	C.6.3 Row (d)	C.6.4 Row (d)	C.6.5 Row (d)	C.6.6 Row (d)	C.6.7 Row (d)	C.6.8 Row (d)

Calculation of Enhanced Accident Benefits - Medical Rehabilitation ULAE Cost and Incremental Payment Pattern for Policy Year 2023

For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 35% opening, 5% completing, and 60% maintenance are based on the work effort required for the new recovery functions under Enhanced Care (EC), and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 35% of the average claim exposure's cost is associated with the initial transaction.
Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 5% of the average claim exposure's cost is associated with the terminal transaction.
The 60% weight for maintenance is spread over average duration of 1.42 years for EC claim exposures, resulting in weights of 42% per maintained EC claim exposure per year respectively.
Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 42% of the average EC claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
Enhanced Care 2022*	26,262	16,473	3,844	2,473	1,870	1,400	974	651	465	353	282	226	181	145	116	93	74	65
2023	61,296	20,783	4,520	2,905	2,222	1,685	1,181	795	572	439	351	281	225	180	144	115	92	80
2024	64,157	20,364	4,728	3,044	2,308	1,734	1,208	809	580	441	352	282	226	180	144	116	92	81
2025	64,663	20,525	4,765	3,068	2,327	1,748	1,218	815	584	445	355	285	227	182	146	116	93	81
2026	65,174	20,687	4,803	3,093	2,345	1,762	1,227	822	589	448	358	287	229	183	147	117	94	82

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.9

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
Enhanced Care 2022*	21,404	12,676	2,523	1,568	1,208	923	654	446	326	252	205	168	137	112	91	74	61	54	
2023	47,167	13,645	2,867	1,877	1,464	1,133	810	556	408	320	261	213	173	142	116	94	77	69	**71,390**
2024	42,121	12,916	3,055	2,006	1,552	1,189	845	577	422	327	267	218	178	145	118	97	79	70	**66,182**
2025	41,013	13,262	3,140	2,063	1,595	1,222	869	593	434	337	274	224	183	149	122	99	81	72	**65,732**
2026	42,109	13,633	3,228	2,120	1,640	1,257	893	610	446	346	282	230	188	153	125	102	83	74	**67,521**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240
(a) 2024	63.64%	19.52%	4.62%	3.03%	2.34%	1.80%	1.28%	0.87%	0.64%	0.49%	0.40%	0.33%	0.27%	0.22%	0.18%	0.15%	0.12%	0.11%		
(b) 2025		62.40%	20.18%	4.78%	3.14%	2.43%	1.86%	1.32%	0.90%	0.66%	0.51%	0.42%	0.34%	0.28%	0.23%	0.19%	0.15%	0.12%	0.11%	
(c) 2026			62.36%	20.19%	4.78%	3.14%	2.43%	1.86%	1.32%	0.90%	0.66%	0.51%	0.42%	0.34%	0.28%	0.23%	0.19%	0.15%	0.12%	0.11%
(d) PY 2023 Selected	15.91%	36.08%	26.83%	8.19%	3.35%	2.45%	1.86%	1.34%	0.94%	0.68%	0.52%	0.42%	0.34%	0.28%	0.23%	0.19%	0.15%	0.13%	0.09%	0.03%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year
(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.
* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Enhanced Accident Benefits - Enhanced Disability ULAE Cost and Incremental Payment Pattern for Policy Year 2023
For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 35% opening, 5% completing, and 60% maintenance are based on the work effort required for the new recovery functions under Enhanced Care (EC), and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 35% of the average claim exposure's cost is associated with the initial transaction.

Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 5% of the average claim exposure's cost is associated with the terminal transaction.

The 60% weight for maintenance is spread over average duration of 1.97 years for EC claim exposures, resulting in weights of 30% per maintained EC claim exposure per year respectively.

Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 30% of the average EC claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
Enhanced Care 2022*	4,649	2,808	1,108	750	556	398	250	152	97	73	55	41	31	23	17	13	10	8
2023	4,966	4,068	1,439	967	716	511	321	194	124	94	70	53	39	30	22	17	12	10
2024	5,337	3,749	1,390	936	694	497	313	189	121	91	68	52	38	29	22	16	12	10
2025	5,379	3,778	1,401	944	700	501	315	191	122	92	69	52	39	29	22	16	12	10
2026	5,421	3,808	1,412	951	705	504	318	192	123	93	69	52	39	29	22	16	12	10

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.9

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
Enhanced Care 2022*	32,440	18,499	6,230	4,070	3,074	2,243	1,441	890	579	447	340	262	199	152	117	89	68	58	
2023	32,719	22,864	7,813	5,348	4,039	2,942	1,887	1,164	757	584	445	343	261	199	152	117	89	76	**81,799**
2024	29,997	20,357	7,687	5,282	3,995	2,915	1,872	1,156	753	580	442	341	259	198	152	116	89	76	**76,267**
2025	29,208	20,901	7,903	5,430	4,107	2,997	1,925	1,189	774	597	454	350	266	204	156	119	91	78	**76,749**
2026	29,989	21,487	8,124	5,583	4,222	3,081	1,979	1,222	795	613	467	360	274	209	160	123	94	80	**78,863**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	**0 - 12**	**12 - 24**	**24 - 36**	**36 - 48**	**48 - 60**	**60 - 72**	**72 - 84**	**84 - 96**	**96 - 108**	**108 - 120**	**120 - 132**	**132 - 144**	**144 - 156**	**156 - 168**	**168 - 180**	**180 - 192**	**192 - 204**	**204 - 216**	**216 - 228**	**228 - 240**
(a) 2024	39.33%	26.69%	10.08%	6.93%	5.24%	3.82%	2.45%	1.52%	0.99%	0.76%	0.58%	0.45%	0.34%	0.26%	0.20%	0.15%	0.12%	0.10%		
(b) 2025		38.06%	27.23%	10.30%	7.08%	5.35%	3.90%	2.51%	1.55%	1.01%	0.78%	0.59%	0.46%	0.35%	0.27%	0.20%	0.16%	0.12%	0.10%	
(c) 2026			38.03%	27.25%	10.30%	7.08%	5.35%	3.91%	2.51%	1.55%	1.01%	0.78%	0.59%	0.46%	0.35%	0.27%	0.20%	0.16%	0.12%	0.10%
(d) PY 2023 Selected	9.83%	25.70%	25.64%	13.69%	7.42%	5.40%	3.90%	2.61%	1.65%	1.08%	0.79%	0.60%	0.46%	0.35%	0.27%	0.21%	0.16%	0.12%	0.08%	0.03%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year

(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.

* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Enhanced Accident Benefits - Permament Impairment ULAE Cost and Incremental Payment Pattern for Policy Year 2023
For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 35% opening, 5% completing, and 60% maintenance are based on the work effort required for the new recovery functions under Enhanced Care, and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 35% of the average claim exposure's cost is associated with the initial transaction.

Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 5% of the average claim exposure's cost is associated with the terminal transaction.

The 60% weight for maintenance is spread over average duration of 3.84 years, resulting in weights of 16% per maintained claim exposure per year respectively.

Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 16% of the average claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
Enhanced Care 2022*	84	459	402	501	1,099	1,155	800	423	274	178	119	71	57	44	38	29	23	23
2023	209	490	499	621	1,360	1,430	990	524	339	220	147	88	71	55	47	36	28	28
2024	207	491	500	622	1,357	1,426	987	522	338	219	147	87	70	55	47	36	28	28
2025	209	495	504	626	1,368	1,437	995	527	341	221	148	88	71	55	47	36	28	28
2026	210	498	508	631	1,379	1,449	1,003	531	343	223	149	89	72	55	48	36	29	28

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.9

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
Enhanced Care 2022*	321	1,655	1,239	1,491	3,330	3,570	2,521	1,360	897	594	405	246	202	160	140	108	87	88	
2023	754	1,508	1,484	1,883	4,204	4,507	3,183	1,718	1,133	750	512	311	256	202	177	137	110	112	**22,940**
2024	637	1,459	1,514	1,921	4,279	4,585	3,237	1,748	1,153	763	521	317	260	205	180	139	112	114	**23,145**
2025	621	1,498	1,557	1,975	4,399	4,714	3,328	1,797	1,185	785	536	326	267	211	185	143	115	117	**23,758**
2026	637	1,541	1,600	2,030	4,522	4,846	3,422	1,847	1,218	807	551	335	275	217	190	147	119	120	**24,423**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240
(a) 2024	2.75%	6.31%	6.54%	8.30%	18.49%	19.81%	13.99%	7.55%	4.98%	3.30%	2.25%	1.37%	1.12%	0.89%	0.78%	0.60%	0.49%	0.49%		
(b) 2025		2.61%	6.31%	6.55%	8.31%	18.51%	19.84%	14.01%	7.56%	4.99%	3.30%	2.25%	1.37%	1.13%	0.89%	0.78%	0.60%	0.49%	0.49%	
(c) 2026			2.61%	6.31%	6.55%	8.31%	18.52%	19.84%	14.01%	7.56%	4.99%	3.30%	2.25%	1.37%	1.13%	0.89%	0.78%	0.60%	0.49%	0.49%
(d) PY 2023 Selected	0.69%	2.88%	5.44%	6.93%	10.42%	16.29%	18.05%	13.85%	8.53%	5.21%	3.46%	2.29%	1.53%	1.13%	0.92%	0.76%	0.62%	0.52%	0.37%	0.12%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year

(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.

* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Enhanced Accident Benefits - Death Benefits ULAE Cost and Incremental Payment Pattern for Policy Year 2023
For Fiscal Loss Years 2022 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 35% opening, 5% completing, and 60% maintenance are based on the work effort required for the new recovery functions under Enhanced Care, and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 35% of the average claim exposure's cost is associated with the initial transaction.
Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 5% of the average claim exposure's cost is associated with the terminal transaction.
The 60% weight for maintenance is spread over average duration of 1.63 years for EC claim exposures, resulting in weights of 37% per maintained EC claim exposure per year respectively.
Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 37% of the average EC claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
Enhanced Care 2022*	464	256	115	46	25	17	11	7	5	3	2	1	1	1	0	0	0	0
2023	650	233	98	41	22	15	10	7	4	3	2	1	1	1	0	0	0	0
2024	628	266	93	41	23	15	10	7	4	3	2	1	1	1	0	0	0	0
2025	639	271	95	41	23	16	10	7	4	3	2	1	1	1	0	0	0	0
2026	651	275	97	42	23	16	10	7	5	3	2	1	1	1	0	0	0	0

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.9

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
Enhanced Care 2022*	1,775	923	354	136	75	52	35	24	16	11	7	5	3	2	2	1	1	1	
2023	2,345	716	291	124	68	47	31	22	14	10	7	5	3	2	1	1	1	0	**3,689**
2024	1,934	791	283	125	71	49	33	23	15	10	7	5	3	2	1	1	1	1	**3,355**
2025	1,902	820	294	130	74	51	34	24	16	11	7	5	3	2	2	1	1	1	**3,377**
2026	1,972	851	305	135	77	53	35	25	16	11	8	5	3	2	2	1	1	1	**3,504**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240
(a) 2024	57.64%	23.56%	8.43%	3.74%	2.12%	1.47%	0.98%	0.68%	0.45%	0.31%	0.21%	0.14%	0.10%	0.07%	0.04%	0.03%	0.02%	0.02%		
(b) 2025		56.33%	24.28%	8.70%	3.86%	2.19%	1.52%	1.01%	0.70%	0.46%	0.31%	0.21%	0.15%	0.10%	0.07%	0.05%	0.03%	0.02%	0.02%	
(c) 2026			56.30%	24.30%	8.70%	3.86%	2.19%	1.52%	1.01%	0.70%	0.46%	0.32%	0.21%	0.15%	0.10%	0.07%	0.05%	0.03%	0.02%	0.02%
(d) PY 2023 Selected	14.41%	34.05%	28.32%	11.36%	4.64%	2.43%	1.55%	1.05%	0.72%	0.48%	0.33%	0.22%	0.15%	0.10%	0.07%	0.05%	0.03%	0.02%	0.01%	0.00%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year
(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.
* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Basic Vehicle Damage Coverage ULAE Cost and Incremental Payment Pattern for Policy Year 2023

For Fiscal Loss Years 2006 to 2026

as of August 31, 2022

Weighted Claim Exposure Count

Weights of 40% opening, 35% completing, and 25% maintenance are based on Mango and Allen's alternative weightings for Johnson's method[1], and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 40% of the average claim exposure's cost is associated with the initial transaction.

Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 35% of the average claim exposure's cost is associated with the terminal transaction.

The 25% weight for maintenance is spread over average duration of 0.59 years, resulting in weights of 42% per maintained claim exposure per year respectively.

Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 42% of the average claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
2006	-	-	1,093	286	108	41	28	15	2	4	2	-	1	-	-	(1)	-	-
2007	229,157	33,907	1,190	340	122	50	17	11	6	4	2	-	3	-	1	-	(1)	-
2008	227,386	32,613	1,172	291	121	46	20	8	3	1	2	1	1	1	1	-	-	-
2009	225,489	29,509	1,123	321	140	57	24	8	12	3	3	3	2	2	1	-	-	-
2010	215,166	25,158	1,142	263	123	51	16	8	9	5	2	2	1	1	-	-	-	-
2011	215,681	25,006	856	205	102	40	35	23	9	8	3	3	1	-	-	-	-	-
2012	214,404	23,419	847	211	87	66	33	21	13	13	4	7	4	-	-	-	-	-
2013	212,254	25,639	802	223	134	75	51	30	24	7	7	4	2	-	-	-	-	-
2014	210,020	24,032	1,452	494	240	133	66	54	31	25	14	7	4	-	-	-	-	-
2015	203,264	20,266	3,506	522	135	84	67	33	7	6	3	1	1	-	-	-	-	-
2016	218,354	18,429	2,246	234	99	71	38	26	8	7	3	2	1	-	-	-	-	-
2017	233,285	18,437	1,505	248	107	58	43	25	7	6	3	1	1	-	-	-	-	-
2018	231,663	15,119	1,852	290	104	117	46	30	10	6	3	1	1	-	-	-	-	-
2019	217,383	16,471	1,578	195	155	65	31	22	7	4	2	1	-	-	-	-	-	-
2020	207,566	12,596	1,001	378	174	91	44	28	10	6	2	1	1	-	-	-	-	-
2021	144,513	10,399	915	155	76	41	19	14	4	3	1	-	-	-	-	-	-	-
Enhanced Care 2022*	180,165	14,924	1,302	241	120	63	30	21	7	4	2	1	-	-	-	-	-	-
2023	218,293	13,152	1,216	273	143	76	36	25	8	5	2	1	-	-	-	-	-	-
2024	226,050	14,472	1,362	273	139	74	35	25	8	5	2	1	-	-	-	-	-	-
2025	227,833	14,586	1,373	275	140	74	35	25	8	5	2	1	-	-	-	-	-	-
2026	229,630	14,701	1,384	277	141	75	36	25	8	5	2	1	-	-	-	-	-	-

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.10

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
2006												-	0	-	-	(0)	-	-	
2007											0	-	1	-	0	-	(0)	-	
2008										0	0	0	0	0	0	-	-	-	
2009									3	1	1	1	1	1	1	-	-	-	
2010								2	3	2	1	1	0	0	-	-	-	-	
2011							9	6	3	3	1	1	0	-	-	-	-	-	
2012						17	9	7	4	5	1	3	2	-	-	-	-	-	
2013					34	21	16	10	10	2	3	2	1	-	-	-	-	-	
2014				125	68	42	22	22	10	10	6	3	2	-	-	-	-	-	
2015			888	149	43	28	28	11	3	2	1	0	0	-	-	-	-	-	
2016		4,670	640	74	33	29	12	10	3	3	1	1	0	-	-	-	-	-	
2017	59,118	5,253	476	82	44	18	17	10	3	3	1	0	0	-	-	-	-	-	
2018	66,003	4,781	610	119	33	45	18	13	4	3	1	1	0	-	-	-	-	-	
2019	68,741	5,428	645	62	60	26	13	10	3	2	1	0	-	-	-	-	-	-	
2020	68,401	5,151	318	146	70	38	19	12	5	3	1	1	0	-	-	-	-	-	
2021	59,101	3,307	352	63	32	17	8	6	2	1	0	-	-	-	-	-	-	-	
Enhanced Care 2022*	57,295	5,748	526	101	51	28	13	9	3	2	1	0	-	-	-	-	-	-	
2023	84,070	5,314	508	116	62	34	16	11	4	2	1	0	-	-	-	-	-	-	**90,140**
2024	91,323	6,051	581	119	62	33	16	12	4	2	1	0	-	-	-	-	-	-	**98,205**
2025	95,265	6,221	597	122	63	34	17	12	4	2	1	0	-	-	-	-	-	-	**102,340**
2026	97,937	6,395	614	126	65	35	17	12	4	2	1	0	-	-	-	-	-	-	**105,210**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	**0 - 12**	**12 - 24**	**24 - 36**	**36 - 48**	**48 - 60**	**60 - 72**	**72 - 84**	**84 - 96**	**96 - 108**	**108 - 120**	**120 - 132**	**132 - 144**	**144 - 156**	**156 - 168**	**168 - 180**	**180 - 192**	**192 - 204**	**204 - 216**	**216 - 228**	**228 - 240**
(a) 2024	92.99%	6.16%	0.59%	0.12%	0.06%	0.03%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
(b) 2025		93.09%	6.08%	0.58%	0.12%	0.06%	0.03%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
(c) 2026			93.09%	6.08%	0.58%	0.12%	0.06%	0.03%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(d) PY 2023 Selected	23.25%	48.08%	26.46%	1.84%	0.22%	0.07%	0.04%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year

(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.

[1] Reference: "Two Alternative Methods for Calculating the Unallocated Loss Adjustment Expense Reserve"; Mango, Donald F., FCAS, MAAA and Allen, Craig A., FCAS, FCIA; Casualty Actuarial Society Forum, Fall 1999 volume
Available: http://www.casact.org/pubs/forum/99fforum/99ff233.pdf

* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Third Party Liability - Property Damage ULAE Cost and Incremental Payment Pattern for Policy Year 2023
For Fiscal Loss Years 2006 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 40% opening, 35% completing, and 25% maintenance are based on Mango and Allen's alternative weightings for Johnson's method[1], and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 40% of the average claim exposure's cost is associated with the initial transaction.

Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 35% of the average claim exposure's cost is associated with the terminal transaction.

The 25% weight for maintenance is spread over average duration of 0.83 years, resulting in weights of 30% per maintained claim exposure per year respectively.

Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 30% of the average claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
2006	-	-	-	80	31	14	10	5	1	1	1	1	1	1	1	1	1	1
2007	-	-	518	89	30	17	10	1	1	2	-	1	-	1	-	1	1	-
2008	12,028	3,918	459	78	31	14	4	3	2	1	1	1	-	-	1	-	-	-
2009	11,943	3,634	397	68	33	16	11	1	-	1	1	-	-	-	-	-	-	-
2010	11,572	3,092	485	65	29	12	5	(0)	1	1	(1)	(1)	-	-	-	-	-	-
2011	11,812	3,547	451	64	34	11	5	6	6	1	1	1	1	-	-	-	-	-
2012	11,344	3,399	365	63	15	14	10	6	4	4	3	3	2	-	-	-	-	-
2013	11,926	3,311	298	65	22	13	5	5	-	2	3	1	1	-	-	-	-	-
2014	11,956	2,938	533	100	39	26	26	14	8	10	5	2	2	-	-	-	-	-
2015	9,991	3,585	548	67	30	14	11	6	4	2	1	-	-	-	-	-	-	-
2016	10,310	3,227	583	55	18	17	10	9	4	2	1	1	-	-	-	-	-	-
2017	10,753	3,285	573	69	29	24	17	7	4	2	1	-	-	-	-	-	-	-
2018	10,318	3,243	644	63	36	32	23	11	6	3	1	1	-	-	-	-	-	-
2019	9,577	3,255	585	66	38	21	17	8	4	2	1	1	-	-	-	-	-	-
2020	9,278	2,753	419	154	65	40	34	17	9	4	2	1	1	-	-	-	-	-
2021	6,803	2,310	448	69	31	19	16	8	4	2	1	1	-	-	-	-	-	-
Enhanced Care 2022*	11,093	3,629	681	96	41	26	22	11	5	3	1	1	-	-	-	-	-	-
2023	10,841	3,135	568	95	42	26	23	11	6	3	1	1	-	-	-	-	-	-
2024	9,998	2,886	524	87	38	24	21	10	5	2	1	1	-	-	-	-	-	-
2025	9,913	2,861	520	87	38	24	20	10	5	2	1	1	-	-	-	-	-	-
2026	9,829	2,837	516	86	38	24	20	10	5	2	1	1	-	-	-	-	-	-

Weighted count in future fiscal years (shaded area) is calculated from historical reported and closure patterns

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.10

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
2006												0	0	0	0	0	0	0	
2007											-	0	-	0	-	0	0	-	
2008										0	0	0	-	-	0	-	-	-	
2009									-	0	0	-	-	-	-	-	-	-	
2010								(0)	0	0	(0)	(0)	-	-	-	-	-	-	
2011							1	2	2	0	0	0	1	-	-	-	-	-	
2012						4	3	2	1	1	1	1	1	-	-	-	-	-	
2013					6	4	2	2	-	1	1	1	0	-	-	-	-	-	
2014				25	11	8	9	6	3	4	2	1	1	-	-	-	-	-	
2015			139	19	10	4	4	2	2	1	0	-	-	-	-	-	-	-	
2016		818	166	18	6	7	3	4	2	1	0	0	-	-	-	-	-	-	
2017	2,725	936	181	23	12	8	7	3	2	1	0	-	-	-	-	-	-	-	
2018	2,940	1,025	212	26	11	12	9	5	2	1	1	0	-	-	-	-	-	-	
2019	3,028	1,072	239	21	15	9	7	4	2	1	0	0	-	-	-	-	-	-	
2020	3,057	1,126	133	59	26	17	15	7	4	2	1	0	0	-	-	-	-	-	
2021	2,782	735	173	28	13	8	7	4	2	1	0	0	-	-	-	-	-	-	
Enhanced Care 2022*	3,528	1,397	275	40	17	11	10	5	3	1	1	0	-	-	-	-	-	-	
2023	4,175	1,267	238	41	18	12	10	5	3	1	1	0	-	-	-	-	-	-	**5,770**
2024	4,039	1,207	224	38	17	11	10	5	2	1	1	0	-	-	-	-	-	-	**5,554**
2025	4,145	1,220	226	38	17	11	10	5	3	1	1	0	-	-	-	-	-	-	**5,677**
2026	4,192	1,234	229	39	17	11	10	5	3	1	1	0	-	-	-	-	-	-	**5,742**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240
(a) 2024	72.72%	21.72%	4.03%	0.68%	0.31%	0.19%	0.17%	0.09%	0.04%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
(b) 2025		73.01%	21.49%	3.98%	0.68%	0.30%	0.19%	0.17%	0.08%	0.04%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
(c) 2026			73.01%	21.49%	3.98%	0.68%	0.30%	0.19%	0.17%	0.08%	0.04%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(d) PY 2023 Selected	18.18%	41.94%	30.01%	7.54%	1.41%	0.37%	0.22%	0.15%	0.10%	0.05%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year

(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.

[1] Reference: "Two Alternative Methods for Calculating the Unallocated Loss Adjustment Expense Reserve"; Mango, Donald F., FCAS, MAAA and Allen, Craig A., FCAS, FCIA; Casualty Actuarial Society Forum, Fall 1999 volume
Available: http://www.casact.org/pubs/forum/99fforum/99ff233.pdf

* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Calculation of Third Party Liability - Out of Province Bodily Injury ULAE Cost and Incremental Payment Pattern for Policy Year 2023

For Fiscal Loss Years 2006 to 2026
as of August 31, 2022

Weighted Claim Exposure Count

Weights of 40% opening, 35% completing, and 25% maintenance are based on Mango and Allen's alternative weightings for Johnson's method[1], and are applied as follows:

Opening weight is included for the incremental number of claim exposures opened within the year, to reflect that 40% of the average claim exposure's cost is associated with the initial transaction.
Completing weight is included for the incremental number of claim exposures closed within the year, to reflect that 35% of the average claim exposure's cost is associated with the terminal transaction.
The 25% weight for maintenance is spread over average duration of 2.21 years, resulting in weights of 11% per maintained claim exposure per year respectively.
Maintenance weight is included for the number of claim exposures remaining open at the end of the previous year and for the incremental number of claim exposures opened within the year, to reflect that 11% of the average claim exposure's cost is associated with each year in which it is open for some period of time.

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216
2006	-	-	-	-	-	-	-	-	-	-	-	26	25	18	20	13	16	31
2007	-	-	-	-	-	-	-	-	-	-	55	26	25	18	20	13	16	31
2008	37,216	11,425	4,731	3,024	1,657	762	382	225	144	99	55	26	25	18	20	13	16	31
2009	34,957	11,020	4,750	2,774	1,639	860	450	238	155	105	65	45	29	29	22	23	19	34
2010	34,292	10,910	4,622	2,888	1,871	981	458	272	156	95	55	48	42	28	29	26	19	34
2011	36,921	10,388	5,030	3,216	2,178	1,119	633	322	164	113	70	75	48	42	41	30	22	40
2012	36,317	11,461	5,768	3,329	2,110	1,199	604	302	178	115	81	60	59	52	42	31	23	42
2013	34,894	13,152	5,706	3,212	2,253	1,319	640	351	198	136	94	74	83	62	49	37	27	49
2014	34,762	13,022	6,012	3,717	2,540	1,318	764	394	309	186	129	121	117	87	68	51	38	68
2015	35,659	13,677	7,136	3,951	2,393	1,642	1,023	667	366	250	202	157	151	114	88	67	50	90
2016	36,703	16,456	7,630	3,684	2,867	2,079	1,495	804	513	372	273	217	212	159	122	92	69	123
2017	39,306	16,655	6,693	3,950	3,401	2,711	1,679	1,110	754	515	381	310	306	230	175	132	99	175
2018	41,190	15,721	7,670	4,974	4,251	3,195	2,448	1,521	1,004	687	509	419	415	311	237	178	134	236
2019	37,619	16,604	7,787	5,284	3,968	3,532	2,482	1,517	1,001	684	508	419	416	312	238	179	134	236
2020	35,258	15,679	4,144	2,446	2,104	1,742	1,228	739	507	348	254	198	188	141	109	82	62	111
2021	24,858	9,917	2,220	1,581	1,230	1,014	719	433	303	208	151	113	104	78	61	46	35	63
Enhanced Care 2022*	225	220	111	71	47	29	22	13	9	6	4	3	2	1	1	1	0	0
2023	333	322	150	95	62	38	30	16	11	7	5	3	2	1	1	1	0	1
2024	384	319	172	107	70	43	33	19	12	8	5	4	2	2	1	1	0	1
2025	370	307	165	103	68	41	32	18	12	8	5	4	2	2	1	1	0	1
2026	356	295	159	99	65	40	31	17	11	8	5	3	2	2	1	1	0	1

Weighted count in future fiscal years (shaded area) for fiscal loss years 2021 and prior is calculated from historical Thrid Party Liability - Bolidy Injury reported and closure patterns.
Weighted count in fiscal loss years 2022, 2023 and 2024 is calculated from historical reported and closure patterns of out of province BI claim exposures.

Incremental Paid ULAE ($000's)

Incremental Paid ULAE is computed by multiplying the weighted claim exposure counts above by the fiscal year ULAE cost per weighted claim exposure calculated in T.Appendix C.6.10

Fiscal Loss Year	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	(1) Incurred ULAE
2006												38	42	35	42	30	59	103	
2007											80	45	48	39	46	47	53	108	
2008										143	94	51	53	44	72	42	56	112	
2009									224	179	124	95	68	107	73	80	68	125	
2010								393	265	184	116	114	155	92	100	92	69	127	
2011							914	546	316	239	165	279	160	148	146	112	85	157	
2012						1,731	1,024	582	378	273	299	199	204	189	153	118	90	166	
2013					3,254	2,237	1,235	744	469	504	310	257	301	229	185	142	108	199	
2014				5,367	4,306	2,542	1,620	934	1,142	619	451	437	431	330	263	203	155	285	
2015			10,304	6,698	4,617	3,481	2,428	2,465	1,216	869	728	582	574	441	351	272	209	386	
2016		23,764	12,938	7,106	6,079	4,933	5,528	2,669	1,784	1,339	1,008	823	822	633	500	386	297	544	
2017	56,759	28,240	12,910	8,375	8,068	10,021	5,571	3,862	2,717	1,903	1,443	1,206	1,219	938	736	568	437	794	
2018	69,839	30,324	16,261	11,800	15,713	10,602	8,519	5,477	3,711	2,602	1,978	1,668	1,697	1,306	1,020	787	606	1,096	
2019	72,561	35,204	18,473	19,534	13,166	12,293	8,941	5,603	3,792	2,659	2,023	1,712	1,744	1,342	1,048	809	622	1,125	
2020	74,754	37,197	15,320	8,116	7,322	6,275	4,537	2,801	1,969	1,385	1,040	830	808	622	492	381	294	540	
2021	58,971	36,662	7,368	5,503	4,430	3,745	2,726	1,684	1,209	852	633	485	458	353	282	219	169	315	
Enhanced Care 2022*	833	731	385	256	175	110	87	52	35	24	16	11	8	5	4	2	2	2	
2023	1,103	1,121	542	352	235	148	121	67	45	31	21	14	10	7	5	3	2	3	**3,829**
2024	1,337	1,148	635	404	274	172	135	79	53	37	25	17	12	8	5	4	3	3	**4,351**
2025	1,332	1,133	627	399	270	170	133	78	53	36	24	17	11	8	5	4	2	3	**4,305**
2026	1,314	1,118	618	393	267	167	132	77	52	36	24	16	11	8	5	4	2	3	**4,249**

(1) Incurred ULAE for each Fiscal Loss Year is the sum of paid ULAE from each age interval

Incremental Payment Pattern Selection (Incremental Paid ULAE as a Percentage of Incurred ULAE)

Fiscal Loss Year pattern from PY2023 perspective	0 - 12	12 - 24	24 - 36	36 - 48	48 - 60	60 - 72	72 - 84	84 - 96	96 - 108	108 - 120	120 - 132	132 - 144	144 - 156	156 - 168	168 - 180	180 - 192	192 - 204	204 - 216	216 - 228	228 - 240
(a) 2024	30.73%	26.39%	14.59%	9.29%	6.30%	3.95%	3.10%	1.82%	1.22%	0.85%	0.57%	0.39%	0.27%	0.18%	0.12%	0.09%	0.06%	0.08%		
(b) 2025		30.93%	26.32%	14.55%	9.26%	6.28%	3.94%	3.10%	1.81%	1.22%	0.84%	0.57%	0.39%	0.27%	0.18%	0.12%	0.08%	0.06%	0.08%	
(c) 2026			30.93%	26.32%	14.55%	9.26%	6.28%	3.94%	3.10%	1.81%	1.22%	0.84%	0.57%	0.39%	0.27%	0.18%	0.12%	0.08%	0.06%	0.08%
(d) PY 2023 Selected	7.68%	22.06%	24.54%	16.18%	9.84%	6.44%	4.32%	2.99%	1.99%	1.27%	0.87%	0.59%	0.40%	0.28%	0.19%	0.13%	0.09%	0.07%	0.05%	0.02%

(a) to (c) are the ratio of incremental Paid ULAE in each development period over the total Paid ULAE of the fiscal loss year
(d) =[50%*(a)+100%*(b)+50%*(c)]/(50%+100%+50%); 50%/100%/50% represents the weights for fiscal loss years 2024 to 2026, and the weighted results are off-balanced to 100% for PY2023 payment patterns.
[1] Reference: "Two Alternative Methods for Calculating the Unallocated Loss Adjustment Expense Reserve"; Mango, Donald F., FCAS, MAAA and Allen, Craig A., FCAS, FCIA; Casualty Actuarial Society Forum, Fall 1999 volume
Available: http://www.casact.org/pubs/forum/99fforum/99ff233.pdf
* Enhanced Care 2022 denotes the 11 month period beginning one month into Fiscal Loss Year 2022 (May 1, 2021) up until the end of the fiscal loss year (March 31, 2022)

Fiscal Year Average ULAE Cost per Weighted Claim Exposure
From Legal-based Accident Benefits Coverages to Enhanced Accident Benefits Coverages
For Fiscal Loss Years 2017 to 2026
as of August 31, 2022

Fiscal Year	Number of Weighted Claim Exposure Counts		
	AB-MR (1)	AB-WB (2)	AB-DB (3)
2017	89,769	6,134	489
2018	94,548	5,245	475
2019	94,662	4,416	460
2020	98,278	5,375	539
2021	80,781	4,278	474
From	ICBC Historical Data		

Fiscal Year	Allocated ULAE ($000's)		
	AB-MR (4)	AB-WB (5)	AB-DB (6)
2017	14,076	6,602	387
2018	17,215	8,074	475
2019	18,431	8,644	498
2020	24,545	11,512	551
2021	28,129	13,193	536
From Technical Appendix	C.6.11 column (13)	C.6.11 column (14)	C.6.11 column (15)

Fiscal Year	Average ULAE Cost per Weighted Claim Exposure Count ($)		
	AB-MR (7)=(4)÷(1)	AB-WB (8)=(5)÷(2)	AB-DB (9)=(6)÷(3)
2017	157	1,076	791
2018	182	1,540	1,001
2019	195	1,958	1,082
2020	250	2,142	1,023
2021	348	3,084	1,130

Fiscal Year	Relativity of Indicated Average ULAE Cost per Weighted Claim Exposure Count		
	AB-MR (10)=(7)÷(7)	AB-WB (11)=(8)÷(7)	AB-DB (12)=(9)÷(7)
2017	1.00	6.86	5.05
2018	1.00	8.46	5.50
2019	1.00	10.05	5.56
2020	1.00	8.58	4.10
2021	1.00	8.86	3.24
(a) Selected Relativity Average 5 Years (FY2017-FY2021)	**1.00**	**8.56**	**4.69**

Fiscal Year	Modelled Number of EAB Weighted Claim Exposure Counts		
	EAB-MR (13)	EAB-ED (14)	EAB-PI/DB (15)
2023	77,768	7,774	1,573
2024	88,784	10,513	2,075
2025	92,020	11,316	2,749
2026	95,202	12,112	4,006
From Technical Appendix	C.6.2	C.6.3 diagonal sums	C.6.4 & C.6.5

Fiscal Year	EAB ULAE ($000's) (16)	Relativity Weighted EAB Claim Exposure Counts (17)	EAB Indicated Average ULAE Cost ($) per Weighted Claim Exposure Count		
			EAB-MR (18)	EAB-ED (19)	EAB-PI/DB (20)
2023	116,737	151,706	769	6,588	3,609
2024	123,769	188,519	657	5,621	3,079
2025	127,989	201,792	634	5,430	2,974
2026	140,647	217,682	646	5,532	3,030
(b) Selected Long Term Trend Rate			**2.0%**	**2.0%**	**2.0%**
From	ICBC internal analysis	(10a)x(13)+(11a)x (14) +(12a)x(15)	(16)÷(17)x(10a)	(16)÷(17)x(11a)	(16)÷(17)x(12a)

Fiscal Year Average ULAE Cost per Weighted Claim Exposure for Basic Vehicle Damage Coverage (BVDC), Third Party Liability (TPL) - Property Damage (TPL-PD) and TPL - Out of Province Bodily Injury (TPL-OOP BI)

For Fiscal Loss Years 2017 to 2025
as of August 31, 2022

Fiscal Year	Number of Weighted Claim Exposure Counts	
	BVDC/TPL-PD (1)	TPL-BI/TPL-OOP BI (2)
2017	270,646	71,348
2018	267,580	74,590
2019	248,129	68,757
2020	239,757	69,527
2021	169,601	60,668
2022	223,410	32,023
From	ICBC Historical Data including both legal-based and Enhanced Care	

Fiscal Year	Allocated ULAE ($000's)	
	BVDC/TPL-PD (3)	TPL-BI/TPL-OOP BI (4)
2017	68,586	103,030
2018	76,236	126,470
2019	78,464	132,620
2020	79,009	147,412
2021	69,362	143,926
2022	71,048	118,380
From Technical Appendix	C.6.11 column (16)	** see note below

Fiscal Year	Average ULAE Cost per Weighted Claim Exposure Count ($)	
	BVDC/TPL-PD (5)=(3)÷(1)	TPL-BI/TPL-OOP BI (6)=(4)÷(2)
2017	253	1,444
2018	285	1,696
2019	316	1,929
2020	330	2,120
2021	409	2,372
2022	318	3,697
Trended 2022*	**370**	**3,191**

Fiscal Year	Expense Trend Rate (7)	Modelled average ULAE Cost per Weighted Exposure Count ($)	
		BVDC/TPL-PD (8)	TPL-OOP BI** (9)
2023	4.0%	385	3,319
2024	4.9%	404	3,480
2025	3.5%	418	3,602
Selected Long Term Trend Rate		**2.0%**	**2.6%**
From	Internal actuarial analysis	calculated by applying (7) trend rate to (5) to (6) Trended 2022 average ULAE cost for each year	

Notes:

*Trended 2022 values is calculated from fitted exponetial regression curves with fiscal year 2017 to 2022 data. By doing that, the volatility with historical data could be smoothed.

**TPL-BI/TPL-OOP BI denotes legal-based bodily injury claims on or before April 31, 2021 and third-party out-of-province bodily injury claims on or after May 1, 2021. After the completion of the ULAE analysis in this Application, it was found that the average ULAE costs for TPL-OOP BI were derived using outdated data and assumptions, and a 2.6% trend beyond fiscal year 2025 was inadvertently applied, instead of the 2.0% trend that was selected. This results in an overstatement of the ULAE costs for PY 2023 by $104,000. Due to the timing of this discovery, and its immaterial impact, the ULAE forecast for PY 2023 continues to rely on average ULAE costs derived using the outdated assumptions including the 2.6% trend, shown in this exhibit.

Allocation of Fiscal Year ULAE by Coverage ($ 000's)

For Fiscal Loss Years 2017 to 2022
as of August 31, 2022

Fiscal Year	Claims Handling: Injury Adjusting (1)	Claims Handling: Recovery and Rehabilitation Services (2)	Claims Handling: MD Services (3)	Claims Handling: First Contact (4)	Others (5)	Total (6)
2017	80,512	1,794	34,337	13,371	62,724	**192,738**
2018	107,158	2,326	42,291	14,933	61,823	**228,530**
2019	108,882	2,805	42,406	14,630	69,993	**238,717**
2020	119,593	7,758	42,953	13,842	78,940	**263,086**
2021	127,733	13,560	41,982	12,626	59,293	**255,193**
2022	97,590	60,882	41,916	12,973	70,037	**283,398**
From	ICBC data of Basic internal claims services expenses (excluding project costs)					(1)+(2)+(3)+(4)+(5)

Overhead Factor (7)
1.48
1.37
1.41
1.43
1.30
1.33
(5) ÷ sum [(1) to (4)] + 1

Notes:

(5) Consists of costs for claims programs, claims administrative and other claims support and advisory roles and functions.

Claims Handling	Claims Service Expenses - Historical Allocation by Legal-based Coverage: AB * (8)	AB-DB (9)	BVDC/TPL-PD (10)	TPL-BI/TPL-OOP BI ** (11)	Total (12)
(a) Injury Adjusting	14.9%	0.3%	0.0%	84.7%	100.0%
(b) Recovery and Rehabilitation Services	91.2%	0.0%	0.0%	8.8%	100.0%
(c) MD Services	0.0%	0.0%	100.0%	0.0%	100.0%
(d) First Contact	2.1%	0.0%	89.2%	8.6%	100.0%
From	Internal actuarial analysis				(8)+(9)+(10)+(11)

*** (e) Medical Rehabilitation % of AB**	68.1%

Fiscal Year	Allocated ULAE: AB-MR (13)	AB-WB (14)	AB-DB (15)	BVDC/TPL-PD (16)	TPL-BI/TPL-OOP BI ** (17)	Total (18)
2017	14,076	6,602	387	68,586	103,087	**192,738**
2018	17,215	8,074	475	76,236	126,529	**228,530**
2019	18,431	8,644	498	78,464	132,680	**238,717**
2020	24,545	11,512	551	79,009	147,469	**263,086**
2021	28,129	13,193	536	69,362	143,973	**255,193**
2022	63,649	29,853	419	71,048	118,430	**283,398**

Notes:

(13) = [(1) x (a) + (2) x (b) + (3) x (c) + (4) x (d)] x (7) x (e) by fiscal year
(14) = [(1) x (a) + (2) x (b) + (3) x (c) + (4) x (d)] x (7) x (1 - (e)) by fiscal year
(15), (16), (17) = [(1) x (a) + (2) x (b) + (3) x (c) + (4) x (d)] x (7) by fiscal year
(18) = (13)+(14)+(15)+(16)+(17)
* AB includes MR and WB with the MR proportion (e) derived from internal actuarial analysis.
** TPL-BI/TPL-OOP BI denotes legal-based bodily injury claims on or before April 30, 2021 and third-party out-of-province bodily injury claims on or after May 1, 2021.

TECHNICAL APPENDIX E.0

PAYMENT PATTERNS
DATA AND METHODOLOGY

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A INTRODUCTION

1. Section B of this Technical Appendix describes the loss and allocated loss adjustment expense (ALAE) payment patterns. Section C discusses the unallocated loss adjustment expense (ULAE) payment patterns. Section D explains the calculation of the payment pattern for general expenses excluding merchant fees.

B LOSS AND ALAE

B.1 DATA

2. The historical claims costs data used in the payment pattern analysis in this Application is similar to that used for the 2021 Revenue Requirements Application (2021 RRA).[1] ICBC does not have sufficient experience under Enhanced Accident Benefits (EAB) to develop its own payment patterns and will continue to leverage the historical claims payment data from Manitoba Public Insurance (MPI). Given the large differences between the legal-based Accident Benefits (AB) product and the EAB product, it is not appropriate for the purposes of this revenue requirements application to rely on the legal-based AB payment patterns. For other Basic insurance coverages, ICBC's historical paid loss and ALAE data by fiscal loss year (FLY) are used, with adjustments as appropriate.

B.2 METHODOLOGY

3. The determination of payment pattern assumptions relies on the results of the Paid Development Method for loss and ALAE. The Paid Development Method is described in Technical Appendix C.0, Section B. Once loss and ALAE data have been compiled and loss development factors have been calculated for each period, the following five steps are taken to estimate the percentage of Policy Year (PY) 2023 loss and ALAE paid in each successive period.

Step 1 – Select paid development factors for loss and ALAE payments on a FLY basis.

Step 2 – Convert FLY paid development factors to policy year factors.

Step 3 – Calculate the annual payment pattern (i.e., percentage of ultimate loss and ALAE paid over time).

[1] ICBC followed the Government Directive of November 30, 2020 with respect to ICBC's Application for a General Rate Change Order for the 2021 Policy Year approved by Order in Council 632, December 14, 2020.

Step 4 – Apply indexation factors to the annual payment pattern for EAB - Medical Rehabilitation (EAB-MR) and EAB - Enhanced Disability (EAB-ED) sub-coverages.

Step 5 – Calculate the quarterly payment pattern for the first three years.

4. **Step 1:** As discussed in the Section B.1 above, ICBC continues to rely on related experience for the EAB coverages, that being MPI's historical claims payment data. As a result, the age-to-age paid development factors by FLY for these coverages, as shown in column (a) of Technical Appendices E.1 to E.4, are based on the results of MPI's paid development analysis supporting their 2023 general rate application as of July 12, 2022.[2]

5. For other Basic insurance coverages, selections for the paid development factors by FLY are shown in row (a) of Technical Appendices E.5 to E.7. Basic Vehicle Damage Coverage (BVDC) and Third Party Liability-Property Damage (TPL-PD) historical paid loss and ALAE data are net of salvage and subrogation.

6. The baseline selection for the BVDC and TPL-PD development factors is the average of the six most recent factors, excluding the highest and lowest factors. This represents a change from the 2021 RRA where selections from the 2021 RRA Chapter 3, Appendix D, Estimates of Incurred Loss and ALAE were used. These baselines are selected for the specific purpose of forecasting the policy year loss and ALAE payments. They provide a balance between stability of the selections from one analysis to another and responsiveness to recent experience, while excluding any potential outliers that might introduce bias if they remained in the calculation. The Third Party Liability – Out-of-Province Bodily Injury (TPL-OOP BI) historical paid loss and ALAE data develops more slowly and is subject to more volatility so a longer baseline average is selected, that being the average of the eight most recent factors, excluding the highest and lowest factors.

7. While recent history includes payments impacted by the COVID-19 pandemic, the longer term baseline average (six years or eight years) that excludes the highest and lowest development factors adequately smooths this out. The selections by sub-coverage are shown in Figure E.0.1 below.

[2] https://apps.mpi.mb.ca/Rate-Application/2023/2023_GRA.pdf - Part VII - Investments, Capital, Reserves & RiskManagement, External Actuary Review 2023 General Rate Application, Actuarial Report on Manitoba Public Insurance Corporation Universal Compulsory Automobile Insurance as of March 31, 2022 (EAR Attachment B).

Figure TA E.0.1 – Paid Development Method Selections for Payment Patterns

Technical Appendix	Description	Selection
E.5	BVDC Loss and ALAE Net of Salvage of Subrogation Payment Patterns	• Baseline from 12 months to 72 months • No development after 72 months
E.6	TPL-PD Loss and ALAE Net of Salvage and Subrogation Payment Patterns	• Baseline from 12 months to 96 months • No development after 96 months
E.7	TPL-OOP BI Loss and ALAE Payment Patterns	• Baseline from 12 months to 216 months • No development after 216 months

8. **Step 2**: The paid development factors by FLY selected in Step 1 do not recognize the timing difference between the average accident date and the effective date of the policy covering the claims. As an example, the average accident date is six months after the average policy written date for annual policies. In order to appropriately reflect this timing difference, the FLY-based paid development factors for each coverage are converted to a policy year basis using an algebraic formula based on a paper titled "Techniques for the Conversion of Loss Development Factors", published by the Casualty Actuary Society.[3] The algebraic formula used for the conversion is shown below.[4]

$$f_k = \frac{(1 + g_k)}{(1 + g_{k-1}^{-1})}$$

where f_k represents the policy year factors to develop paid losses from age k to age $k+1$, and g_k represents the accident year factor to develop paid losses from age k to age $k+1$. In summary, the appropriate use of the conversion formula requires the following conditions to be met for policies and claims costs. ICBC has confirmed that all conditions are met.

1) **Policies are written uniformly over the calendar year.** In the context of this Application, ICBC's policies are uniformly written over the "policy period"; ICBC has determined that the written pattern for Basic insurance policies sufficiently satisfies this condition.

2) **Each policy has a development pattern that corresponds to an accident year.** Since most of ICBC's policies are on an annual term, development patterns correspond to an accident year (or FLY, as used at ICBC).

[3] Spore, Louis, *Techniques for the Conversion of Loss Development Factors.* Accessed October 16, 2020, https://www.casact.org/pubs/forum/98sforum/98sf373.pdf
[4] Details of the derivation of the algebraic formula and its underlying assumptions are laid out in the paper.

3) **Expected losses for each risk are the same.** ICBC analyzes the payment patterns by sub-coverage. Within each sub-coverage, the loss and ALAE are expected to be similar.

4) **The number of policies is large.** ICBC has approximately 4.4 million Basic insurance policies, thus meeting this condition.

9. Policy year age-to-age factors are shown in column (b) of Technical Appendices E.1 to E.4 and row (b) of Technical Appendices E.5 to E.7.

10. **Step 3:** The product of age-to-age paid loss development factors on a policy year basis from Step 2 produces age-to-ultimate paid development factors. The cumulative percentage of paid loss and ALAE for two time periods, PY 2023-1 (policies written from April 1, 2023 to March 31, 2024) and PY 2023-2 (policies written from April 1, 2024 to March 31, 2025), are calculated as the inverse of the age-to-ultimate paid development factors, with PY 2023-2 offset by one year. The PY 2023 cumulative percentage of paid loss and ALAE excluding the impact of indexation is the average of PY 2023-1 and PY 2023-2. The PY 2023 incremental percentage of paid loss and ALAE is the difference between current and prior period cumulative paid development factors. These calculations are shown in columns (c) to (g) of Technical Appendices E.1 to E.4 and rows (c) to (g) of Technical Appendices E.5 to E.7. Technical Appendices E.3 and E.4, column (g), and Technical Appendices E.5 to E.7, row (g) also include the calculations described in Step 5.

11. **Step 4:** As discussed in Technical Appendix Set C.1 (Enhanced Accident Benefits Reserving Analysis), the future benefits for EAB-MR and EAB-ED need to be adjusted (indexed) based on the inflation assumptions cited in Appendix C.0, Figure C.0.3.

12. The calculation of indexation factors for both EAB-MR and EAB-ED is presented in Technical Appendix E.8. The inflation forecast (column a) is first applied to the FLYs that coincide with PY 2023 (FLYs 2024, 2025 and 2026) by payment year, as shown in columns (b), (c), and (d) for EAB-MR and columns (g), (h) and (i) for EAB-ED. The PY 2023 inflation impact is then calculated from a weighted average of FLYs 2024, 2025 and 2026 assuming that PY 2023 claims are incurred as PY 2023 policies are earned (columns (e) and (j) for EAB-MR and EAB-ED respectively). The earning pattern of the PY 2023 policies is shown in Section D, Figure E.0.3. Finally, the PY 2023 inflationary impact is accumulated over time to produce the PY 2023 indexation factors (columns (f) and (k) for EAB-MR and EAB-ED respectively).

13. To obtain the incremental percentage of paid loss and ALAE including indexation for EAB-MR and EAB-ED (in Technical Appendices E.1 and E.2), the PY 2023 incremental percentage of paid loss and ALAE (excluding indexation) is multiplied by the PY 2023 indexation factors and then scaled down proportionately so that the sum of all payment years is 100%. The incremental and cumulative percentages of paid loss and ALAE including indexation for EAB-MR and EAB-ED are shown in columns (i) and (j) respectively of Technical Appendices E.1 and E.2.

14. **Step 5:** In order to provide more precise cash flows for discounting purposes within the first three years, when a meaningful portion of total payments is expected to take place, incremental paid percentages are further broken down into quarters. However, since MPI quarterly payment data is not available and the algebraic technique discussed in Step 2 above requires data in twelve month increments, quarterly development factors are not available on a PY basis. As a result, ICBC has adopted the quarterly payment patterns from the 2019 Revenue Requirements Application for the first two payment years as an approximation for the policy year quarterly payment patterns. For the third payment year, ICBC has assumed equal (25%) weight to each quarter. ICBC deems this a reasonable approximation at this time given the absence of data available relating to this matter.

15. Figure E.0.2 below shows the coverages from the 2019 Revenue Requirements Application from which the policy year quarterly payment patterns are used for the first two payment years in this Application. As ICBC obtains data under the Enhanced Care product these patterns will be adjusted. The Technical Appendices listed in Figure E.0.2 are separately filed in Excel format.

Figure TA E.0.2 – Coverages from the 2019 RRA for Quarterly Payment Patterns

2023 RRA	Technical Appendix	2019 RRA
Enhanced Accident Benefits	E.1 to E.4	Accident Benefits
Basic Vehicle Damage Coverage	E.5	Property Damage
Third Party Liability – Property Damage	E.6	Property Damage
Third Party Liability – Out-of-Province Bodily Injury	E.7	Bodily Injury

C ULAE

16. Information about the life cycle of a claim is used to determine when ULAE is expected to be paid. Specifically, ULAE is expected to be paid according to the amount of effort expended during the four phases of a claim's life cycle:

- Opening of the claim.
- Maintenance of the claim while it is open.
- Completion of the claim. A claim is completed when no further case management activity is expected.
- Claim is completed but not closed. In this phase there is no further case management activity (ULAE payments are completed), but the claim is not closed to enable pre-determined, ongoing payment streams to the claimant.

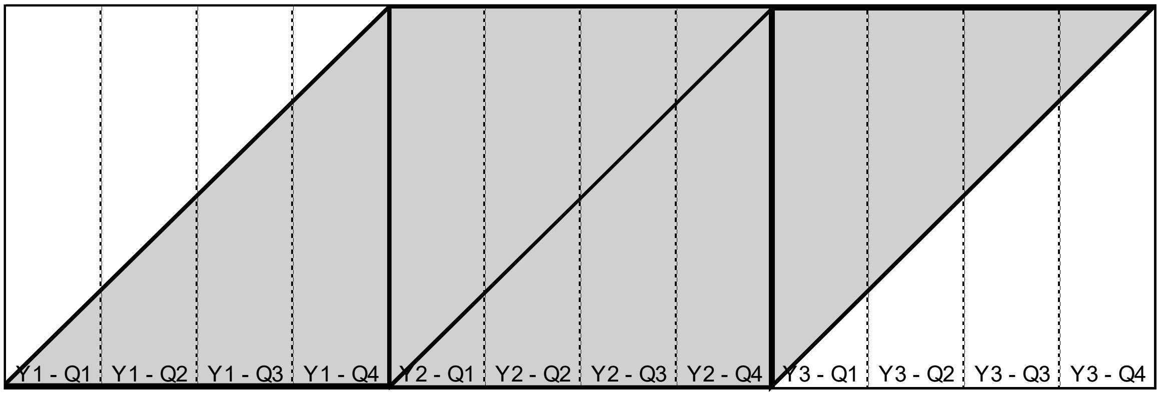
17. For EAB-MR and EAB-ED, loss and ALAE payments extend much further into the future than the ULAE payments. Some of these claims are expected to be in the complete but not closed phase (as described above) as long-term loss and ALAE payments continue after adjusting activity (ULAE payments) is completed.

18. Appendix E.2 provides a summary of the ULAE payment patterns which are from Technical Appendix Set C.6. The first three payment years are broken down by quarter using the loss and ALAE quarterly payment patterns as weights.

D GENERAL EXPENSES EXCLUDING MERCHANT FEES

19. General expenses, excluding merchant fees, are recognized over the entire life of the policy. Since PY 2023 is a 24-month period, the policies written in that period will be earned over 36 months from April 1, 2023 to March 31, 2026. This is illustrated in Figure E.0.3.

Figure TA E.0.3 – Earning Pattern for General Expenses by Quarter



PY 2023 Policies Earning over Fiscal Year 2023/24 Apr 1, 2023 to Mar 31, 2024	PY 2023 Policies Earning over Fiscal Year 2024/25 Apr 1, 2024 to Mar 31, 2025	PY 2023 Policies Earning over Fiscal Year 2025/26 Apr 1, 2025 to Mar 31, 2026

20. The earned proportion is the shaded portion of Figure E.0.3 and is calculated for each quarter by using the formula for the area of an isosceles right triangle and the formula for the area of a rectangle.

21. For FY 2023/24, the area of each quarter is calculated as:

FY 2023/24 Q1 (Y1 - Q1):

(1/2) x (3/12) x (3/12) = 9/288 = 1/32 earned in Q1

FY 2023/24 Q2 (Y1 - Q2):

(3/12) x (3/12) + (1/2) x (3/12) x (3/12) = 27/288 = 3/32 earned in Q2

FY 2023/24 Q3 (Y1 - Q3):

(3/12) x (6/12) + (1/2) x (3/12) x (3/12) = 45/288 = 5/32 earned in Q3

FY 2023/24 Q4 (Y1 - Q4):

(3/12) x (9/12) + (1/2) x (3/12) x (3/12) = 63/288 = 7/32 earned in Q4

22. For FY 2024/25, the area of each year-quarter is (3/12) x (12/12) = 1/4, and the earning pattern for FY 2025/26 is a mirror image of FY 2023/24 (FY 2025/26 Q1 is 7/32, FY 2025/26 Q2 is 5/32, etc.).

23. These proportions are then normalized to 100% for each fiscal year and applied as quarterly weights to each fiscal year for general expenses, excluding merchant fees, as reported

in Appendix D.1 columns (4) and (5). The fiscal year quarterly weights are presented below in Figure E.0.4.

Figure TA E.0.4 – Fiscal Year Quarterly Weights for General Expenses, Excluding Merchant Fees

Earning Period	Fiscal Year Quarterly Weights
Year 1 - Q1	6%
Year 1 - Q2	19%
Year 1 - Q3	31%
Year 1 - Q4	44%
Year 2 - Q1	25%
Year 2 - Q2	25%
Year 2 - Q3	25%
Year 2 - Q4	25%
Year 3 - Q1	44%
Year 3 - Q2	31%
Year 3 - Q3	19%
Year 3 - Q4	6%

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Enhanced Accident Benefits - Medical Rehabilitation

Annual Paid Development Factors

Selected Age-to-Age LDF (a)		Policy Year Age-to-Age LDF (b)		Age-to-Ultimate LDF (c)	
12 to 24	2.0520	12 to 24	3.0520	12 to Ult	9.1200
24 to 36	1.1550	24 to 36	1.4489	24 to Ult	2.9882
36 to 48	1.0765	36 to 48	1.1129	36 to Ult	2.0624
48 to 60	1.0515	48 to 60	1.0635	48 to Ult	1.8531
60 to 72	1.0355	60 to 72	1.0433	60 to Ult	1.7424
72 to 84	1.0300	72 to 84	1.0327	72 to Ult	1.6701
84 to 96	1.0300	84 to 96	1.0300	84 to Ult	1.6172
96 to 108	1.0300	96 to 108	1.0300	96 to Ult	1.5701
108 to 120	1.0300	108 to 120	1.0300	108 to Ult	1.5244
120 to 132	1.0300	120 to 132	1.0300	120 to Ult	1.4800
132 to 144	1.0300	132 to 144	1.0300	132 to Ult	1.4368
144 to 156	1.0300	144 to 156	1.0300	144 to Ult	1.3950
156 to 168	1.0280	156 to 168	1.0290	156 to Ult	1.3544
168 to 180	1.0230	168 to 180	1.0255	168 to Ult	1.3162
180 to 192	1.0190	180 to 192	1.0210	180 to Ult	1.2835
192 to 204	1.0170	192 to 204	1.0180	192 to Ult	1.2572
204 to 216	1.0165	204 to 216	1.0167	204 to Ult	1.2350
216 to 228	1.0161	216 to 228	1.0163	216 to Ult	1.2146
228 to 240	1.0153	228 to 240	1.0157	228 to Ult	1.1951
240 to 252	1.0145	240 to 252	1.0149	240 to Ult	1.1767
252 to 264	1.0138	252 to 264	1.0142	252 to Ult	1.1594
264 to 276	1.0131	264 to 276	1.0135	264 to Ult	1.1432
276 to 288	1.0125	276 to 288	1.0128	276 to Ult	1.1280
288 to 300	1.0118	288 to 300	1.0121	288 to Ult	1.1138
300 to 312	1.0112	300 to 312	1.0115	300 to Ult	1.1004
312 to 324	1.0107	312 to 324	1.0110	312 to Ult	1.0879
324 to 336	1.0101	324 to 336	1.0104	324 to Ult	1.0761
336 to 348	1.0096	336 to 348	1.0099	336 to Ult	1.0650
348 to 360	1.0092	348 to 360	1.0094	348 to Ult	1.0545
360 to 372	1.0087	360 to 372	1.0089	360 to Ult	1.0447
372 to 384	1.0083	372 to 384	1.0085	372 to Ult	1.0355
384 to 396	1.0079	384 to 396	1.0081	384 to Ult	1.0268
396 to 408	1.0075	396 to 408	1.0077	396 to Ult	1.0186
408 to 420	1.0071	408 to 420	1.0073	408 to Ult	1.0108
420 to 432	1.0000	420 to 432	1.0035	420 to 432	1.0035
432 to Ult	1.0000	432 to Ult	1.0000	432 to Ult	1.0000

Excluding Indexation

Payment Year	Cumulative % Paid PY 2023-1 (d)	Cumulative % Paid PY 2023-2 (e)	Cumulative % Paid PY 2023 (f)	Incremental % Paid PY 2023 (g)
Year 1	10.96%	0.00%	5.48%	5.48%
Year 2	33.46%	10.96%	22.21%	16.73%
Year 3	48.49%	33.46%	40.98%	18.76%
Year 4	53.96%	48.49%	51.22%	10.25%
Year 5	57.39%	53.96%	55.68%	4.45%
Year 6	59.88%	57.39%	58.63%	2.96%
Year 7	61.84%	59.88%	60.86%	2.22%
Year 8	63.69%	61.84%	62.76%	1.91%
Year 9	65.60%	63.69%	64.65%	1.88%
Year 10	67.57%	65.60%	66.58%	1.94%
Year 11	69.60%	67.57%	68.58%	2.00%
Year 12	71.69%	69.60%	70.64%	2.06%
Year 13	73.84%	71.69%	72.76%	2.12%
Year 14	75.97%	73.84%	74.90%	2.14%
Year 15	77.91%	75.97%	76.94%	2.04%
Year 16	79.54%	77.91%	78.73%	1.79%
Year 17	80.97%	79.54%	80.26%	1.53%
Year 18	82.33%	80.97%	81.65%	1.39%
Year 19	83.67%	82.33%	83.00%	1.35%
Year 20	84.99%	83.67%	84.33%	1.33%
Year 21	86.25%	84.99%	85.62%	1.29%
Year 22	87.47%	86.25%	86.86%	1.24%
Year 23	88.65%	87.47%	88.06%	1.20%
Year 24	89.78%	88.65%	89.22%	1.16%
Year 25	90.88%	89.78%	90.33%	1.11%
Year 26	91.92%	90.88%	91.40%	1.07%
Year 27	92.93%	91.92%	92.43%	1.03%
Year 28	93.90%	92.93%	93.42%	0.99%
Year 29	94.83%	93.90%	94.36%	0.95%
Year 30	95.72%	94.83%	95.27%	0.91%
Year 31	96.57%	95.72%	96.15%	0.87%
Year 32	97.39%	96.57%	96.98%	0.84%
Year 33	98.18%	97.39%	97.78%	0.80%
Year 34	98.93%	98.18%	98.55%	0.77%
Year 35	99.65%	98.93%	99.29%	0.74%
Year 36	100.00%	99.65%	99.82%	0.54%
Year 37	100.00%	100.00%	100.00%	0.18%

Including Indexation

Payment Year	PY 2023 Indexation Factor (h)	Incremental % Paid PY 2023 (i)	Cumulative % Paid PY 2023 (j)
Year 1	1.0000	4.59%	4.59%
Year 2	1.0130	14.18%	18.76%
Year 3	1.0312	16.18%	34.94%
Year 4	1.0539	9.03%	43.98%
Year 5	1.0750	4.00%	47.98%
Year 6	1.0965	2.71%	50.69%
Year 7	1.1184	2.08%	52.77%
Year 8	1.1408	1.82%	54.59%
Year 9	1.1636	1.83%	56.42%
Year 10	1.1869	1.93%	58.35%
Year 11	1.2106	2.02%	60.37%
Year 12	1.2348	2.13%	62.50%
Year 13	1.2595	2.23%	64.73%
Year 14	1.2847	2.30%	67.03%
Year 15	1.3104	2.23%	69.27%
Year 16	1.3366	2.00%	71.26%
Year 17	1.3634	1.75%	73.01%
Year 18	1.3906	1.62%	74.63%
Year 19	1.4184	1.60%	76.23%
Year 20	1.4468	1.61%	77.84%
Year 21	1.4757	1.59%	79.43%
Year 22	1.5053	1.57%	81.00%
Year 23	1.5354	1.54%	82.54%
Year 24	1.5661	1.51%	84.05%
Year 25	1.5974	1.49%	85.53%
Year 26	1.6293	1.46%	86.99%
Year 27	1.6619	1.43%	88.42%
Year 28	1.6952	1.40%	89.82%
Year 29	1.7291	1.37%	91.19%
Year 30	1.7637	1.34%	92.54%
Year 31	1.7989	1.31%	93.85%
Year 32	1.8349	1.28%	95.13%
Year 33	1.8716	1.26%	96.39%
Year 34	1.9090	1.23%	97.61%
Year 35	1.9472	1.20%	98.81%
Year 36	1.9862	0.89%	99.70%
Year 37	2.0259	0.30%	100.00%

Including Indexation

Payment Year-Quarter	Incremental % Paid PY 2023 (k)	Cumulative % Paid PY 2023 (l)	
Year 1-Q1	0.05%	0.05%	Smoothing[1]
Year 1-Q2	0.49%	0.54%	Smoothing[1]
Year 1-Q3	1.27%	1.80%	Smoothing[1]
Year 1-Q4	2.78%	4.59%	Smoothing[1]
Year 2-Q1	2.35%	6.93%	Smoothing[2]
Year 2-Q2	3.15%	10.08%	Smoothing[2]
Year 2-Q3	3.53%	13.61%	Smoothing[2]
Year 2-Q4	5.16%	18.76%	Smoothing[2]
Year 3-Q1	3.96%	22.72%	Smoothing[3]
Year 3-Q2	4.32%	27.04%	Smoothing[3]
Year 3-Q3	3.90%	30.94%	Smoothing[3]
Year 3-Q4	4.00%	34.94%	Smoothing[3]
Year 4	9.03%	43.98%	
Year 5	4.00%	47.98%	
Year 6	2.71%	50.69%	
Year 7	2.08%	52.77%	
Year 8	1.82%	54.59%	
Year 9	1.83%	56.42%	
Year 10	1.93%	58.35%	
Year 11	2.02%	60.37%	
Year 12	2.13%	62.50%	
Year 13	2.23%	64.73%	
Year 14	2.30%	67.03%	
Year 15	2.23%	69.27%	
Year 16	2.00%	71.26%	
Year 17	1.75%	73.01%	
Year 18	1.62%	74.63%	
Year 19	1.60%	76.23%	
Year 20	1.61%	77.84%	
Year 21	1.59%	79.43%	
Year 22	1.57%	81.00%	
Year 23	1.54%	82.54%	
Year 24	1.51%	84.05%	
Year 25	1.49%	85.53%	
Year 26	1.46%	86.99%	
Year 27	1.43%	88.42%	
Year 28	1.40%	89.82%	
Year 29	1.37%	91.19%	
Year 30	1.34%	92.54%	
Year 31	1.31%	93.85%	
Year 32	1.28%	95.13%	
Year 33	1.26%	96.39%	
Year 34	1.23%	97.61%	
Year 35	1.20%	98.81%	
Year 36	0.89%	99.70%	
Year 37	0.30%	100.00%	

Notes:

(a) Loss Development Factors 12-216 as of March 31, 2022 from 2023 MPI General Rate Application (July 12, 2022) EAR ("MPI Application") Attachment B, Appendix F, page 20, column 9;
Successive LDF's reduced by 5% starting at the 216-228 factor (1.0161) for 17 years according to MPI Application, Attachment B, Appendix F, page 18.
https://apps.mpi.mb.ca/Rate-Application/2023/2023_GRA.pdf
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "Techniques for the Conversion of Loss Development Factors", published by the Casualty Actuary Society.
(c) Age-to-Ultimate LDF = product of column (b) beginning from the same maturity
(d) PY 2023-1 Cumulative % Paid excluding indexation = 1/ (c)
(e) PY 2023-2 Cumulative % Paid excluding indexation = 1/ (c) Prior
(f) PY 2023 Cumulative % Paid excluding indexation = ((d) + (e)) / 2
(g) Incremental % Paid excluding indexation = (f) - (f) Prior
(h) Technical Appendix E.8 column (f)
(i) Incremental % Paid including indexation = sumproduct of (g) and (h), normalized such that the cumulative sum of the sumproducts equals 100%
(j) Cumulative % Paid including indexation = summation of (i) up to current row Age
(k) Incremental % Paid including indexation = sumproduct of (d) and (h), and (e) and (h), and the relevant smoothing parameters normalized such that the cumulative sum of the sumproducts equals 100%
(l) Cumulative % Paid including indexation = summation of (k) up to current row Age
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-MR
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-MR
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-MR. % Paid for PY 2023-1 in Year 3 is set to 25% per quarter.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Enhanced Accident Benefits - Enhanced Disability

Annual Paid Development Factors

Selected Age-to-Age LDF (a)		Policy Year Age-to-Age LDF (b)		Age-to-Ultimate LDF (c)	
12 to 24	1.9656	12 to 24	2.966	12 to Ult	16.8224
24 to 36	1.2788	24 to 36	1.5104	24 to Ult	5.6725
36 to 48	1.1770	36 to 48	1.2217	36 to Ult	3.7556
48 to 60	1.1285	48 to 60	1.1508	48 to Ult	3.0742
60 to 72	1.0975	60 to 72	1.1121	60 to Ult	2.6714
72 to 84	1.0755	72 to 84	1.0860	72 to Ult	2.4022
84 to 96	1.0635	84 to 96	1.0693	84 to Ult	2.2120
96 to 108	1.0585	96 to 108	1.0609	96 to Ult	2.0687
108 to 120	1.0525	108 to 120	1.0554	108 to Ult	1.9499
120 to 132	1.0470	120 to 132	1.0497	120 to Ult	1.8475
132 to 144	1.0420	132 to 144	1.0445	132 to Ult	1.7601
144 to 156	1.0405	144 to 156	1.0412	144 to Ult	1.6851
156 to 168	1.0370	156 to 168	1.0387	156 to Ult	1.6184
168 to 180	1.0330	168 to 180	1.0349	168 to Ult	1.5581
180 to 192	1.0305	180 to 192	1.0317	180 to Ult	1.5055
192 to 204	1.0275	192 to 204	1.0290	192 to Ult	1.4592
204 to 216	1.0265	204 to 216	1.0270	204 to Ult	1.4181
216 to 228	1.0246	216 to 228	1.0255	216 to Ult	1.3808
228 to 240	1.0229	228 to 240	1.0238	228 to Ult	1.3464
240 to 252	1.0213	240 to 252	1.0221	240 to Ult	1.3152
252 to 264	1.0198	252 to 264	1.0205	252 to Ult	1.2867
264 to 276	1.0184	264 to 276	1.0191	264 to Ult	1.2608
276 to 288	1.0171	276 to 288	1.0178	276 to Ult	1.2372
288 to 300	1.0159	288 to 300	1.0165	288 to Ult	1.2156
300 to 312	1.0148	300 to 312	1.0154	300 to Ult	1.1958
312 to 324	1.0138	312 to 324	1.0143	312 to Ult	1.1777
324 to 336	1.0128	324 to 336	1.0133	324 to Ult	1.1612
336 to 348	1.0119	336 to 348	1.0124	336 to Ult	1.1459
348 to 360	1.0111	348 to 360	1.0115	348 to Ult	1.1319
360 to 372	1.0103	360 to 372	1.0107	360 to Ult	1.1191
372 to 384	1.0096	372 to 384	1.0099	372 to Ult	1.1072
384 to 396	1.0089	384 to 396	1.0092	384 to Ult	1.0963
396 to 408	1.0083	396 to 408	1.0086	396 to Ult	1.0863
408 to 420	1.0077	408 to 420	1.0080	408 to Ult	1.0770
420 to 432	1.0072	420 to 432	1.0074	420 to Ult	1.0685
432 to 444	1.0067	432 to 444	1.0069	432 to Ult	1.0606
444 to 456	1.0062	444 to 456	1.0064	444 to Ult	1.0533
456 to 468	1.0058	456 to 468	1.0060	456 to Ult	1.0466
468 to 480	1.0054	468 to 480	1.0056	468 to Ult	1.0403
480 to 492	1.0050	480 to 492	1.0052	480 to Ult	1.0346
492 to 504	1.0046	492 to 504	1.0048	492 to Ult	1.0292
504 to 516	1.0043	504 to 516	1.0045	504 to Ult	1.0243
516 to 528	1.0040	516 to 528	1.0042	516 to Ult	1.0198
528 to 540	1.0037	528 to 540	1.0039	528 to Ult	1.0155
540 to 552	1.0035	540 to 552	1.0036	540 to Ult	1.0116
552 to 564	1.0032	552 to 564	1.0033	552 to Ult	1.0080
564 to 576	1.0030	564 to 576	1.0031	564 to Ult	1.0046
576 to 588	1.0000	576 to 588	1.0015	576 to 588	1.0015
588 to Ult	1.0000	588 to Ult	1.0000	588 to Ult	1.0000

Excluding Indexation

Payment Year	Cumulative % Paid PY 2023-1 (d)	Cumulative % Paid PY 2023-2 (e)	Cumulative % Paid PY 2023 (f)	Incremental % Paid PY 2023 (g)
Year 1	5.94%	0.00%	2.97%	2.97%
Year 2	17.63%	5.94%	11.79%	8.81%
Year 3	26.63%	17.63%	22.13%	10.34%
Year 4	32.53%	26.63%	29.58%	7.45%
Year 5	37.43%	32.53%	34.98%	5.40%
Year 6	41.63%	37.43%	39.53%	4.55%
Year 7	45.21%	41.63%	43.42%	3.89%
Year 8	48.34%	45.21%	46.77%	3.36%
Year 9	51.29%	48.34%	49.81%	3.04%
Year 10	54.13%	51.29%	52.71%	2.89%
Year 11	56.82%	54.13%	55.47%	2.77%
Year 12	59.34%	56.82%	58.08%	2.61%
Year 13	61.79%	59.34%	60.57%	2.49%
Year 14	64.18%	61.79%	62.99%	2.42%
Year 15	66.42%	64.18%	65.30%	2.32%
Year 16	68.53%	66.42%	67.48%	2.18%
Year 17	70.52%	68.53%	69.53%	2.05%
Year 18	72.42%	70.52%	71.47%	1.95%
Year 19	74.27%	72.42%	73.35%	1.88%
Year 20	76.04%	74.27%	75.15%	1.81%
Year 21	77.72%	76.04%	76.88%	1.72%
Year 22	79.31%	77.72%	78.51%	1.64%
Year 23	80.83%	79.31%	80.07%	1.56%
Year 24	82.26%	80.83%	81.55%	1.48%
Year 25	83.62%	82.26%	82.94%	1.40%
Year 26	84.91%	83.62%	84.27%	1.32%
Year 27	86.12%	84.91%	85.51%	1.25%
Year 28	87.27%	86.12%	86.69%	1.18%
Year 29	88.34%	87.27%	87.81%	1.11%
Year 30	89.36%	88.34%	88.85%	1.05%
Year 31	90.32%	89.36%	89.84%	0.99%
Year 32	91.21%	90.32%	90.77%	0.93%
Year 33	92.06%	91.21%	91.64%	0.87%
Year 34	92.85%	92.06%	92.45%	0.82%
Year 35	93.59%	92.85%	93.22%	0.77%
Year 36	94.29%	93.59%	93.94%	0.72%
Year 37	94.94%	94.29%	94.61%	0.67%
Year 38	95.55%	94.94%	95.25%	0.63%
Year 39	96.12%	95.55%	95.84%	0.59%
Year 40	96.66%	96.12%	96.39%	0.55%
Year 41	97.16%	96.66%	96.91%	0.52%
Year 42	97.63%	97.16%	97.39%	0.48%
Year 43	98.06%	97.63%	97.84%	0.45%
Year 44	98.47%	98.06%	98.27%	0.42%
Year 45	98.85%	98.47%	98.66%	0.39%
Year 46	99.21%	98.85%	99.03%	0.37%
Year 47	99.54%	99.21%	99.37%	0.34%
Year 48	99.85%	99.54%	99.70%	0.32%
Year 49	100.00%	99.85%	99.93%	0.23%
Year 50	100.00%	100.00%	100.00%	0.07%

Including Indexation

Payment Year	PY 2023 Indexation Factor (h)	Incremental % Paid PY 2023 (i)	Cumulative % Paid PY 2023 (j)
Year 1	1.0000	2.29%	2.29%
Year 2	1.0064	6.85%	9.14%
Year 3	1.0204	8.14%	17.28%
Year 4	1.0408	5.98%	23.26%
Year 5	1.0626	4.43%	27.69%
Year 6	1.0839	3.80%	31.50%
Year 7	1.1055	3.32%	34.81%
Year 8	1.1276	2.92%	37.73%
Year 9	1.1502	2.70%	40.43%
Year 10	1.1732	2.62%	43.05%
Year 11	1.1967	2.55%	45.61%
Year 12	1.2206	2.46%	48.06%
Year 13	1.2450	2.39%	50.45%
Year 14	1.2699	2.37%	52.82%
Year 15	1.2953	2.32%	55.14%
Year 16	1.3212	2.22%	57.35%
Year 17	1.3476	2.13%	59.48%
Year 18	1.3746	2.06%	61.55%
Year 19	1.4021	2.03%	63.58%
Year 20	1.4301	1.99%	65.57%
Year 21	1.4587	1.94%	67.51%
Year 22	1.4879	1.88%	69.39%
Year 23	1.5177	1.82%	71.21%
Year 24	1.5480	1.76%	72.97%
Year 25	1.5790	1.70%	74.68%
Year 26	1.6106	1.64%	76.32%
Year 27	1.6428	1.58%	77.90%
Year 28	1.6756	1.52%	79.43%
Year 29	1.7091	1.47%	80.90%
Year 30	1.7433	1.41%	82.30%
Year 31	1.7782	1.35%	83.66%
Year 32	1.8137	1.30%	84.95%
Year 33	1.8500	1.24%	86.20%
Year 34	1.8870	1.19%	87.39%
Year 35	1.9248	1.14%	88.53%
Year 36	1.9633	1.09%	89.62%
Year 37	2.0025	1.04%	90.66%
Year 38	2.0426	1.00%	91.65%
Year 39	2.0834	0.95%	92.60%
Year 40	2.1251	0.91%	93.51%
Year 41	2.1676	0.87%	94.38%
Year 42	2.2109	0.83%	95.20%
Year 43	2.2552	0.79%	95.99%
Year 44	2.3003	0.75%	96.74%
Year 45	2.3463	0.71%	97.45%
Year 46	2.3932	0.68%	98.14%
Year 47	2.4411	0.65%	98.78%
Year 48	2.4899	0.62%	99.40%
Year 49	2.5397	0.45%	99.85%
Year 50	2.5905	0.15%	100.00%

Including Indexation

Payment Year-Quarter	Incremental % Paid PY 2023 (k)	Cumulative % Paid PY 2023 (l)	
Year 1-Q1	0.02%	0.02%	Smoothing[1]
Year 1-Q2	0.21%	0.23%	
Year 1-Q3	0.64%	0.87%	
Year 1-Q4	1.43%	2.29%	
Year 2-Q1	0.97%	3.27%	Smoothing[2]
Year 2-Q2	1.36%	4.63%	
Year 2-Q3	1.84%	6.47%	
Year 2-Q4	2.67%	9.14%	
Year 3-Q1	1.85%	10.99%	Smoothing[3]
Year 3-Q2	2.05%	13.05%	
Year 3-Q3	2.10%	15.15%	
Year 3-Q4	2.13%	17.28%	
Year 4	5.98%	23.26%	
Year 5	4.43%	27.69%	
Year 6	3.80%	31.50%	
Year 7	3.32%	34.81%	
Year 8	2.92%	37.73%	
Year 9	2.70%	40.43%	
Year 10	2.62%	43.05%	
Year 11	2.55%	45.61%	
Year 12	2.46%	48.06%	
Year 13	2.39%	50.45%	
Year 14	2.37%	52.82%	
Year 15	2.32%	55.14%	
Year 16	2.22%	57.35%	
Year 17	2.13%	59.48%	
Year 18	2.06%	61.55%	
Year 19	2.03%	63.58%	
Year 20	1.99%	65.57%	
Year 21	1.94%	67.51%	
Year 22	1.88%	69.39%	
Year 23	1.82%	71.21%	
Year 24	1.76%	72.97%	
Year 25	1.70%	74.68%	
Year 26	1.64%	76.32%	
Year 27	1.58%	77.90%	
Year 28	1.52%	79.43%	
Year 29	1.47%	80.90%	
Year 30	1.41%	82.30%	
Year 31	1.35%	83.66%	
Year 32	1.30%	84.95%	
Year 33	1.24%	86.20%	
Year 34	1.19%	87.39%	
Year 35	1.14%	88.53%	
Year 36	1.09%	89.62%	
Year 37	1.04%	90.66%	
Year 38	1.00%	91.65%	
Year 39	0.95%	92.60%	
Year 40	0.91%	93.51%	
Year 41	0.87%	94.38%	
Year 42	0.83%	95.20%	
Year 43	0.79%	95.99%	
Year 44	0.75%	96.74%	
Year 45	0.71%	97.45%	
Year 46	0.68%	98.14%	
Year 47	0.65%	98.78%	
Year 48	0.62%	99.40%	
Year 49	0.45%	99.85%	
Year 50	0.15%	100.00%	

Notes:

(a) Loss Development Factors 12-216 as of March 31, 2022 from 2023 MPI General Rate Application (July 12, 2022) EAR ("MPI Application") Attachment B, Appendix E, page 15, column 9;
Successive LDF's reduced by 7% starting with the 216-228 factor for 30 years;
ICBC's actuaries have selected a 7% decay factor for EAB-ED loss development factors. The selection is calculated such that 1) the ratio of expected discounted cash flows to undiscounted cash flows approximates the selected commuted reserve factor in the MPI Application Attachment B, Appendix E, page 20, row [g] and 2) the product of successive loss development factors from 216 to Ultimate equals the tail factor selected in the MPI Application, Attachment B, Appendix E, page 16 column [10]

(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "Techniques for the Conversion of Loss Development Factors", published by the Casualty Actuary Society.
(c) Age-to-Ultimate LDF = product of column (b) beginning from the same maturity
(d) PY 2023-1 Cumulative % Paid excluding indexation = 1/ (c)
(e) PY 2023-2 Cumulative % Paid excluding indexation = 1/ (c) Prior
(f) PY 2023 Cumulative % Paid excluding indexation = ((d) + (e)) / 2
(g) Incremental % Paid excluding indexation = (f) - (f) Prior
(h) Technical Appendix E.8 column (k)
(i) Incremental % Paid including indexation = sumproduct of (g) and (h), normalized such that the cumulative sum of the sumproducts equals 100%
(j) Cumulative % Paid including indexation = summation of (i) up to current row Age
(k) Incremental % Paid including indexation = sumproduct of (d) and (h), and (e) and (h), and the relevant smoothing parameters normalized such that the cumulative sum of the sumproducts equals 100%
(l) Cumulative % Paid including indexation = summation of (k) up to current row Age

Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-WB
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-WB
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-WB. % Paid for PY 2023-1 in Year 3 is set to 25% per quarter.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Enhanced Accident Benefits - Permanent Impairment

Annual Paid Development Factors

Selected Age-to-Age LDF (a)		Policy Year Age-to-Age LDF (b)		Age-to-Ultimate LDF (c)	
12 to 24	2.0801	12 to 24	3.0801	12 to Ult	9.0832
24 to 36	1.3749	24 to 36	1.6039	24 to Ult	2.9490
36 to 48	1.3000	36 to 48	1.3316	36 to Ult	1.8387
48 to 60	1.1265	48 to 60	1.2020	48 to Ult	1.3808
60 to 72	1.0270	60 to 72	1.0738	60 to Ult	1.1488
72 to 84	1.0099	72 to 84	1.0184	72 to Ult	1.0699
84 to 96	1.0096	84 to 96	1.0098	84 to Ult	1.0506
96 to 108	1.0070	96 to 108	1.0083	96 to Ult	1.0404
108 to 120	1.0045	108 to 120	1.0057	108 to Ult	1.0319
120 to 132	1.0039	120 to 132	1.0042	120 to Ult	1.0260
132 to 144	1.0040	132 to 144	1.0040	132 to Ult	1.0217
144 to 156	1.0041	144 to 156	1.0040	144 to Ult	1.0176
156 to 168	1.0040	156 to 168	1.0040	156 to Ult	1.0135
168 to 180	1.0035	168 to 180	1.0037	168 to Ult	1.0095
180 to 192	1.0025	180 to 192	1.0030	180 to Ult	1.0057
192 to 204	1.0015	192 to 204	1.0020	192 to Ult	1.0027
204 to 216	1.0000	204 to 216	1.0007	204 to Ult	1.0007
216 to Ult	1.0000	216 to Ult	1.0000	216 to Ult	1.0000

Payment Year	Cumulative % Paid PY 2023-1 (d)	Cumulative % Paid PY 2023-2 (e)	Cumulative % Paid PY 2023 (f)
Year 1	11.01%	0.00%	5.50%
Year 2	33.91%	11.01%	22.46%
Year 3	54.39%	33.91%	44.15%
Year 4	72.42%	54.39%	63.40%
Year 5	87.05%	72.42%	79.73%
Year 6	93.47%	87.05%	90.26%
Year 7	95.19%	93.47%	94.33%
Year 8	96.11%	95.19%	95.65%
Year 9	96.91%	96.11%	96.51%
Year 10	97.47%	96.91%	97.19%
Year 11	97.88%	97.47%	97.67%
Year 12	98.27%	97.88%	98.07%
Year 13	98.66%	98.27%	98.46%
Year 14	99.06%	98.66%	98.86%
Year 15	99.43%	99.06%	99.24%
Year 16	99.73%	99.43%	99.58%
Year 17	99.93%	99.73%	99.83%
Year 18	100.00%	99.93%	99.96%
Year 19	100.00%	100.00%	100.00%

Payment Year-Quarter	Incremental % Paid PY 2023 (g)	
Year 1-Q1	0.13%	Smoothing[1]
Year 1-Q2	0.65%	
Year 1-Q3	1.83%	
Year 1-Q4	2.90%	
Year 2-Q1	4.30%	Smoothing[2]
Year 2-Q2	4.04%	
Year 2-Q3	3.83%	
Year 2-Q4	4.79%	
Year 3-Q1	6.73%	Smoothing[3]
Year 3-Q2	5.95%	
Year 3-Q3	4.56%	
Year 3-Q4	4.45%	
Year 4	19.26%	
Year 5	16.33%	
Year 6	10.53%	
Year 7	4.07%	
Year 8	1.32%	
Year 9	0.86%	
Year 10	0.68%	
Year 11	0.48%	
Year 12	0.40%	
Year 13	0.39%	
Year 14	0.40%	
Year 15	0.38%	
Year 16	0.33%	
Year 17	0.25%	
Year 18	0.14%	
Year 19	0.04%	

Notes:
(a) Loss Development Factors 12-216 as of March 31, 2022 from 2023 MPI General Rate Application (July 12, 2022) EAR Attachment B Appendix G page 13 column 9.
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "Techniques for the Conversion of Loss Development Factors", published by the Casualty Actuary Society.
(c) Age-to-Ultimate LDF = product of column (b) beginning from the same maturity
(d) PY 2023-1 Cumulative % Paid = 1 / (c)
(e) PY 2023-2 Cumulative % Paid = 1 / (c) Prior
(f) PY 2023 Cumulative % Paid = ((d) + (e)) / 2
(g) Incremental % Paid = (f) - (f) Prior; except for Year 1-Q1 to Year 3-Q4
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB. % Paid for PY 2023-1 in Year 3 is uniformly proportioned over four quarters.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Enhanced Accident Benefits - Death Benefits

Annual Paid Development Factors

Selected Age-to-Age LDF		Policy Year Age-to-Age LDF		Age-to-Ultimate LDF	
(a)		(b)		(c)	
12 to 24	2.0801	**12 to 24**	3.0801	**12 to Ult**	9.0832
24 to 36	1.3749	**24 to 36**	1.6039	**24 to Ult**	2.9490
36 to 48	1.3000	**36 to 48**	1.3316	**36 to Ult**	1.8387
48 to 60	1.1265	**48 to 60**	1.2020	**48 to Ult**	1.3808
60 to 72	1.0270	**60 to 72**	1.0738	**60 to Ult**	1.1488
72 to 84	1.0099	**72 to 84**	1.0184	**72 to Ult**	1.0699
84 to 96	1.0096	**84 to 96**	1.0098	**84 to Ult**	1.0506
96 to 108	1.0070	**96 to 108**	1.0083	**96 to Ult**	1.0404
108 to 120	1.0045	**108 to 120**	1.0057	**108 to Ult**	1.0319
120 to 132	1.0039	**120 to 132**	1.0042	**120 to Ult**	1.0260
132 to 144	1.0040	**132 to 144**	1.0040	**132 to Ult**	1.0217
144 to 156	1.0041	**144 to 156**	1.0040	**144 to Ult**	1.0176
156 to 168	1.0040	**156 to 168**	1.0040	**156 to Ult**	1.0135
168 to 180	1.0035	**168 to 180**	1.0037	**168 to Ult**	1.0095
180 to 192	1.0025	**180 to 192**	1.0030	**180 to Ult**	1.0057
192 to 204	1.0015	**192 to 204**	1.0020	**192 to Ult**	1.0027
204 to 216	1.0000	**204 to 216**	1.0007	**204 to Ult**	1.0007
216 to Ult	1.0000	**216 to Ult**	1.0000	**216 to Ult**	1.0000

Payment Year	Cumulative % Paid PY 2023-1	Cumulative % Paid PY 2023-2	Cumulative % Paid PY 2023
	(d)	(e)	(f)
Year 1	11.01%	0.00%	5.50%
Year 2	33.91%	11.01%	22.46%
Year 3	54.39%	33.91%	44.15%
Year 4	72.42%	54.39%	63.40%
Year 5	87.05%	72.42%	79.73%
Year 6	93.47%	87.05%	90.26%
Year 7	95.19%	93.47%	94.33%
Year 8	96.11%	95.19%	95.65%
Year 9	96.91%	96.11%	96.51%
Year 10	97.47%	96.91%	97.19%
Year 11	97.88%	97.47%	97.67%
Year 12	98.27%	97.88%	98.07%
Year 13	98.66%	98.27%	98.46%
Year 14	99.06%	98.66%	98.86%
Year 15	99.43%	99.06%	99.24%
Year 16	99.73%	99.43%	99.58%
Year 17	99.93%	99.73%	99.83%
Year 18	100.00%	99.93%	99.96%
Year 19	100.00%	100.00%	100.00%

Payment Year-Quarter	Incremental % Paid PY 2023	
(g)		
Year 1-Q1	0.13%	**Smoothing[1]**
Year 1-Q2	0.65%	
Year 1-Q3	1.83%	
Year 1-Q4	2.90%	
Year 2-Q1	4.30%	**Smoothing[2]**
Year 2-Q2	4.04%	
Year 2-Q3	3.83%	
Year 2-Q4	4.79%	
Year 3-Q1	6.73%	**Smoothing[3]**
Year 3-Q2	5.95%	
Year 3-Q3	4.56%	
Year 3-Q4	4.45%	
Year 4	19.26%	
Year 5	16.33%	
Year 6	10.53%	
Year 7	4.07%	
Year 8	1.32%	
Year 9	0.86%	
Year 10	0.68%	
Year 11	0.48%	
Year 12	0.40%	
Year 13	0.39%	
Year 14	0.40%	
Year 15	0.38%	
Year 16	0.33%	
Year 17	0.25%	
Year 18	0.14%	
Year 19	0.04%	

Notes:
(a) Loss Development Factors 12-216 as of March 31, 2022 from 2023 MPI General Rate Application (July 12, 2022) EAR Attachment B Appendix G page 13 column 9.
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on “Techniques for the Conversion of Loss Development Factors”, published by the Casualty Actuary Society.
(c) Age-to-Ultimate LDF = product of column (b) beginning from the same maturity
(d) PY 2023-1 Cumulative % Paid = 1 / (c)
(e) PY 2023-2 Cumulative % Paid = 1 / (c) Prior
(f) PY 2023 Cumulative % Paid = ((d) + (e)) / 2
(g) Incremental % Paid = (f) - (f) Prior; except for Year 1-Q1 to Year 3-Q4
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for AB-DB. % Paid for PY 2023-1 in Year 3 is uniformly proportioned over four quarters.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Basic Vehicle Damage Coverage

BVDC Paid Loss and ALAE Net of Salvage and Subrogation ($000's)

FLY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
2003	-	-	-	-	270,011	270,021	270,072	269,952	269,832	269,705	269,613	269,531	269,459	269,394	269,357	269,252	269,168
2004	-	-	-	292,549	292,947	292,835	292,834	292,520	292,329	292,108	292,033	291,937	291,835	291,747	291,559	291,474	291,425
2005	-	-	290,482	292,069	292,409	292,512	292,452	292,345	292,159	292,109	292,032	291,976	291,934	291,881	291,845	291,825	291,800
2006	-	301,921	307,944	309,223	309,609	309,439	309,121	308,887	308,512	308,308	308,038	307,875	307,765	307,656	307,589	307,532	307,488
2007	246,200	321,633	327,838	328,951	329,390	329,290	328,975	328,650	328,415	328,145	327,968	327,869	327,779	327,660	327,584	327,543	327,487
2008	247,693	329,246	338,149	339,330	339,592	339,153	338,549	338,248	338,056	337,871	337,750	337,634	337,535	337,446	337,354	337,298	-
2009	255,432	332,442	338,117	338,967	339,573	339,640	339,341	338,885	338,597	338,016	337,840	337,701	337,602	337,486	337,421	-	-
2010	255,811	322,063	326,666	327,161	327,214	326,975	326,600	326,387	326,163	326,014	325,811	325,625	325,526	325,422	-	-	-
2011	266,271	330,514	336,764	337,666	337,884	337,822	337,567	337,575	337,367	337,214	337,015	336,892	336,797	-	-	-	-
2012	261,206	329,203	334,949	335,586	335,783	335,708	335,351	335,153	335,021	334,906	334,768	334,658	-	-	-	-	-
2013	254,601	337,458	343,545	344,318	344,759	345,072	345,031	344,881	344,789	344,613	344,459	-	-	-	-	-	-
2014	252,894	342,386	354,219	356,746	357,855	358,428	358,488	358,497	358,558	358,421	-	-	-	-	-	-	-
2015	221,161	367,952	384,120	389,871	390,260	390,457	390,595	390,623	390,582	-	-	-	-	-	-	-	-
2016	289,719	435,277	455,899	456,065	456,147	456,282	456,168	456,162	-	-	-	-	-	-	-	-	-
2017	288,993	504,924	516,338	516,892	517,182	517,203	516,903	-	-	-	-	-	-	-	-	-	-
2018	365,906	532,935	542,769	542,901	543,271	543,744	-	-	-	-	-	-	-	-	-	-	-
2019	373,860	522,628	532,721	533,964	534,339	-	-	-	-	-	-	-	-	-	-	-	-
2020	378,354	512,216	522,246	523,478	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	276,724	398,527	406,322	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	349,328	580,650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Factors	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
2003					1.0000	1.0002	0.9996	0.9996	0.9995	0.9997	0.9997	0.9997	0.9998	0.9999	0.9996	0.9997	1.0000
2004				1.0014	0.9996	1.0000	0.9989	0.9993	0.9992	0.9997	0.9997	0.9997	0.9997	0.9994	0.9997	0.9998	1.0000
2005			1.0055	1.0012	1.0004	0.9998	0.9996	0.9994	0.9998	0.9997	0.9998	0.9999	0.9998	0.9999	0.9999	0.9999	1.0000
2006		1.0199	1.0042	1.0012	0.9995	0.9990	0.9992	0.9988	0.9993	0.9991	0.9995	0.9996	0.9996	0.9998	0.9998	0.9999	1.0000
2007	1.3064	1.0193	1.0034	1.0013	0.9997	0.9990	0.9990	0.9993	0.9992	0.9995	0.9997	0.9997	0.9996	0.9998	0.9999	0.9998	
2008	1.3292	1.0270	1.0035	1.0008	0.9987	0.9982	0.9991	0.9994	0.9995	0.9996	0.9997	0.9997	0.9997	0.9997	0.9998		
2009	1.3015	1.0171	1.0025	1.0018	1.0002	0.9991	0.9987	0.9992	0.9983	0.9995	0.9996	0.9997	0.9997	0.9998			
2010	1.2590	1.0143	1.0015	1.0002	0.9993	0.9989	0.9993	0.9993	0.9995	0.9994	0.9994	0.9997	0.9997				
2011	1.2413	1.0189	1.0027	1.0006	0.9998	0.9992	1.0000	0.9994	0.9995	0.9994	0.9996	0.9997					
2012	1.2603	1.0175	1.0019	1.0006	0.9998	0.9989	0.9994	0.9996	0.9997	0.9996	0.9997						
2013	1.3254	1.0180	1.0023	1.0013	1.0009	0.9999	0.9996	0.9997	0.9995	0.9996							
2014	1.3539	1.0346	1.0071	1.0031	1.0016	1.0002	1.0000	1.0002	0.9996								
2015	1.6637	1.0439	1.0150	1.0010	1.0005	1.0004	1.0001	0.9999									
2016	1.5024	1.0474	1.0004	1.0002	1.0003	0.9997	1.0000										
2017	1.7472	1.0226	1.0011	1.0006	1.0000	0.9994											
2018	1.4565	1.0185	1.0002	1.0007	1.0009												
2019	1.3979	1.0193	1.0023	1.0007													
2020	1.3538	1.0196	1.0024														
2021	1.4402	1.0196															
2022	1.6622																

BVDC Paid Loss and ALAE Net of Salvage and Subrogation
Age-to-Age LDFs

	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
Maximum	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to Ult**
3	1.6622	1.0196	1.0024	1.0007	1.0009	1.0004	1.0001	1.0002	0.9997	0.9996	0.9997	0.9997	0.9997	0.9998	0.9999	0.9999	1.0000
4	1.6622	1.0196	1.0024	1.0007	1.0009	1.0004	1.0001	1.0002	0.9997	0.9996	0.9997	0.9997	0.9997	0.9998	0.9999	0.9999	
5	1.6622	1.0226	1.0024	1.0010	1.0016	1.0004	1.0001	1.0002	0.9997	0.9996	0.9997	0.9997	0.9997	0.9999	0.9999		
Minimum	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to Ult**
3	1.3538	1.0193	1.0002	1.0006	1.0000	0.9994	1.0000	0.9997	0.9995	0.9994	0.9994	0.9997	0.9997	0.9997	0.9998	0.9998	1.0000
4	1.3538	1.0185	1.0002	1.0002	1.0000	0.9994	0.9996	0.9996	0.9995	0.9994	0.9994	0.9997	0.9996	0.9997	0.9998	0.9998	
5	1.3538	1.0185	1.0002	1.0002	1.0000	0.9994	0.9994	0.9994	0.9995	0.9994	0.9994	0.9997	0.9996	0.9997			
Arithmetic Average	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to Ult**
2	1.5512	1.0196	1.0023	1.0007	1.0005	0.9996	1.0000	1.0000	0.9996	0.9996	0.9997	0.9997	0.9997	0.9998	0.9999	0.9998	1.0000
3	1.4854	1.0195	1.0016	1.0006	1.0004	0.9998	1.0000	0.9999	0.9996	0.9995	0.9996	0.9997	0.9997	0.9998	0.9998	0.9999	1.0000
4	1.4635	1.0192	1.0015	1.0005	1.0004	0.9999	0.9999	0.9999	0.9996	0.9995	0.9996	0.9997	0.9997	0.9998	0.9999	0.9999	
5	1.4621	1.0199	1.0013	1.0006	1.0007	0.9999	0.9998	0.9998	0.9996	0.9995	0.9996	0.9997	0.9997	0.9998	0.9998		
6	1.5096	1.0245	1.0036	1.0010	1.0007	0.9998	0.9998	0.9997	0.9994	0.9995	0.9996	0.9997	0.9997	0.9997			
Arithmetic Average Excl. HiLo																	
avg 3 excl HiLo	1.4402	1.0196	1.0023	1.0007	1.0003	0.9997	1.0000	0.9999	0.9996	0.9996	0.9996	0.9997	0.9997	0.9998	0.9998	0.9999	1.0000
avg 4 excl HiLo	1.4190	1.0194	1.0017	1.0006	1.0004	1.0000	1.0000	0.9998	0.9996	0.9995	0.9996	0.9997	0.9997	0.9998	0.9999	0.9998	
avg 5 excl HiLo	1.4315	1.0195	1.0013	1.0006	1.0006	0.9999	0.9999	0.9997	0.9996	0.9995	0.9996	0.9997	0.9997	0.9998	0.9998		
avg 6 excl HiLo	1.4892	1.0203	1.0015	1.0007	1.0006	0.9998	0.9999	0.9997	0.9995	0.9995	0.9996	0.9997	0.9997	0.9998			
			avg 6 excl HiLo			Judgment ->											
(a) Selected Age-to-Age LDF	1.4892	1.0203	1.0015	1.0007	1.0006	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Policy Year
Age-to-Age LDFs

	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
(b) Policy Year Age-to-Age LDF	2.489	1.209	1.011	1.001	1.0007	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
(c) Age-to-Ultimate LDF	3.0476	1.2243	1.0130	1.0021	1.0010	1.0003	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
(d) Cumulative % Paid PY 2023-1	32.81%	81.68%	98.72%	99.79%	99.90%	99.97%	100.00%	100.00%
(e) Cumulative % Paid PY 2023-2	0.00%	32.81%	81.68%	98.72%	99.79%	99.90%	99.97%	100.00%
(f) Cumulative % Paid PY 2023	16.41%	57.25%	90.20%	99.25%	99.84%	99.93%	99.98%	100.00%

	Smoothing[1]				Smoothing[2]				Smoothing[3]								
	Year 1-Q1	**Year 1-Q2**	**Year 1-Q3**	**Year 1-Q4**	**Year 2-Q1**	**Year 2-Q2**	**Year 2-Q3**	**Year 2-Q4**	**Year 3-Q1**	**Year 3-Q2**	**Year 3-Q3**	**Year 3-Q4**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**
(g) Incremental % Paid PY 2023	0.31%	2.24%	5.35%	8.50%	8.97%	9.63%	10.35%	11.89%	10.79%	9.52%	7.13%	5.51%	9.05%	0.59%	0.09%	0.05%	0.02%

Notes:
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "*Techniques for the Conversion of Loss Development Factors*", published by the Casualty Actuary Society.
(d) PY 2023-1 Cumulative % Paid = 1 / (c)
(e) PY 2023-2 Cumulative % Paid = 1 / (c) Prior
(f) PY 2023 Cumulative % Paid = ((d) + (e)) / 2
(g) Incremental % Paid = (f) - (f) Prior; except for Year 1-Q1 to Year 3-Q4
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage. % Paid for PY 2023-1 in Year 3 is uniformly proportioned over four quarters.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Third Party Liability - Property Damage

TPL-PD Paid Loss and ALAE Net of Salvage and Subrogation ($000's)

FLY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204
2003	-	-	-	-	30,182	31,436	31,618	31,640	31,640	31,723	31,705	31,694	31,691	31,690	31,692	31,692	31,690
2004	-	-	-	29,656	30,076	30,053	30,258	30,248	30,217	30,207	30,169	30,179	30,320	30,358	30,357	30,358	30,358
2005	-	-	31,090	31,942	32,373	32,723	32,772	32,753	32,737	32,703	32,689	32,664	32,647	32,643	32,642	32,640	32,635
2006	-	29,821	33,827	34,389	34,650	34,873	34,988	35,018	35,000	35,041	35,021	35,017	35,009	34,991	34,986	34,983	34,979
2007	14,767	29,750	34,438	34,991	35,465	35,542	35,878	35,826	35,805	35,792	35,773	35,766	35,743	35,739	35,729	35,726	35,722
2008	15,777	32,696	37,126	39,348	39,894	39,878	39,797	39,796	40,194	40,206	40,189	40,177	40,242	40,230	40,255	40,249	-
2009	16,005	33,136	36,912	37,944	38,255	38,543	38,516	38,497	38,483	38,557	38,577	38,569	38,562	38,555	38,550	-	-
2010	17,107	30,507	35,046	35,832	36,729	36,798	36,771	36,788	36,751	36,749	36,726	36,713	36,698	36,691	-	-	-
2011	16,468	32,940	36,509	36,941	37,266	37,416	37,389	37,567	37,678	37,668	37,660	37,655	37,645	-	-	-	-
2012	18,934	35,917	40,296	40,944	41,003	41,230	41,277	41,284	41,243	41,225	41,218	41,199	-	-	-	-	-
2013	17,797	35,790	40,261	40,608	40,846	40,852	41,100	41,223	41,205	41,181	41,172	-	-	-	-	-	-
2014	17,963	36,294	42,235	43,626	44,072	44,670	44,950	45,605	45,841	45,848	-	-	-	-	-	-	-
2015	17,692	37,365	44,001	45,952	46,559	46,843	46,936	47,000	47,079	-	-	-	-	-	-	-	-
2016	18,432	39,900	46,527	47,051	47,665	47,919	47,958	48,128	-	-	-	-	-	-	-	-	-
2017	21,612	45,898	53,050	53,894	54,624	55,195	55,183	-	-	-	-	-	-	-	-	-	-
2018	20,339	44,965	53,475	55,190	56,182	56,778	-	-	-	-	-	-	-	-	-	-	-
2019	16,800	39,838	49,260	50,875	51,543	-	-	-	-	-	-	-	-	-	-	-	-
2020	17,578	41,145	47,950	50,655	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	13,197	33,271	38,662	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	17,592	45,994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Factors	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
2003					1.0415	1.0058	1.0007	1.0000	1.0026	0.9994	0.9997	0.9999	0.9999	1.0001	1.0000	1.0000	1.0000
2004				1.0141	0.9993	1.0068	0.9997	0.9990	0.9997	0.9987	1.0003	1.0047	1.0012	1.0000	1.0000	1.0000	1.0000
2005			1.0274	1.0135	1.0108	1.0015	0.9994	0.9995	0.9990	0.9996	0.9992	0.9995	0.9999	0.9999	0.9999	0.9998	1.0000
2006		1.1343	1.0166	1.0076	1.0064	1.0033	1.0009	0.9995	1.0012	0.9994	0.9999	0.9998	0.9995	0.9999	0.9999	0.9999	1.0000
2007	2.0147	1.1576	1.0161	1.0135	1.0022	1.0094	0.9985	0.9994	0.9997	0.9995	0.9998	0.9994	0.9999	0.9997	0.9999	0.9999	
2008	2.0724	1.1355	1.0599	1.0139	0.9996	0.9979	1.0000	1.0100	1.0003	0.9996	0.9997	1.0016	0.9997	1.0006	0.9999		
2009	2.0703	1.1139	1.0280	1.0082	1.0075	0.9993	0.9995	0.9996	1.0019	1.0005	0.9998	0.9998	0.9998	0.9999			
2010	1.7833	1.1488	1.0224	1.0250	1.0019	0.9993	1.0005	0.9990	0.9999	0.9994	0.9996	0.9996	0.9998				
2011	2.0002	1.1083	1.0118	1.0088	1.0040	0.9993	1.0048	1.0029	0.9997	0.9998	0.9999	0.9997					
2012	1.8969	1.1219	1.0161	1.0014	1.0055	1.0011	1.0002	0.9990	0.9996	0.9998	0.9995						
2013	2.0110	1.1249	1.0086	1.0059	1.0001	1.0061	1.0030	0.9996	0.9994	0.9998							
2014	2.0205	1.1637	1.0329	1.0102	1.0136	1.0063	1.0146	1.0052	1.0002								
2015	2.1120	1.1776	1.0443	1.0132	1.0061	1.0020	1.0014	1.0017									
2016	2.1648	1.1661	1.0113	1.0130	1.0053	1.0008	1.0035										
2017	2.1237	1.1558	1.0159	1.0136	1.0104	0.9998											
2018	2.2108	1.1893	1.0321	1.0180	1.0106												
2019	2.3713	1.2365	1.0328	1.0131													
2020	2.3407	1.1654	1.0564														
2021	2.5211	1.1620															
2022	2.6145																

TPL-PD Paid Loss and ALAE Net of Salvage and Subrogation
Age-to-Age LDFs

Maximum	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
3	2.6145	1.2365	1.0564	1.0180	1.0106	1.0020	1.0146	1.0052	1.0002	0.9998	0.9999	0.9998	0.9998	1.0006	0.9999	0.9999	1.0000
4	2.6145	1.2365	1.0564	1.0180	1.0106	1.0063	1.0146	1.0052	1.0002	0.9998	0.9999	1.0016	0.9999	1.0006	0.9999	0.9998	
5	2.6145	1.2365	1.0564	1.0180	1.0136	1.0063	1.0146	1.0052	1.0002	1.0005	0.9999	1.0016	0.9999	1.0006	0.9999		
Minimum	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to Ult**
3	2.3407	1.1620	1.0321	1.0131	1.0053	0.9998	1.0014	0.9996	0.9994	0.9998	0.9995	0.9996	0.9997	0.9997	0.9999	0.9998	1.0000
4	2.3407	1.1620	1.0159	1.0130	1.0053	0.9998	1.0014	0.9990	0.9994	0.9994	0.9995	0.9996	0.9997	0.9997	0.9999	0.9998	
5	2.2108	1.1558	1.0113	1.0130	1.0053	0.9998	1.0002	0.9990	0.9994	0.9994	0.9995	0.9994	0.9995	0.9997	0.9999		
Arithmetic Average	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to Ult**
2	2.5678	1.1637	1.0446	1.0156	1.0105	1.0003	1.0025	1.0034	0.9998	0.9998	0.9997	0.9997	0.9998	1.0002	0.9999	0.9999	1.0000
3	2.4921	1.1880	1.0404	1.0149	1.0088	1.0009	1.0065	1.0021	0.9997	0.9998	0.9997	0.9997	0.9998	1.0001	0.9999	0.9999	1.0000
4	2.4619	1.1883	1.0343	1.0144	1.0081	1.0022	1.0056	1.0013	0.9997	0.9997	0.9997	1.0002	0.9998	1.0000	0.9999	0.9999	
5	2.4117	1.1818	1.0297	1.0142	1.0092	1.0030	1.0045	1.0017	0.9998	0.9999	0.9997	1.0000	0.9997	1.0000	0.9999		
6	2.3637	1.1792	1.0321	1.0135	1.0077	1.0027	1.0046	1.0012	1.0001	0.9998	0.9997	1.0000	0.9998	1.0000			
Arithmetic Average Excl. HiLo																	
avg 3 excl HiLo	2.5211	1.1654	1.0328	1.0136	1.0104	1.0008	1.0035	1.0017	0.9996	0.9998	0.9996	0.9997	0.9998	0.9999	0.9999	0.9999	1.0000
avg 4 excl HiLo	2.4462	1.1773	1.0324	1.0133	1.0083	1.0014	1.0033	1.0006	0.9996	0.9998	0.9997	0.9998	0.9998	0.9999	0.9999	0.9999	
avg 5 excl HiLo	2.4110	1.1722	1.0269	1.0133	1.0091	1.0030	1.0026	1.0014	0.9997	0.9998	0.9997	0.9997	0.9998	0.9999	0.9999		
avg 6 excl HiLo	2.3610	1.1707	1.0313	1.0132	1.0081	1.0025	1.0032	1.0008	0.9998	0.9998	0.9997	0.9997	0.9998	0.9999			
				avg 6 excl HiLo				Judgment ->									
(a) Selected Age-to-Age LDF	2.3610	1.1707	1.0313	1.0132	1.0081	1.0025	1.0032	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Policy Year
Age-to-Age LDFs

	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to Ult
(b) Policy Year Age-to-Age LDF	3.361	1.525	1.096	1.022	1.011	1.005	1.003	1.002	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
(c) Age-to-Ultimate LDF	5.8563	1.7424	1.1427	1.0431	1.0205	1.0097	1.0044	1.0016	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
(d) Cumulative % Paid PY 2023-1	17.08%	57.39%	87.51%	95.87%	97.99%	99.04%	99.56%	99.84%	100.00%	100.00%
(e) Cumulative % Paid PY 2023-2	0.00%	17.08%	57.39%	87.51%	95.87%	97.99%	99.04%	99.56%	99.84%	100.00%
(f) Cumulative % Paid PY 2023	8.54%	37.23%	72.45%	91.69%	96.93%	98.51%	99.30%	99.70%	99.92%	100.00%

	Smoothing[1]				Smoothing[2]				Smoothing[3]											
	Year 1-Q1	**Year 1-Q2**	**Year 1-Q3**	**Year 1-Q4**	**Year 2-Q1**	**Year 2-Q2**	**Year 2-Q3**	**Year 2-Q4**	**Year 3-Q1**	**Year 3-Q2**	**Year 3-Q3**	**Year 3-Q4**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
(g) Incremental % Paid PY 2023	0.16%	1.17%	2.78%	4.43%	7.31%	7.26%	6.91%	7.22%	10.91%	9.86%	7.89%	6.55%	19.24%	5.24%	1.58%	0.78%	0.40%	0.22%	0.08%

Notes:
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "*Techniques for the Conversion of Loss Development Factors*", published by the Casualty Actuary Society.
(d) PY 2023-1 Cumulative % Paid = 1 / (c)
(e) PY 2023-2 Cumulative % Paid = 1 / (c) Prior
(f) PY 2023 Cumulative % Paid = ((d) + (e)) / 2
(g) Incremental % Paid = (f) - (f) Prior; except for Year 1-Q1 to Year 3-Q4
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Property Damage. % Paid for PY 2023-1 in Year 3 is uniformly proportioned over four quarters.

Calculation of Loss and ALAE Payment Pattern as of August 31, 2022
Third Party Liability - Out of Province Bodily Injury

TPL-OOP BI Paid Loss and ALAE Net of Recoveries ($000's)

FLY	12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
1999	-	-	-	-	-	-	-	37,869	38,227	38,366	38,580	38,634	38,666	38,649	38,647	38,645	38,643	38,633	38,631
2000	-	-	-	-	-	-	36,042	36,437	36,510	36,662	36,761	36,799	36,802	36,816	36,901	36,909	36,859	36,859	36,859
2001	-	-	-	-	-	35,971	37,890	38,544	38,573	38,650	38,729	38,735	38,764	38,760	38,768	38,764	38,759	38,755	38,748
2002	-	-	-	-	33,051	36,332	37,736	39,938	41,122	41,178	41,268	41,275	41,279	41,439	41,450	41,465	41,479	41,894	41,889
2003	-	-	-	24,411	29,345	32,848	36,066	36,992	38,089	40,013	40,150	40,257	40,953	40,909	40,907	40,904	40,902	40,897	40,897
2004	-	-	13,645	20,048	24,750	28,481	31,661	32,773	33,568	33,657	33,658	33,691	33,690	33,703	33,702	33,701	33,700	33,696	33,696
2005	-	8,265	13,061	22,382	30,972	35,591	38,748	39,370	39,438	40,136	40,123	40,133	40,101	40,103	40,103	40,106	40,106	40,106	40,106
2006	1,796	7,521	13,199	19,887	23,912	27,539	31,024	31,575	33,155	33,426	34,181	34,231	34,240	34,450	34,495	34,817	34,875	34,940	-
2007	2,120	6,005	12,003	16,996	20,731	25,457	27,376	29,059	31,178	31,419	32,155	33,030	33,066	33,091	33,463	33,457	33,456	-	-
2008	1,602	8,150	15,185	22,285	27,367	29,423	30,125	30,300	30,667	30,806	30,994	31,124	31,297	32,784	33,006	33,036	-	-	-
2009	2,105	6,603	13,657	17,912	22,642	25,038	27,390	28,485	28,848	29,047	29,267	29,632	29,633	29,631	29,630	-	-	-	-
2010	2,173	7,669	13,767	17,194	20,037	21,944	23,472	24,913	25,324	25,392	25,400	25,524	25,591	25,632	-	-	-	-	-
2011	2,257	8,137	15,163	20,890	27,991	32,965	38,784	40,583	43,447	43,968	44,274	45,629	45,697	-	-	-	-	-	-
2012	3,098	7,364	12,698	20,613	24,998	27,356	27,924	30,784	32,650	34,022	34,197	34,687	-	-	-	-	-	-	-
2013	2,012	6,535	14,646	21,218	26,964	29,467	30,471	30,949	32,052	32,462	32,948	-	-	-	-	-	-	-	-
2014	1,678	8,027	15,667	24,438	29,993	34,101	37,084	39,423	40,203	40,628	-	-	-	-	-	-	-	-	-
2015	2,112	10,347	18,967	27,823	35,545	39,609	41,937	42,944	44,536	-	-	-	-	-	-	-	-	-	-
2016	2,058	9,518	18,740	25,729	32,795	36,394	39,604	41,048	-	-	-	-	-	-	-	-	-	-	-
2017	1,971	8,604	18,679	32,667	38,267	45,162	48,491	-	-	-	-	-	-	-	-	-	-	-	-
2018	1,869	8,703	16,954	24,546	32,468	36,862	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	2,002	11,579	19,258	27,618	39,503	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	2,437	10,657	20,880	30,725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	500	5,282	10,218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	891	5,221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Development Factors	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to 216	216 to 228	228 to Ult
1999								1.0095	1.0036	1.0056	1.0014	1.0008	0.9996	0.9999	1.0000	1.0000	0.9997	0.9999	1.0000
2000							1.0109	1.0020	1.0042	1.0027	1.0010	1.0001	1.0004	1.0023	1.0002	0.9986	1.0000	1.0000	1.0000
2001						1.0533	1.0173	1.0008	1.0020	1.0020	1.0001	1.0008	0.9999	1.0002	0.9999	0.9999	0.9999	0.9998	1.0000
2002					1.0992	1.0386	1.0584	1.0296	1.0014	1.0022	1.0002	1.0001	1.0039	1.0003	1.0004	1.0004	1.0100	0.9999	1.0000
2003				1.2021	1.1194	1.0980	1.0257	1.0297	1.0505	1.0034	1.0027	1.0173	0.9989	1.0000	0.9999	1.0000	0.9999	1.0000	1.0000
2004			1.4693	1.2346	1.1507	1.1117	1.0351	1.0243	1.0026	1.0000	1.0010	1.0000	1.0004	1.0000	1.0000	1.0000	0.9999	1.0000	1.0000
2005		1.5802	1.7137	1.3838	1.1491	1.0887	1.0160	1.0017	1.0177	0.9997	1.0002	0.9992	1.0000	1.0000	1.0001	1.0000	1.0000	1.0000	
2006	4.1885	1.7549	1.5067	1.2024	1.1517	1.1266	1.0178	1.0500	1.0082	1.0226	1.0015	1.0003	1.0062	1.0013	1.0093	1.0017	1.0019		
2007	2.8331	1.9987	1.4160	1.2198	1.2280	1.0754	1.0615	1.0729	1.0077	1.0234	1.0272	1.0011	1.0008	1.0112	0.9998	1.0000			
2008	5.0872	1.8633	1.4675	1.2281	1.0751	1.0238	1.0058	1.0121	1.0045	1.0061	1.0042	1.0056	1.0475	1.0068	1.0009				
2009	3.1371	2.0683	1.3115	1.2641	1.1058	1.0940	1.0400	1.0128	1.0069	1.0076	1.0125	1.0000	0.9999	1.0000					
2010	3.5292	1.7951	1.2489	1.1653	1.0952	1.0696	1.0614	1.0165	1.0027	1.0003	1.0049	1.0026	1.0016						
2011	3.6047	1.8636	1.3777	1.3399	1.1777	1.1765	1.0464	1.0706	1.0120	1.0069	1.0306	1.0015							
2012	2.3768	1.7244	1.6233	1.2127	1.0943	1.0207	1.1024	1.0606	1.0420	1.0051	1.0143								
2013	3.2490	2.2411	1.4487	1.2708	1.0928	1.0341	1.0157	1.0356	1.0128	1.0150									
2014	4.7851	1.9516	1.5599	1.2273	1.1370	1.0875	1.0631	1.0198	1.0106										
2015	4.8981	1.8330	1.4670	1.2775	1.1143	1.0588	1.0240	1.0371											
2016	4.6244	1.9689	1.3729	1.2747	1.1097	1.0882	1.0364												
2017	4.3651	2.1709	1.7489	1.1714	1.1802	1.0737													
2018	4.6574	1.9482	1.4478	1.3227	1.1353														
2019	5.7830	1.6632	1.4341	1.4303															
2020	4.3728	1.9592	1.4715																
2021	10.5629	1.9346																	
2022	5.8616																		

TPL-OOP BI Paid Loss and ALAE Net of Recoveries
Age-to-Age LDFs

	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to 216	216 to 228	228 to Ult
Maximum																			
3	10.5629	1.9592	1.4715	1.4303	1.1802	1.0882	1.0631	1.0371	1.0420	1.0150	1.0306	1.0026	1.0475	1.0112	1.0093	1.0017	1.0019	1.0000	1.0000
4	10.5629	1.9592	1.7489	1.4303	1.1802	1.0882	1.0631	1.0606	1.0420	1.0150	1.0306	1.0056	1.0475	1.0112	1.0093	1.0017	1.0019	1.0000	1.0000
5	10.5629	2.1709	1.7489	1.4303	1.1802	1.0882	1.1024	1.0706	1.0420	1.0150	1.0306	1.0056	1.0475	1.0112	1.0093	1.0017	1.0100	1.0000	1.0000
Minimum	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to 216**	**216 to 228**	**228 to Ult**
3	4.3728	1.6632	1.4341	1.1714	1.1097	1.0588	1.0240	1.0198	1.0106	1.0051	1.0049	1.0000	0.9999	1.0000	0.9998	1.0000	0.9999	1.0000	1.0000
4	4.3728	1.6632	1.4341	1.1714	1.1097	1.0588	1.0157	1.0198	1.0106	1.0003	1.0049	1.0000	0.9999	1.0000	0.9998	1.0000	0.9999	0.9999	1.0000
5	4.3728	1.6632	1.3729	1.1714	1.1097	1.0341	1.0157	1.0198	1.0027	1.0003	1.0042	1.0000	0.9999	1.0000	0.9998	1.0000	0.9999	0.9998	1.0000
Arithmetic Average	**12 to 24**	**24 to 36**	**36 to 48**	**48 to 60**	**60 to 72**	**72 to 84**	**84 to 96**	**96 to 108**	**108 to 120**	**120 to 132**	**132 to 144**	**144 to 156**	**156 to 168**	**168 to 180**	**180 to 192**	**192 to 204**	**204 to 216**	**216 to 228**	**228 to Ult**
2	8.2123	1.9469	1.4528	1.3765	1.1578	1.0810	1.0302	1.0284	1.0117	1.0100	1.0225	1.0021	1.0008	1.0034	1.0004	1.0008	1.0009	1.0000	1.0000
3	6.9324	1.8523	1.4511	1.3082	1.1417	1.0736	1.0412	1.0308	1.0218	1.0090	1.0166	1.0014	1.0164	1.0060	1.0034	1.0005	1.0006	1.0000	1.0000
4	6.6451	1.8763	1.5256	1.2998	1.1349	1.0770	1.0348	1.0383	1.0193	1.0068	1.0156	1.0024	1.0125	1.0048	1.0025	1.0004	1.0004	1.0000	1.0000
5	6.2475	1.9352	1.4950	1.2953	1.1353	1.0685	1.0483	1.0447	1.0160	1.0070	1.0133	1.0022	1.0112	1.0039	1.0020	1.0003	1.0023	0.9999	1.0000
6	5.9338	1.9408	1.4904	1.2840	1.1282	1.0605	1.0480	1.0400	1.0145	1.0068	1.0156	1.0018	1.0093	1.0032	1.0017	1.0003	1.0019	1.0000	1.0000
Arithmetic Average Excl. HiLo																			
avg 3 excl HiLo	5.8616	1.9346	1.4478	1.3227	1.1353	1.0737	1.0364	1.0356	1.0128	1.0069	1.0143	1.0015	1.0016	1.0068	1.0009	1.0000	1.0000	1.0000	1.0000
avg 4 excl HiLo	5.8223	1.9414	1.4597	1.2987	1.1248	1.0806	1.0302	1.0364	1.0124	1.0060	1.0134	1.0021	1.0012	1.0040	1.0005	1.0000	0.9999	1.0000	1.0000
avg 5 excl HiLo	5.4340	1.9473	1.4511	1.2916	1.1289	1.0733	1.0412	1.0444	1.0118	1.0065	1.0106	1.0017	1.0028	1.0027	1.0003	1.0000	1.0006	1.0000	1.0000
avg 6 excl HiLo	5.1687	1.9527	1.4551	1.2755	1.1241	1.0635	1.0425	1.0383	1.0106	1.0064	1.0147	1.0014	1.0021	1.0020	1.0002	1.0001	1.0004	1.0000	1.0000
avg 7 excl HiLo	5.0598	1.9288	1.4761	1.2746	1.1181	1.0685	1.0463	1.0339	1.0094	1.0081	1.0126	1.0011	1.0018	1.0016	1.0002	1.0001	1.0003	1.0000	
avg 8 excl HiLo	5.0329	1.9326	1.4715	1.2643	1.1281	1.0686	1.0452	1.0304	1.0091	1.0106	1.0108	1.0009	1.0015	1.0014	1.0002	1.0000	1.0003		
									avg 8 excl HiLo									**Judgment**	
(a) Selected Age-to-Age LDF	5.0329	1.9326	1.4715	1.2643	1.1281	1.0686	1.0452	1.0304	1.0091	1.0106	1.0108	1.0009	1.0015	1.0014	1.0002	1.0000	1.0003	1.0000	

Policy Year
Age-to-Age LDFs

	12 to 24	24 to 36	36 to 48	48 to 60	60 to 72	72 to 84	84 to 96	96 to 108	108 to 120	120 to 132	132 to 144	144 to 156	156 to 168	168 to 180	180 to 192	192 to 204	204 to 216	216 to 228	228 to Ult	
(b) Policy Year Age-to-Age LDF	6.033	2.446	1.629	1.348	1.188	1.097	1.057	1.038	1.020	1.010	1.011	1.006	1.001	1.001	1.001	1.000	1.000	1.000	1.000	
(c) Age-to-Ultimate LDF	48.6341	8.0615	3.2951	2.0231	1.5007	1.2630	1.1517	1.0901	1.0506	1.0304	1.0204	1.0096	1.0038	1.0026	1.0011	1.0004	1.0003	1.0001	1.0000	
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**
(d) Cumulative % Paid PY 2023-1	2.06%	12.40%	30.35%	49.43%	66.64%	79.18%	86.82%	91.73%	95.19%	97.05%	98.00%	99.05%	99.62%	99.74%	99.89%	99.96%	99.97%	99.99%	100.00%	100.00%
(e) Cumulative % Paid PY 2023-2	0.00%	2.06%	12.40%	30.35%	49.43%	66.64%	79.18%	86.82%	91.73%	95.19%	97.05%	98.00%	99.05%	99.62%	99.74%	99.89%	99.96%	99.97%	99.99%	100.00%
(f) Cumulative % Paid PY 2023	1.03%	7.23%	21.38%	39.89%	58.03%	72.91%	83.00%	89.28%	93.46%	96.12%	97.53%	98.53%	99.34%	99.68%	99.81%	99.92%	99.97%	99.98%	99.99%	100.00%

	Smoothing[1]				Smoothing[2]				Smoothing[3]																									
	Year 1-Q1	**Year 1-Q2**	**Year 1-Q3**	**Year 1-Q4**	**Year 2-Q1**	**Year 2-Q2**	**Year 2-Q3**	**Year 2-Q4**	**Year 3-Q1**	**Year 3-Q2**	**Year 3-Q3**	**Year 3-Q4**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**
(g) Incremental % Paid PY 2023	0.01%	0.09%	0.26%	0.68%	0.81%	1.26%	1.51%	2.62%	3.05%	3.42%	3.50%	4.18%	18.51%	18.14%	14.88%	10.09%	6.28%	4.18%	2.66%	1.41%	1.00%	0.81%	0.35%	0.13%	0.11%	0.04%	0.01%	0.01%	0.01%

Notes:
(b) Policy Year Age-to-Age LDF = (1 + (a))/(1 + 1/(a) Prior); Formula based on "*Techniques for the Conversion of Loss Development Factors*", published by the Casualty Actuary Society.
(d) PY 2023-1 Cumulative % Paid = 1 / (c)
(e) PY 2023-2 Cumulative % Paid = 1 / (c) Prior
(f) PY 2023 Cumulative % Paid = ((d) + (e)) / 2
(g) Incremental % Paid = (f) - (f) Prior; except for Year 1-Q1 to Year 3-Q4
Smoothing[1] % Paid for PY 2023-1 in Year 1 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Bodily Injury
Smoothing[2] % Paid for PY 2023-1 and PY 2023-2 in Year 2 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Bodily Injury
Smoothing[3] % Paid for PY 2023-2 in Year 3 is spread over four quarters using the same proportions presented in the 2019 RRA for legal-based Bodily Injury. % Paid for PY 2023-1 in Year 3 is uniformly proportioned over four quarters.

Calculation of Indexation Factor

FY	Inflation Forecast (a)	Enhanced Accident Benefits - Medical Rehabilitation: Payment Year	Inflation Impact: FLY 2024 (b)	FLY 2025 (c)	FLY 2026 (d)	PY 2023 (e)	Indexation Factor: PY 2023 (f)	Enhanced Accident Benefits - Enhanced Disability: Payment Year	Inflation Impact: FLY 2024 (g)	FLY 2025 (h)	FLY 2026 (i)	PY 2023 (j)	Indexation Factor: PY 2023 (k)
2024	1.000	**1**	1.000			1.000	1.000	**1**	1.000			1.000	1.000
2025	1.039	**2**	1.039	1.000		1.013	1.013	**2**	1.019	1.000		1.006	1.006
2026	1.024	**3**	1.024	1.024	1.000	1.018	1.031	**3**	1.031	1.012	1.000	1.014	1.020
2027	1.022	**4**	1.022	1.022	1.022	1.022	1.054	**4**	1.023	1.023	1.011	1.020	1.041
2028	1.020	**5**	1.020	1.020	1.020	1.020	1.075	**5**	1.021	1.021	1.021	1.021	1.063
2029	1.020	**6**	1.020	1.020	1.020	1.020	1.096	**6**	1.020	1.020	1.020	1.020	1.084
2030	1.020	**7**	1.020	1.020	1.020	1.020	1.118	**7**	1.020	1.020	1.020	1.020	1.106
2031	1.020	**8**	1.020	1.020	1.020	1.020	1.141	**8**	1.020	1.020	1.020	1.020	1.128
2032	1.020	**9**	1.020	1.020	1.020	1.020	1.164	**9**	1.020	1.020	1.020	1.020	1.150
2033	1.020	**10**	1.020	1.020	1.020	1.020	1.187	**10**	1.020	1.020	1.020	1.020	1.173
2034	1.020	**11**	1.020	1.020	1.020	1.020	1.211	**11**	1.020	1.020	1.020	1.020	1.197
2035	1.020	**12**	1.020	1.020	1.020	1.020	1.235	**12**	1.020	1.020	1.020	1.020	1.221
2036	1.020	**13**	1.020	1.020	1.020	1.020	1.260	**13**	1.020	1.020	1.020	1.020	1.245
2037	1.020	**14**	1.020	1.020	1.020	1.020	1.285	**14**	1.020	1.020	1.020	1.020	1.270
2038	1.020	**15**	1.020	1.020	1.020	1.020	1.310	**15**	1.020	1.020	1.020	1.020	1.295
2039	1.020	**16**	1.020	1.020	1.020	1.020	1.337	**16**	1.020	1.020	1.020	1.020	1.321
2040	1.020	**17**	1.020	1.020	1.020	1.020	1.363	**17**	1.020	1.020	1.020	1.020	1.348
2041	1.020	**18**	1.020	1.020	1.020	1.020	1.391	**18**	1.020	1.020	1.020	1.020	1.375
2042	1.020	**19**	1.020	1.020	1.020	1.020	1.418	**19**	1.020	1.020	1.020	1.020	1.402
2043	1.020	**20**	1.020	1.020	1.020	1.020	1.447	**20**	1.020	1.020	1.020	1.020	1.430
2044	1.020	**21**	1.020	1.020	1.020	1.020	1.476	**21**	1.020	1.020	1.020	1.020	1.459
2045	1.020	**22**	1.020	1.020	1.020	1.020	1.505	**22**	1.020	1.020	1.020	1.020	1.488
2046	1.020	**23**	1.020	1.020	1.020	1.020	1.535	**23**	1.020	1.020	1.020	1.020	1.518
2047	1.020	**24**	1.020	1.020	1.020	1.020	1.566	**24**	1.020	1.020	1.020	1.020	1.548
2048	1.020	**25**	1.020	1.020	1.020	1.020	1.597	**25**	1.020	1.020	1.020	1.020	1.579
2049	1.020	**26**	1.020	1.020	1.020	1.020	1.629	**26**	1.020	1.020	1.020	1.020	1.611
2050	1.020	**27**	1.020	1.020	1.020	1.020	1.662	**27**	1.020	1.020	1.020	1.020	1.643
2051	1.020	**28**	1.020	1.020	1.020	1.020	1.695	**28**	1.020	1.020	1.020	1.020	1.676
2052	1.020	**29**	1.020	1.020	1.020	1.020	1.729	**29**	1.020	1.020	1.020	1.020	1.709
2053	1.020	**30**	1.020	1.020	1.020	1.020	1.764	**30**	1.020	1.020	1.020	1.020	1.743
2054	1.020	**31**	1.020	1.020	1.020	1.020	1.799	**31**	1.020	1.020	1.020	1.020	1.778
2055	1.020	**32**	1.020	1.020	1.020	1.020	1.835	**32**	1.020	1.020	1.020	1.020	1.814
2056	1.020	**33**	1.020	1.020	1.020	1.020	1.872	**33**	1.020	1.020	1.020	1.020	1.850
2057	1.020	**34**	1.020	1.020	1.020	1.020	1.909	**34**	1.020	1.020	1.020	1.020	1.887
2058	1.020	**35**	1.020	1.020	1.020	1.020	1.947	**35**	1.020	1.020	1.020	1.020	1.925
2059	1.020	**36**	1.020	1.020	1.020	1.020	1.986	**36**	1.020	1.020	1.020	1.020	1.963
2060	1.020	**37**		1.020	1.020	1.020	2.026	**37**	1.020	1.020	1.020	1.020	2.003
2061	1.020	**38**			1.020	1.020	2.066	**38**	1.020	1.020	1.020	1.020	2.043
2062	1.020							**39**	1.020	1.020	1.020	1.020	2.083
2063	1.020							**40**	1.020	1.020	1.020	1.020	2.125
2064	1.020							**41**	1.020	1.020	1.020	1.020	2.168
2065	1.020							**42**	1.020	1.020	1.020	1.020	2.211
2066	1.020							**43**	1.020	1.020	1.020	1.020	2.255
2067	1.020							**44**	1.020	1.020	1.020	1.020	2.300
2068	1.020							**45**	1.020	1.020	1.020	1.020	2.346
2069	1.020							**46**	1.020	1.020	1.020	1.020	2.393
2070	1.020							**47**	1.020	1.020	1.020	1.020	2.441
2071	1.020							**48**	1.020	1.020	1.020	1.020	2.490
2072	1.020							**49**		1.020	1.020	1.020	2.540
2073	1.020							**50**			1.020	1.020	2.590

Notes:

(a) Appendix C.0, Figure C.0.3

Col (b) to (d) represent the annaul inflation impact for EAB-MR payments in a fiscal year for FLY 2024, FLY 2025, and FLY 2026.

(e) PY 2023 Inflation Imapct for EAB-MR = sumproduct of (b) to (d), and a weighting based on the FLY earned proportions, as described in Technical Appendix E.0 Section B.2.

(f) PY 2023 Indexation Forecast for EAB-MR = product of column (e) beginning from the same maturity

Col (g) to (i) represent the fiscal year inflation forecasts for EAB-ED payments adjusted with equal weighted inflation assumptions for the current year and the year prior, for FLY 2024, FLY 2025, and FLY 2026. Indexation for EAB-ED is applied on the anniversary of the date of loss, rather than EAB-MR, where indexation is applied all at once for all claims at the beginning of the fiscal year.

(j) PY 2023 Inflation Imapct for EAB-ED = sumproduct of (g) to (i), and a weighting based on the FLY earned proportions, as described in Technical Appendix E.0 Section B.2.

(k) PY 2023 Indexation Forecast for EAB-ED = product of column (j) beginning from the same maturity

CHAPTER 4

CAPITAL MANAGEMENT PLAN

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A INTRODUCTION

1. ICBC's current Basic insurance capital management plan (Basic CMP) was approved by the BCUC in its May 27, 2016 Decision on the 2015 Revenue Requirements Application (Order G-74-16). The objectives of the Basic CMP are to promote stability and predictability of Basic insurance rates, as well as to support the financial stability of Basic insurance. The Basic CMP establishes capital targets, outlines the process for building, maintaining and releasing capital, and provides a rate smoothing framework.

2. *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004, as amended (Special Direction IC2)* mandates the use of ICBC's Basic CMP and provides the framework on how the elements of the Basic CMP are included in the proposed rate change. Section 3(1)(d) of *Special Direction IC2* requires that the BCUC ensure that rates are set in accordance with "the capital management plan".

3. On December 12, 2022 *Special Direction IC2*[1] was amended to provide directions for policy year (PY) 2023. The significant amendments affecting PY 2023 are:

- The capital build and capital maintenance provisions are substituted with a capital provision equal to an amount of 7% of required premium (section 3 (1)(e.2)).
- Section 3 (1.1) is repealed and replaced with section 3 (1.11) to remove the requirement for ICBC to apply for a rate change order based on a +/- 1.5 percentage points band on the previous rate change.
- In accordance with section 3 (1.2), the requirement under section 3 (1)(b) and (c)(iii) to set the rate in a manner that allows ICBC to maintain a Minimum Capital Test (MCT) of 100% is not in effect for PY 2023.
- The Customer Renewal Credit (CRC) in section 3 (1)(h) is not in effect for PY 2023.

B IMPACT OF AMENDMENTS TO *SPECIAL DIRECTION IC2* FRAMEWORK ON ICBC'S CAPITAL MANAGEMENT PLAN

4. The impacts of the December 12, 2022 amendments to *Special Direction IC2* on the Basic CMP and on the proposed rate change sought in this Application are discussed below.

[1] *Special Direction IC2* as amended by Order in Council 666/2022, December, 12 2022 (B.C. Reg 269/2022).

B.1 CAPITAL TARGETS

5. The May 27, 2016 Basic CMP includes a capital management target of 145% MCT. In addition, *Special Direction IC2* requires the BCUC to set rates in a manner that ensures ICBC maintains minimum capital equal to 100% MCT as described in the MCT guideline.[2] However, these requirements are not in effect for PY 2023. Nevertheless, ICBC is providing information on its MCT ratios as further described below.

6. As specified in section 1.1 of *Special Direction IC2*, the MCT used with respect to the application of the Basic CMP in this Application must be determined:

- Using data available from the most recently completed quarter of the fiscal year at the time the corporation files an application for a general rate change order (in this case the second quarter (Q2) of Fiscal Year (FY) 2022/23), and

- Based on that data, by projecting the MCT as at the end of that fiscal year.

7. In accordance with May 19 2015 Decision on the 2014 Revenue Requirements Application (Order G-81-15), the Outlook (projected) Basic MCT ratio for the end of FY 2022/23[3] and the most recent quarter's actual Basic MCT ratio (actual year-to-date value as of Q2 of FY 2022/23) are provided in Figure 4.1 below.[4] However, the amendments to *Special Direction IC2* suspend all aspects of the Basic CMP that are dependent on the MCT. The MCT ratios provided in Figure 4.1 have no impact on the proposed rate change for PY 2023.

Figure 4.1 – 2022/23 Basic MCT Ratio as of Q2 of FY 2022/23

2022/23 Basic MCT Ratio	Value of MCT Ratio
Actual Year-to-Date Basic MCT Ratio	78%
Outlook Basic MCT Ratio for the end of the 2022/23 fiscal year	91%

[2] Section 3 (1.2) and (1.3) of *Special Direction IC2.*
[3] Details on the calculation of the Outlook Basic MCT Ratio for the end of FY 2022/23 are in Chapter 8, Appendix 8A, Performance Measures, Section D.2.2.3.
[4] Order G-81-15, page 26, stipulates that ICBC is to provide the most recent quarter's actual MCT ratio (e.g., second quarter actual MCT ratio); and year-end Outlook MCT ratio (e.g., year-end Outlook MCT ratio as of second quarter) to satisfy the modified CRC process. The CRC is not in effect for PY 2023 in accordance with *Special Direction IC2* section 3(1)(h).

8. As shown in Figure 4.1, the Basic MCT ratio continues to be significantly below the capital management target of 145%, and also below the regulatory minimum of 100% MCT that would have applied but for its suspension in PY 2023.[5]

9. In PY 2021, the transition to the new Enhanced Care product reduced claims costs, thereby providing the opportunity to significantly reduce Basic insurance rates for policyholders and build capital. However, capital levels (as reflected by the MCT ratio) are still low compared to the current minimums and targets.

10. Having adequate Basic capital is important to absorb unexpected costs that could arise in the future and may be used to help maintain rate stability under a rate smoothing framework for the benefit of customers in future policy years.

B.2 CAPITAL BUILD AND CAPITAL MAINTENANCE

11. The Basic CMP previously included provisions for both capital build and capital maintenance. The purpose of the capital build provision is to gradually increase the Basic insurance capital level toward the capital management target of 145%. Whereas the purpose of the capital maintenance provision is to maintain Basic capital at the desired capital management target level by providing for the additional capital needed to keep pace with the growth in ICBC's business. However, for PY 2021 rates, these provisions were directed[6] as follows:

- Using a calculation for the capital maintenance provision that neither increases nor decreases the rate change.
- Adding a capital build provision that would result in the addition of 11.5 percentage points to the rate change to cover costs after accounting for the effect of the investment income and expenses that vary with the amount of premium collected from a policyholder.

12. As per the December 12, 2022 amendments to *Special Direction IC2*, beginning in PY 2023, the capital build and capital maintenance provisions are to be replaced with an overall capital provision equal to 7% of required premium. Using a static capital provision of 7% going forward will allow ICBC to continue to increase its capital levels by a meaningful amount while

[5] *Special Direction IC2* section 3(1)(b) otherwise requires the BCUC to set Basic insurance rates to allow ICBC to maintain the regulatory minimum requirement that the Basic MCT is at least 100%. This regulatory minimum requirement for Basic MCT is not in effect for PY 2023 in accordance with *Special Direction IC2* section 3(1.2).
[6] *Special Direction IC2* as amended by Order in Council 633/2020, December 14, 2020 (B.C. Reg 281/2020).

promoting rate stability, before the application of a rate smoothing framework. By removing the link between the amount of capital provision embedded in the indicated rate change and ICBC's Basic capital level, fluctuations in capital levels year-over-year will have a much smaller impact on the amount of the indicated rate change. Regardless of ICBC's capital level, ICBC will continue to maintain 7% of required premium as its capital provision. The calculation of the PY 2023 capital provision is provided in Chapter 3, Appendix Set A and Technical Appendix Set A.

B.3 CUSTOMER RENEWAL CREDIT (CRC)

13. The Basic CMP specifies the criteria for the issuance of a CRC, which provides a mechanism for the release of capital to policyholders. Section 3(1)(h) of *Special Direction IC2* has been amended, precluding the issuance of a CRC for the duration of PY 2023.

B.4 RATE SMOOTHING FRAMEWORK

14. Section 3 (1.11) of *Special Direction IC2* states that ICBC must not decrease existing rates. This is referred to in this Application as the rate change floor, which requires that the proposed rate change be no lower than 0%, and forms part of the existing rate smoothing framework under the currently approved Basic CMP. For PY 2023, all remaining provisions under the existing rate smoothing framework, such as the requirement to apply for a rate change based on a +/- 1.5 percentage point band on the previous rate change, have been repealed as per Order in Council (OIC) No.666 (666/2022).

15. The rate change floor applies to PY 2023 as the actuarial indicated rate change is - 6.5%, as described in Chapter 3, Actuarial Indicated Rate Change Analysis. Figure 4.2 below provides a summary of the actuarial indicated rate change, the impact of the rate change floor, and the proposed rate change.

Figure 4.2 – Impact of Rate Change Floor

Formula	Item	Total Basic
(1)	Projected PY 2023 Premium at Current Rate Level ($ 000's)	6,484,731
(2)	Required PY 2023 Premium ($ 000's)	6,063,325
(3) = [(2) / (1)] - 1	**Actuarial Indicated Rate Change**	**-6.5%**
(4) = Max [(1),(2)]	Proposed PY 2023 Premium (Including Rate Change Floor) ($ 000's)	6,484,731
(4) - (2)	Impact from Rate Change Floor ($ 000's)	421,406
(5) = [(4) / (1)] - 1	**Proposed Rate Change**	**0%**

16. As shown in Figure 4.2, the application of the rate change floor of 0% results in $421.4 million of premium in excess of the PY 2023 required premium. This allows for a surplus of $402.9 million (equal to the $421.4 million of excess premium minus premium tax) to contribute to ICBC's Basic capital over the policy period.

C CONCLUSION

17. In conclusion, the *Special Direction IC2* amendments:

- Require that ICBC use the Basic CMP in existence as of May 27, 2016 with changes to the capital provision (specifically a capital provision equal to an amount of 7% of required premium).
- Suspend the minimum capital requirement (of 100% MCT).
- Repeal some elements of rate smoothing.
- Suspend the CRC for PY 2023.

18. The proposed rate change of 0% aligns with these amendments and allows for a surplus of $402.9 million to flow into ICBC's Basic capital. The surplus will allow ICBC to build towards its current capital management target of 145% MCT while providing additional room to absorb any unfavourable emergence that may occur within the 24-month policy period.

19. During the 2021 Revenue Requirements Application (RRA), ICBC had originally expressed an intent to file a new Basic CMP as part of this Application. However, given the amendments to *Special Direction IC2* discussed above, ICBC has delayed its update until December 15, 2024 as part of the 2025 RRA.

CHAPTER 5
INVESTMENTS

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A INTRODUCTION

1. ICBC has an investment portfolio in excess of $20 billion as at March 31, 2022. Funds available for investment purposes come primarily from the premiums collected and set aside for unpaid claims. ICBC invests available funds to generate an investment return that is used to reduce premiums for policyholders.

2. The operational management of ICBC's investment portfolio is performed by the British Columbia Investment Management Corporation (BCI), a provincial Crown agent with $211.1 billion of net assets under management as at March 31, 2022.

3. ICBC's investment strategy continues to be governed by a Statement of Investment Policy and Procedures (SIPP), which is approved by ICBC's Board of Directors. The SIPP outlines the investment portfolio's strategic asset mix, which sets target allocations to individual investment asset classes.

4. In this Chapter, ICBC provides information on its investment portfolio and explains developments since the 2021 Revenue Requirements Application (2021 RRA), including the continued transition to the new long-term strategic asset mix and the introduction of an environmental, social and governance mandate in ICBC's investments. These changes, along with interest rate movements and expected investment return forecasts, impact the actuarial indicated rate change through their influence on the New Money Rate and the Yield on Capital Available for Rate Setting (formerly known as the Yield on Basic Equity).

5. Due to a shift in asset classes held in the portfolio, as well as changes in the expected return of each asset class, the New Money Rate and Yield on Capital Available for Rate Setting are higher for Policy Year (PY) 2023 than the equivalent investment yields for PY 2021. This means that ICBC is expected to generate higher investment returns, resulting in a favourable impact on rates. This favourable impact is in addition to the longer expected payout period for policyholder supplied funds under Enhanced Care, which enables ICBC to hold and invest premiums collected over a longer period of time.

6. This Chapter sets out the following:

- Section B discusses the formula for the New Money Rate.
- Section C discusses the formula for the Yield on Capital Available for Rate Setting.
- Section D shows the calculation of the New Money Rate and the Yield on Capital Available for Rate Setting for PY 2023 (April 1, 2023 – March 31, 2025).
- The SIPP dated January 27, 2022 (January 2022 SIPP) is provided in Appendix 5A. Changes to the SIPP in comparison to the one dated April 22, 2021, filed as part of the 2021 Revenue Requirements Proceeding are described, and a blacklined version of the January 2022 SIPP showing the changes is provided.
- Appendix 5B includes BCI's Long-Term Capital Market Expectations reference document prepared in August 2022 (BCI Report), from which the asset class forecasts for the New Money Rate and the equity yield in the Yield on Capital Available for Rate Setting are sourced.

7. Historical investment performance information for fiscal year 2021/22 has also been provided in Chapter 8, Appendix 8B, Investment Performance Information.[1]

B FORMULA FOR THE NEW MONEY RATE

B.1 INTRODUCTION

8. The New Money Rate represents the investment yield expected for premiums collected over the policy period. Investment income is earned on these premiums until they are paid out for costs related to the policy period. The New Money Rate is used as the discount rate for the required premium calculation in Chapter 3, Actuarial Indicated Rate Change Analysis.

B.2 COMPONENTS OF THE FORMULA

9. The BCUC approved the current New Money Rate formula in its October 28, 2021 Decision on the 2021 Revenue Requirements Application (Order G-307-21). The formula as set out in Figure 5.1 is calculated as the weighted sum of expected returns of ICBC's investment assets, determined by using the weighting for each asset class in ICBC's strategic asset mix and BCI's 15-year annualized return forecasts, plus a Diversification and Rebalancing Premium. This

[1] Required reporting in accordance with the April 6, 2010 Decision on the Streamlined Regulatory Process (Order G-65-10).

is done for each of the two 12-month periods covered by PY 2023. An average of the two 12-month periods is then calculated, which constitutes the New Money Rate for PY 2023.

Figure 5.1 – New Money Rate Formula

	Asset Group Return		Weighting		Forecast
[A]	Fixed Income - Liquidity Return	=	Strategic mix weight as % of the portfolio	x	Weighted average of BCI 15-year total return forecast for fixed income - liquidity assets
[B]	Fixed Income - Credit Return	=	Strategic mix weight as % of the portfolio	x	Weighted average of BCI 15-year total return forecast for fixed income - credit assets
[C]	Equity Return	=	Strategic mix weight as % of the portfolio	x	Weighted average of BCI 15-year total return forecast for equity assets
[D]	Real Assets Return	=	Strategic mix weight as % of the portfolio	x	Weighted average of BCI 15-year total return forecast for real assets
[E]	Portfolio Leverage Cost	=	Strategic mix weight as % of the portfolio	x	BCI 15-year total return forecast for Canadian money market assets
[F]	Sum of Asset Group Returns		[A] + [B] + [C] + [D] + [E]		
[G]	Diversification & Rebalancing Premium				
[H]	**New Money Rate for each 12-month period**		[F]+[G]		
Average of the New Money Rate calculated for each 12-month period is the New Money Rate for PY 2023					

10. The asset groups, the weighting for each asset group, and BCI's forecasts are described in the sections below, as well as the Diversification and Rebalancing Premium.

B.2.1 ASSET GROUPS

11. The New Money Rate formula incorporates each asset class in ICBC's strategic asset mix. For simplicity, ICBC summarizes the weightings and weighted average expected returns for the investment portfolio as four major asset groups: Fixed Income Assets - Liquidity, Fixed Income Assets - Credit, Equity Assets and Real Assets.

12. **Fixed Income Assets – Liquidity:** Fixed Income - Liquidity assets currently include ICBC's Money Market, Short Bonds (segregated) and in future years will include Government Bonds.

13. **Fixed Income Assets – Credit:** Fixed Income - Credit assets currently include Corporate Bonds, Private Debt and Mortgages (which also includes a component of Mezzanine Debt).

14. **Equity Assets:** Equity assets currently include ICBC's Global Equity, Emerging Markets and Private Equity portfolios. During fiscal year 2022/23, ICBC divested itself of the Canadian Equity portfolio.

15. **Real Assets:** Real assets currently consist of Real Estate assets (both ICBC's directly-owned properties, BCI pooled funds and other externally managed pooled funds) as well as Infrastructure asset investment vehicles.

16. **Leverage:** An explicit allocation of leverage has been added to the portfolio, which currently consists of repurchase agreements using short term government securities. This may provide enhanced portfolio returns and, under normal market conditions, add an additional source of liquidity.

B.2.2 WEIGHTING

17. The New Money Rate formula uses the weightings of each asset class according to the strategic asset mix contained in ICBC's SIPP, Appendix A. The weighting of each asset group is calculated as the sum of the weightings of each asset class included in the asset group descriptions above in Section B.2.1.

B.2.3 FORECASTS

18. ICBC uses BCI's 15-year annualized return forecasts as the source of expected returns for each asset class for the purposes of calculating the New Money Rate. Due to rising interest rates and geopolitical events, BCI updated its forecasts in August and these updated figures were used for the purposes of determining the PY 2023 New Money Rate.

B.2.4 DIVERSIFICATION AND REBALANCING PREMIUM

19. As in the 2021 RRA, ICBC is including a Diversification and Rebalancing Premium to the New Money Rate formula. The Diversification and Rebalancing Premium accounts for the incremental return realized by diversified investment portfolios that are systematically rebalanced to maintain the weights of the strategic asset mix.

C FORMULA FOR THE YIELD ON CAPITAL AVAILABLE FOR RATE SETTING

C.1 INTRODUCTION

20. Capital Available for Rate Setting, as defined in section 1 (1) of *Special Direction IC2* as amended by Order in Council 666, December 12, 2022 (B.C. Reg. 269/2022), replaces what was referred to in previous revenue requirements applications as Basic Equity. Other than the change in terminology, there has been no amendment as to how the formula for the Yield on Basic Equity, as approved by Order G-307-21, differs from the formula for the Yield on Capital Available for Rate Setting.

C.2 COMPONENTS OF THE FORMULA

21. The components of the Yield on Capital Available for Rate Setting formula are shown in Figure 5.2. The formula retains the components of the currently approved formula for the Yield on Basic Equity, determined as the sum of the product of the current weighting and current yield of each asset class in the current portfolio, minus fees for managing the investment portfolio. The yield on equity assets continues to be based on the BCI's 15-year weighted average return on ICBC's equity assets.

Figure 5.2 – Formula for the Yield on Capital Available for Rate Setting

	Asset Class Weight Component		Yield Component
[A]	Current Weighting of Fixed Income – Liquidity as % of portfolio	x	Current Yield at Market
[B]	Current Weighting of Fixed Income – Credit as % of portfolio	x	Current Yield at Cost / Market
[C]	Current Weighting of Equities as % of portfolio	x	BCI 15-year weighted average return on ICBC equity assets (CAD)
[D]	Current Weighting of Real Estate as % of portfolio	x	Current Yield at Cost / Market
[E]	Current Weighting of Infrastructure as % of portfolio	x	Current Yield at Market
[F]	Sum of Asset Group Returns [A] + [B] + [C] + [D] + [E]		
[G]	Fees for managing investment portfolio as % of portfolio value		
[H]	**Yield on Capital Available for Rate Setting for each 12-month period** [F] - [G]		

D CALCULATION OF THE INVESTMENT RETURNS

22. Subsections D.1 and D.2 show the calculations of the New Money Rate and Yield on Capital Available for Rate Setting for the two 12-month periods that constitute PY 2023 using the formulas described in Section B and C.

D.1 CALCULATION OF THE NEW MONEY RATE

23. In accordance with Section B, the New Money Rate is calculated as the weighted sum of expected returns of ICBC's investment assets, determined using the weighting for each asset class in ICBC's strategic asset mix and BCI's 15-year annualized return forecast, plus a Diversification and Rebalancing Premium.

24. As can be seen from Figures 5.3 and 5.4, a different value of the New Money Rate is computed for the first 12-month period as compared to the second 12-month period. This results from the shift in ICBC's investment portfolio toward the long-term strategic asset mix according to the multi-year transition schedule contained in Appendix A of the January 2022 SIPP.

25. To calculate the New Money Rate for PY 2023, the weightings for each asset class have been determined using the target holdings of the portfolio as at April 1, 2023 and April 1, 2024. The New Money Rate for each 12-month period is then determined as the weighted average expected return for ICBC's investment assets utilizing the BCI report included as Attachment 5B.1 to Appendix 5B, in addition to the Diversification and Rebalancing Premium. Further details on the calculation of the weighted yields in column (3) are provided in Appendix 5B. An average of the two 12-month periods is then taken to arrive at the New Money Rate for PY 2023, namely 5.72%.

Figure 5.3 – New Money Rate for the First 12-Month Period

Asset Group	Weighting (%)[1] (1)	Formula for Asset Yield	Forecast Yield (%) (2)	Weighted Yield (%) (1)x(2)=(3)
Fixed Income - Liquidity	44	BCI 15-year weighted average total return forecast on ICBC fixed income assets	3.4	1.49
Fixed Income - Credit	22	BCI 15-year weighted average total return forecast on ICBC fixed income assets	5.6	1.23
Equity	30	BCI 15-year weighted average total return forecast on ICBC equity assets	6.7	2.02
Real Assets	14	BCI 15-year weighted average total return forecast on ICBC real assets	6.5	0.91
Leverage	-10	BCI 15-year total return forecast – ICBC Canadian money market assets	2.4	-0.24
Expected Return of Investment Assets				5.41
Diversification & Rebalancing Premium				0.25
New Money Rate for the first 12-month period[2]				**5.66**

[1] Weightings based on strategic mix target, as shown in Appendix 5A. Attachment 5A.1 (page 24).
[2] Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.

Figure 5.4 – New Money Rate for the Second 12-Month Period

Asset Group	Weighting (%)[1] (1)	Formula for Asset Yield	Forecast Yield (%) (2)	Weighted Yield (%) (1)x(2)=(3)
Fixed Income - Liquidity	41	BCI 15-year weighted average total return forecast on ICBC fixed income assets	3.4	1.39
Fixed Income - Credit	22	BCI 15-year weighted average total return forecast on ICBC fixed income assets	5.6	1.24
Equity	30	BCI 15-year weighted average total return forecast on ICBC equity assets	6.8	2.05
Real Assets	17	BCI 15-year weighted average total return forecast on ICBC real assets	6.5	1.10
Leverage	-10	BCI 15-year total return forecast – ICBC Canadian money market assets	2.4	-0.24
Expected Return of Investment Assets				5.54
Diversification & Rebalancing Premium				0.25
New Money Rate for the second 12-month period[2]				**5.79**

[1] Weightings based on strategic mix target, as shown in Appendix 5A. Attachment 5A.1 (page 24).
[2] Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.

26. The New Money Rate for PY 2023 of 5.72% is 160 basis points higher than the New Money Rate of 4.12% calculated using the April 2021 SIPP submitted as part of the 2021 RRA Proceeding. The increase is largely attributable to a shift of fixed income assets to higher yielding credit instruments, higher expected returns in select asset classes and higher allocations to less liquid but higher yielding asset classes.

27. Due to the fall in values of liquid securities at the beginning of 2022, ICBC's current weighting of illiquid investments is above the strategic target weight. This has resulted in correspondingly lower weights for some liquid securities, in particular short bonds, compared to the strategic targets at October 30, 2022.

28. The New Money Rate for the second 12-month period using the formula described in Section B is 5.79%, 13 basis points higher than the New Money Rate calculated for the first 12-month period. The increase is attributable to the shifts in the weighting of the strategic asset mix, including a lower weighting of Short Bonds and Global Equity and a higher weight of illiquid and higher yielding assets like Private Equity and Infrastructure.

D.2 CALCULATION OF THE YIELD ON CAPITAL AVAILABLE FOR RATE SETTING

29. In accordance with Section C, the Yield on Capital Available for Rate Setting is the sum of the weighted yields for each asset class less the fees for managing the investment portfolio. Note that, except for the yield on equity assets, actual weightings and yields for all the individual asset classes are used in the formula.

30. A different value for the Yield on Capital Available for Rate Setting is calculated for the first 12-month period of PY 2023 compared to the second 12-month period. This is due to an expected change in the weighting of the asset classes for the second 12-month span, as further explained below.

31. To calculate the Yield on Capital Available for Rate Setting for the first 12-month period, the weightings for each asset class have been determined using the holdings of the existing portfolio as at August 31, 2022 and for most of the asset classes the current yields are determined from the holdings in the existing portfolio. As described in Section C, the equities yield formula in Figures 5.5 and 5.6 is determined as the weighted average expected return for ICBC's equity assets utilizing the BCI Report.

32. To calculate the Yield on Capital Available for Rate Setting for the second 12-month period, the weightings for each asset class have been determined using a multi-year investment outlook projection of assets held as at April 1, 2024.

33. The Yield on Capital Available for Rate Setting for the first and second 12-month periods are 176 and 196 basis points higher than the second 12-month period in the previous filing, respectively. This increase is attributable largely to higher yields on fixed income investments generally as well as a shift in allocation toward higher yielding fixed income assets.

34. The Yield on Capital Available for Rate Setting for the first 12-month period is 4.77% and for the second 12-month period is 4.97%. Calculations for the respective periods are shown below in Figures 5.5 and 5.6.

Figure 5.5 – Yield on Capital Available for Rate Setting for the First 12-Month Period

Asset Class	Current Weightings (%)	Formula for Yield	Current Yields (%)	Weighted Yields (%)
Fixed Income - Liquidity	41.65	Current Money Market Yield at Cost	3.75	1.57
Fixed Income - Credit	21.22	Current Bond Portfolio Yield at Cost / Market	4.68	0.99
Equity	26.19	BCI 15-year weighted average return on ICBC equity assets (CAD)	6.65	1.74
Real Estate	8.51	Current Real Estate Yield at Cost / Market	6.39	0.55
Infrastructure	2.43	Current Infrastructure Yield at Market	7.55	0.18
Total	**100.00**[1]			**5.03**
Minus the Fees for Managing the Investment Portfolio				-0.26
Yield on Capital Available for Rate Setting for the first 12-month period[1]				**4.77**

[1] Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.

Figure 5.6 – Yield on Capital Available for Rate Setting for the Second 12-Month Period

Asset Class	Projected Weightings (%)	Formula for Yield	Current Yields (%)	Weighted Yields (%)
Fixed Income - Liquidity	36.75	Current Money Market Yield at Cost	3.75	1.38
Fixed Income - Credit	19.56	Current Bond Portfolio Yield at Cost / Market	4.68	0.92
Equity	28.09	BCI 15-year weighted average return on ICBC equity assets (CAD)	6.65	1.87
Real Estate	9.91	Current Real Estate Yield at Cost / Market	6.39	0.63
Infrastructure	5.70	Current Infrastructure Yield at Market	7.55	0.43
Total	**100.00**[1]			**5.23**
Minus the Fees for Managing the Investment Portfolio				-0.26
Yield on Capital Available for Rate Setting for the second 12-month period[1]				**4.97**

[1] Differences between current weightings multiplied by actual yields and weighted yields are due to rounding.

E CONCLUSION

35. Interest rate movements, expected investment return forecasts and changes to ICBC's investment portfolio, as described above, have an impact on the actuarial indicated rate change. This is through their impact to the New Money Rate and the Yield on Capital Available for Rate Setting. For PY 2023, both the New Money Rate and the Yield on Capital Available for Rate

Setting are higher than their corresponding investment yields for PY 2021. As indicated in Chapter 3, this enables ICBC to generate higher investment income which results in a favourable impact for customers.

APPENDIX 5A

STATEMENT OF INVESTMENT POLICY AND PROCEDURES

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A INTRODUCTION

1. In this Appendix, the most recent Statement of Investment Policy and Procedures (SIPP) dated January 27, 2022 (January 2022 SIPP), included as Attachment 5A.1, is compared to that dated April 22, 2021 (April 2021 SIPP), submitted during the 2021 Revenue Requirements Proceeding. A blacklined version of the January 2022 SIPP compared to the April 2021 SIPP is provided as Attachment 5A.2.

2. The January 2022 SIPP reflects an updated set of investment beliefs to ensure that environmental, social and governance (ESG) factors are considered as part of investing activities. Other revisions to the SIPP relate to findings from the most recently completed asset-liability management study and its implications on the strategic asset mix for ICBC's investment portfolio or for general housekeeping.

B ESG BELIEFS

3. Climate change and reconciliation with Indigenous peoples have been noted as specific priorities for ICBC. In coordination with the Investment Committee and ICBC management, the British Columbia Investment Management Corporation (BCI) has established a set of beliefs around environmental, social and governance issues to guide ICBC's investment approach. This has resulted in a statement that was then incorporated into the SIPP (Section 12 and Appendix C). BCI will report on ESG matters on an annual basis to the Investment Committee (SIPP Section 9).

C ASSET ALLOCATION

4. Revisions to the SIPP (SIPP Section 7 and Appendix A), reflect an accelerated timetable to achieve ICBC's strategic shift to hold fewer highly liquid fixed income investments in exchange for less liquid investments that offer the potential for higher returns over the long run. This revision was done in conjunction with BCI, which believes that the capital can be placed on the accelerated timetable in a prudent fashion.

5. ICBC continues to hold legacy investments in certain asset classes in addition to assets managed on a segregated basis. Among these are investments made before the transition to BCI as well as Canadian bonds.

D BCI FUNDS APPROVED FOR INVESTMENT

6. SIPP Appendix B has been updated to reflect additional pooled funds offered by BCI that

have been approved by ICBC's Board of Directors and are eligible for investment, namely the Government Bond Fund and the Leveraged Bond Fund.

E OTHER CHANGES

7. Other revisions to the SIPP include:

- The addition of ICBC's Statement of Investment Beliefs, previously a stand alone document, as Appendix C.
- Updates to asset limits of the regulatory framework (SIPP Section 3).

8. All other amendments address housekeeping issues such as changes to naming conventions.

Attachment 5A.1 – Statement of Investment Policy and Procedures Dated January 27, 2022

INSURANCE CORPORATION OF BRITISH COLUMBIA

STATEMENT OF INVESTMENT

POLICY AND PROCEDURES

January 27, 2022

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INSURANCE CORPORATION OF BRITISH COLUMBIA

Statement of Investment Policy and Procedures

1 PURPOSE

The purpose of this Statement of Investment Policy and Procedures (the "Statement" or "SIPP") is to establish guidelines which will ensure ICBC's assets are managed prudently. The Statement will establish eligible investments, asset allocation ranges and the discretion given to fund managers, and consequently dictate the portfolio risk return profile.

2 CORPORATE LIABILITY AND RISK PROFILE

ICBC (the "Corporation" or "ICBC") is a Crown corporation offering compulsory basic automobile insurance and optional extension insurance.

As of September 30, 2021, ICBC's liabilities were profiled as follows:

	Liabilities ($000)	Duration in Years
Basic	12,339,620	3.25
Optional	5,637,403	2.39
Total	17,977,023	3.01

ICBC maintains one investment portfolio for both Basic and Optional insurance businesses for the purposes of operational efficiency and prudence. Like other insurers, ICBC's liabilities are subject to inflation risk and can be sensitive to price increases. ICBC can also have significant cash needs due to volatility of claims payments. However, the relative predictability and volume of premium cash flows considerably reduce ICBC's cash flow risks.

Enhanced Care Insurance

The implementation of Enhanced Care Coverage Basic insurance is expected to result in a longer average duration profile for Basic claims liabilities and less volatility in ICBC's operational cash requirements. This transition of ICBC's corporate liability profile is expected to occur gradually, over multiple years, as legacy tort claims are settled and Enhanced Care liabilities are incurred. During this transition period, ICBC is expected to experience significant negative operational cash flows due to the payout of legacy claims settlements requiring liquidity from the ICBC Investment Fund.

<u>ICBC Risk Tolerance Statement</u>

The Risk Tolerance Statement formalizes the Board of Director's tolerance for risk related to its investment portfolio. The statement below helps to specify how ICBC Management, British Columbia Investment Management Corporation ("BCI") and the Board of Directors will monitor the ICBC Investment Fund to ensure it remains within an acceptable level of risk.

"ICBC's prime investment objective is to maintain sufficient assets and liquidity to meet insurance claims obligations while delivering an investment return within prudent investment parameters. In accordance with this objective, the investment portfolio should hold sufficient liquid assets to withstand a stressed financial market or insurance claims environment by maintaining a Liquidity Coverage Ratio of at least 1.5x under either scenario. If the portfolio's Liquidity Coverage Ratio falls below 1.5x there will be an immediate reassessment of the investment portfolio's strategic asset mix. Otherwise, the investment portfolio will be managed in accordance with the Statement of Investment Policy and Procedures."

The Liquidity Coverage Ratio will be reported to the Investment Committee by BCI in the Investment Risk Report.

3 REGULATORY FRAMEWORK

The legislative framework with respect to ICBC's obligations and responsibilities in the management of its investment portfolio is based on the "prudent person rule". This general prudent person standard is set out in section 492 of the *Insurance Companies Act* (Canada). This standard requires ICBC to make investments for its insurance business in the manner that "a reasonable and prudent person would apply in respect of a portfolio of investments to avoid undue risk of loss and to obtain a reasonable return".

The specific statutory framework and asset class limits with respect to ICBC's investments are outlined in Section 29 of the *Insurance Corporation Act* (British Columbia) and Section 2 of the Application of Legislation Regulation, BC Reg. 322/2003 deposited.

The regulatory asset class limits applicable to ICBC's Optional insurance business are as follows (Investment Limits (Insurance Companies) Regulations SOR/2001-396):

1. real estate investments are limited to 10% of total assets;

2. equity investments are limited to 25% of total assets; and

3. investments in (1) and (2) in the aggregateare limited to 35% of assets.

It should be noted that this Statement has been developed in consideration of the limits established by the legislative framework. For clarity, while ICBC maintains one investment portfolio for the purposes of operational efficiency and prudence, these limits shall be adhered to in respect of the Optional insurance business for the purposes of determining actuarial discount rates and setting insurance rates. Accordingly, the strategic asset mix weighting for the Basic- and Optional-backing assets are provided in Appendix A.

4 ROLES AND RESPONSIBILITIES

1. <u>ICBC Board of Directors</u>

   Under Corporate By-Laws, the Board of Directors has the responsibilities to (a) define and control strategies, policies and limitations related to the investment of the Corporation's funds, (b) exercise voting rights attached to corporate securities, and (c) provide for the custody of assets, registration of securities, and disposition of investments. The execution of most of these responsibilities has been delegated to the ICBC Investment Committee of the Board of Directors, BCI, and

ICBC Management. The Board of Directors still retains responsibility for major changes to investment policies and procedures.

2. ICBC Investment Committee

The Investment Committee is responsible for recommending investment policies and procedures to the Board of Directors, ensuring investments are managed in compliance with the policies, and monitoring performance.

These responsibilities include making recommendations to the Board of Directors regarding:

a) asset allocation parameters (including tactical asset allocation ranges);

b) risk management parameters (e.g., benchmarks);

c) eligible investments (e.g., eligible BCI funds for investment); and

d) external investment management services.

3. BCI

BCI acts as an agent for investment of ICBC, and is responsible for providing all required day-to-day investment management services pursuant to the Funds Management Agreement dated November 1, 2019 between ICBC and BCI (the "**FMA**"), the First Additional Services Agreement dated November 1, 2019 between ICBC and BCI (the "**ASA**" and together with the FMA, the "**BCI Agreements**").

BCI has the following responsibilities:

a) invests or arranges for the investment of ICBC's assets and ensures ongoing compliance with this Statement;

b) collaborates with ICBC Management in the development of investment policies, procedures, and strategies for consideration by the Investment Committee;

c) recommends asset allocation parameters (including the strategic asset mix and tactical asset allocation ranges) to the Investment Committee;

d) rebalances the portfolio and completes tactical asset allocations within permitted ranges;

e) hires and manages contract arrangements with the custodian and other external providers of related services (e.g., external investment managers, data service providers, etc.) on behalf of ICBC;

f) monitors the activity of external investment managers (including ICBC's legacy external investment managers) and reports on investment manager performance to the Investment Committee;

g) provides performance measurement services and fulfills all reporting requirements outlined in Section 9 of this Statement;

h) attends Investment Committee meetings at the request of the Investment Committee;

i) receives direction from ICBC Management regarding (i) the movement of funds between ICBC and BCI in respect of the Corporations' operational requirements and (ii) changes to the ICBC payment plan receivable;

j) arranges securities lending services; and

k) perform such other duties and provide such other services required to be performed or provided by BCI under the BCI Agreements and any other agreements for Additional Services (as defined in the FMA) entered into between ICBC and BCI from time to time.

4. ICBC Management

ICBC Management is responsible for providing investment advice, policy recommendations, and other information required by the Board of Directors and Investment Committee to discharge their responsibilities, and may work in collaboration with BCI or other external service providers in development of such information. Management is also responsible for ongoing governance and oversight over BCI, and ensuring that procedures are in place to confirm that BCI remains in compliance with this Statement.

ICBC Management has the following responsibilities:

a) recommends investment policies and procedures to the Investment Committee;

b) recommends asset allocation parameters (including the strategic asset mix and tactical asset allocation ranges) to the Investment Committee;

c) recommends eligible investments from among BCI's fund offerings to the Investment Committee;

d) ensures policy compliance, investment performance, and external management fees are monitored and reported to the Investment Committee;

e) recommends the termination of ICBC's legacy external investment managers to the Investment Committee;

f) with respect to ICBC's legacy assets (i.e., external funds, mortgages, real estate), authorize and provide instructions to BCI regarding any dispositions and subsequent reinvestment of those assets and the termination of legacy external investment managers; and

g) ensures adequate cash flows to meet the Corporation's payment obligations.

5. <u>External Investment Managers</u>

ICBC utilizes external investment management services for certain portfolio strategies. For clarity, the external investment managers (other than BCI and through BCI, its affiliate, QuadReal Property Group Limited Partnership ("**QuadReal**")) that continue to manage ICBC assets upon the effective date of the transition of day-to-day investment management responsibilities to BCI are referred to as the "legacy external investment managers". For clarity,

a) all other references to external managers include BCI and to externally managed funds includes funds managed by BCI; and

b) external investment managers specifically exclude existing property managers and mortgage loan servicers.

The legacy external investment managers have the following responsibilities:

a) select securities within each permitted asset class for the portion of the portfolio allocated to the manager, subject to applicable legislation and to any constraints or directives within this Statement or established by the ICBC Investment Committee;

b) participate in a review of this Statement when requested by the Investment Committee;

c) provide a Statement of Investment Policy and Goals for any pooled fund investments;

d) provide quarterly performance reports;

e) inform ICBC Management and BCI of any element of the Statement or any other item that could prevent the achievement of the mandate objectives, and obtain prior approval from ICBC Management to materially deviate from the Statement;

f) inform ICBC Management and BCI of any changes in ownership of the firm or changes in key personnel, investment process, or style; and

g) inform ICBC Management and BCI if any of the investments fall outside of the investment constraints as a result of the Statement or changes to the Statement or applicable legislation.

6. <u>Custodian</u>

The custodian has the following responsibilities:

a) fulfills all their duties as outlined in their service agreement; and

b) fulfills the regular duties of a custodian as required by law.

5 CONFLICT OF INTEREST

All actual, potential, or perceived conflicts of interest between all parties associated with the investment of insurance assets, including officers, directors, designated employees, employees or agents of ICBC, but excluding BCI and external managers retained by BCI, shall be disclosed to the Investment Committee before any decision regarding the specific transactions are completed. If a conflict of interest arises, the party shall disclose such a conflict to the Chair of the Investment Committee or in the Chair's absence, the acting Chair. The party must be excluded from participating in any discussion or decision related to the area of conflict.

The Secretary of the Investment Committee will be responsible for recording the declaration of conflict and will advise the Board of Directors of the details of the conflict.

Guidance on what constitutes conflicts of interest will be provided by:

a. Section 2.04 of the Corporate By-Law No. 9 dated July 28, 2016 of the Insurance Corporation of British Columbia; and

b. The Insurance Corporation of British Columbia's Code of Ethics for officers and employees of ICBC.

BCI and external managers retained by BCI shall not be subject to the above provisions. All actual, potential, or perceived conflicts of interest:

c. with respect to BCI and its officers and employees shall be governed by BCI's *Code of Ethics & Professional Conduct*; and

d. with respect to external managers retained by BCI shall be governed by the CFA Institute's *Code of Ethics and Standards of Professional Conduct*.

6 ASSET ALLOCATION

Strategic Asset Mix

The strategic asset mix is used to set the total return performance benchmark for the portfolio.

It establishes the long-term combination of asset classes normally split into three major groups categorized as fixed income, equities, and real assets. The broad fixed income category includes all interest-bearing instruments, but for the purposes of risk monitoring has been categorized into two sub-groups as liquidity and credit. Liquid fixed income includes money market instruments and highly liquid bonds, while fixed income credit includes corporate bonds, private debt and mortgages. The equity category includes investments exhibiting elements of participation in ownership of companies like common stocks and private equity. The real assets category includes investments exhibiting elements of participation in ownership of physical assets like infrastructure and real estate.

The strategic asset mix is determined in consideration of liquidity, risk constraints, and cash flows in order to meet the long-term investment objectives of the Fund.

Leverage is used to satisfy the ICBC receivables program. The level of leverage in the strategic asset mix is approximately the historical value of the ICBC payment plan receivable.

Asset Class	Strategic Mix
Fixed Income Assets	**55%**
Money Market	2%
Government Bonds	25%
Corporate Bonds	12%
Private Debt	10%
Mortgages	6%
Equity Assets	**25%**
Global Equity	13%
Emerging Markets Equity	2%
Private Equity	10%
Real Assets	**30%**
Real Estate	15%
Infrastructure & Renewable Resources	15%
Sub Total	**110%**
Portfolio Leverage	-10%
Total Portfolio	**100%**

Tactical Asset Mix

The tactical asset mix focuses on short-term asset allocations that attempt to increase investment return or manage risk through opportunistic shifts in asset weightings. Since tactical asset allocation can either add or detract from the overall strategic asset mix return, the extent of tactical asset mix decisions are limited by the following ranges. These ranges are set in consideration of the overall financial strength of ICBC and its sensitivity to negative or positive investment returns.

ICBC recognizes the difficulty in fully funding the long-term allocations in illiquid asset classes. As a temporary measure, the Strategic Asset Mix will track the mandate at a given time and will adjust each year until such time as the fully funded long-term mandates are achieved. The Asset Mix Transition Schedule, showing intended interim asset allocation targets, is shown in Appendix A and should be reviewed annually as implementation progresses, and adjusted as required.

Tactical ranges applicable during the transition mix will be reviewed and updated annually.

Benchmark weights shall be set in alignment with funded allocations in respect of the illiquid asset classes, up to the long-term strategic mix targets. Over or under allocations to these asset classes – and the associated benchmark weights – will be invested by BCI in accordance with BCI's internal proxy asset guidelines.

Due to the significant asset mix transitions effective May 1, 2021, benchmark weights will be set to actual portfolio allocations for a maximum transitional period of five months. The allocation may temporarily be outside of the policy range during the transitional period.

7 INVESTMENT RISK

Diversification of investment risk between asset classes is provided through the asset allocation guidelines set forth in the previous section.

Tactical Asset Mix – April 1, 2022 to March 31, 2023			
Asset Class	**Tactical Minimum**	**Strategic Target**	**Tactical Maximum**
Fixed Income - Liquidity	**43%**	**47%**	**55%**
Money Market	0%	5%	10%
Short Bonds (segregated)	38%	42%	50%
Government Bonds	-	-	-
Fixed Income - Credit	**18%**	**22%**	**26%**
Corporate Bonds	9%	12%	15%
Private Debt	0%	2%	4%
Mortgages[1]	4%	8%	11%
Equity Assets	**21%**	**29%**	**33%**
Canadian Equity	-	-	-
Global Equity	17%	25%	30%
Emerging Markets Equity	0%	2%	4%
Private Equity	0%	2%	4%
Real Assets	**7%**	**12%**	**16%**
Real Estate	5%	9%	13%
Infrastructure & RR	0%	3%	6%
Sub Total	**100%**	**110%**	**115%**
Portfolio Leverage	0%	-10%	-15%
Total Portfolio	**100%**	**100%**	**100%**

- Investment risk guidelines within each asset class are set out in the definitions of eligible investments.

[1] Mortgages asset class includes Mezzanine Debt.

8 RETURN OBJECTIVES

The return objectives for ICBC's investment portfolio is to achieve superior investment returns through management of its assets subject to level of risk deemed appropriate by the Statement.

ICBC will measure individual asset categories against the appropriate index with added excess returns. Measurement will be assessed net of associated management fees over four-year moving periods.

Below is a list of the appropriate benchmarks for each asset class and the expected incremental return for active management. The following benchmarks are referred to herein as the "Index".

ASSET CLASS	SUB – CATERGORIES	BENCHMARK
Fixed Income – Liquidity		
Money Market	CAD	FTSE Canada 91-day T-Bill Index
	USD	Secured Overnight Financing Rate (SOFR)
Short Bonds	Short Bonds	FTSE Canada Short term Overall Bond Index
	Legacy Mid Bonds Investments	FTSE Canada Mid term Overall Bond Index
Government Bonds		FTSE Canada All Government Bond Index
Fixed Income – Credit		
Corporate Bonds		50 per cent Investment Grade: Bank of America Merrill Lynch US Corporate Index (CAD Hedged) *Plus* 50 per cent High Yield: Bank of America Merrill Lynch BB-B US Cash Pay High Yield Constrained Index (CAD Hedged)
Private Debt		S&P/LSTA U.S. Leveraged Loan 100 Index (CAD Hedged)
Mortgages	BCI Program	ICE Bank of America Merrill Lynch 1-3 Year Canada + 270 bps
	Legacy Fixed Term Investments	FTSE Canada Short Term Bond Index + 100 basis points

ASSET CLASS	SUB – CATERGORIES	BENCHMARK
	Legacy Mezzanine Investments	ICE BAML 1-3 Year U.S. Corporate/Government Index + 200 basis points (hedged to CAD)
Equities		
Canadian Equities	Large Cap	S&P/TSX Capped Composite Index
	Legacy Small Cap Investments	S&P/TSX Small Cap Index
Global Equities	Large Cap	MSCI World Ex-Canada Net Index
	Legacy Small Cap Investments	MSCI World Small Cap Net Index
Emerging Markets Equities		MSCI Emerging Markets Net Index
Private Equity		MSCI All Country World Net Index plus 200 basis points
Real Assets		
Real Estate	BCI Program	6.8% Nominal
	Legacy Investments	Canadian CPI + 4.25%
Infrastructure & RR		6.3% Nominal

The excess return objective for Short Bonds is 10 basis points. All other excess return objectives are as per BCI's pooled fund policies.

For performance measurement purposes, the benchmark proportion within asset classes will be set to actual to account for the legacy investments.

9 PERFORMANCE MEASUREMENT AND REPORTING

Performance Measurement

Investment returns will be reported to the Investment Committee on a quarterly basis. As a general rule, investments should be priced using market values derived from independent pricing sources in accordance with standard industry practices, and returns determined using time-weighted rates of return.

Private assets that are not regularly traded (e.g., private equity and infrastructure & renewable resources) shall be valued at least annually, in accordance with the valuation policies established by the managers and standard industry practices, and returns, will also be calculated using internal rates of return.

Reporting

BCI will provide ICBC with reports as outlined in the following table:

Report	Frequency
Asset Allocation	Weekly
Performance Report	Monthly; Quarterly
Investment Risk Report	Semi-annually
Investment Strategy Report	Quarterly
Fee Statement	Quarterly
Client Investment Fee Outlook	Annually

Performance reports will include the following information:

- market values and share of overall portfolio of individual asset classes;
- quarterly, annual, and longer-term returns for the total portfolio, individual funds, and performance benchmarks;
- discussion of performance at the total portfolio and asset class levels;
- sources / uses of funds;
- contribution to returns analysis;
- attribution analysis for liquid asset classes;
- comparison of asset class performance with manager universes; and
- a certificate of attestation of compliance with this Statement, and compliance with BCI's internal pooled fund policies.

For clarity, the performance reports will capture all ICBC investment assets (i.e., BCI-managed assets and ICBC's legacy assets).

BCI shall provide ICBC with the information reasonably requested to conduct its evaluation of legacy external investment managers provided for in this Statement pursuant to the ASA.

BCI will report on Environment, Social and Governance ("ESG") matters to the Investment Committee on an annual basis.

BCI will also provide ICBC with additional reports and information as may be reasonably requested from time to time.

10 FUND MANAGEMENT STRUCTURE AND INVESTMENT MANAGER MANDATES

Manager Structure

The ICBC Investment Committee has adopted a diversified manager structure which employs a mix of active and passive styles. Active management has been adopted for a portion of assets because it provides the opportunity to outperform market indices over the long run. Passive management, in the form of index or enhanced index mandates, has been adopted for a portion of the assets because it minimizes the risk of underperformance relative to a benchmark index, is less expensive than active management and facilitates allocation changes (e.g., rebalancing and transitions). Specialist managers are used where there is a potential added value benefit.

Transition to BCI

Approval of the Investment Committee is required to terminate legacy external investment managers. The Investment Committee shall also approve any BCI pooled fund into which ICBC assets can be invested. A schedule of approved eligible BCI pooled funds is maintained in Appendix B. ICBC Management shall authorize legacy external investment manager dispositions and reinvestment into BCI funds, including the date of disposition and how cash and/or securities are moved between the legacy fund and the target BCI fund.

Decisions in respect of dispositions of ICBC's legacy direct mortgage and real estate assets and capital expenditures on the legacy real estate assets shall remain subject to ICBC's *Investment Approval Authorities*, as approved by the Board of Directors. BCI shall be entitled to rely on instructions received from ICBC Management and shall have no obligation to investigate or confirm whether any instructions are compliant with such internal ICBC *Investment Approval Authorities.* All other references to such authorities herein shall be similarly qualified with respect to BCI.

Rebalancing

BCI is responsible for portfolio rebalancing. Portfolio assets will be rebalanced whenever actual allocations to an asset class fall outside the maximum or minimum allocation or whenever it is deemed otherwise appropriate by BCI. Rebalancing may be suspended if market conditions, such as excessive volatility or illiquidity, preclude cost effective rebalancing. Should such conditions occur, the ICBC Investment Committee and the Board of Directors will assess the Fund's asset allocation and market conditions with regard to the appropriateness of rebalancing and approve deviations from the tactical asset mix range as required.

Evaluation of Investment Managers

Investment managers will be reviewed by the Investment Committee at least quarterly. BCI will regularly review the legacy external investment managers and shall report on such managers pursuant to the terms set out in the ASA. BCI shall provide ICBC Management with the information needed to conduct ICBC's review of all other external investment managers on a regular basis as agreed between BCI and ICBC.

Investment manager(s) excluding index managers, will be expected to exceed their applicable index, including an additional return net of fees for active management, and exceed the median manager, as applicable. Quarterly (to the extent practical) and annual returns will be monitored, but the four-year moving average return will be the primary measurement. All return calculations will be determined using time-weighted rates of return based on market values derived from independent pricing sources. Return calculations are in accordance with industry standards.

11 ELIGIBLE INVESTMENTS

ICBC's investment assets can be held in segregated accounts or invested in pooled funds and similar or alternative structures (e.g., limited partnerships) where ICBC's assets are commingled with other investors. Investments held in segregated accounts shall be invested in accordance with the following eligible investments guidelines. Investments held in pooled funds shall be invested in accordance with the pooled funds' investment policies. The Investment Committee shall approve any pooled fund or similar commingled structure into which ICBC assets can be invested.

11.1 FINANCING INSTRUMENTS

BCI may transact in repurchase agreements (repos) and repos are an approved instrument for financing. Leverage will be used in accordance with the strategic asset mix set out in section 6 of the Statement.

For clarity, BCI will not combine the liability portfolio with the asset portfolio for purposes of asset allocation, accounting, performance and risk measurement.

Benchmark(s) for liabilities: Realized cost of financing.

BCI will report on the realized cost of financing.

Leverage may be employed within pooled funds as consistent with BCI's pooled fund policies.

The Fund's use of leverage may result in commitments for which the Fund could retain liability even upon withdrawal, within pooled funds as consistent with BCI's pooled fund policies.

11.2 FIXED INCOME

The broad fixed income category includes all interest-bearing instruments. Liquid fixed income includes Money Market, Short Bonds and Government Bonds while fixed income credit includes Corporate Bonds, Private Debt, and Mortgages.

11.3 LIQUID

11.3 A MONEY MARKET INVESTMENTS

Money market investments held for cash management purposes must have a term to maturity of less than fifteen months at time of purchase and will be consolidated with the bond portfolio for the purpose of measuring credit quality, liquidity, duration, and diversification, as outlined in section 11.3 B. All non-government guaranteed issuers will be subject to the same due diligence process that is applied to credit in the bond portfolio.

Money market investments may include both Canadian and US dollar denominated securities. The following investments will be authorized for cash management purposes:

> Treasury bills; provincial promissory notes; repos; certificates of deposit; bankers acceptances & bearer deposit notes; commercial paper; corporate bonds; asset backed securities; swapped deposits; and derivative instruments.

11.3 B SHORT BONDS

ICBC can invest in bonds directly and through externally managed pooled funds. Direct bond investments shall be in bonds held in the Index and secured and unsecured floating, fixed rate and inflation linked debt obligations denominated in Canadian dollars or any major foreign currency of Canadian and foreign corporations, governments and government agencies, and supranational development banks. Bonds may also include coupons, residuals, and synthetic fixed income securities.

Derivative instruments for the purposes of synthetic indexing, risk control, lowering transaction costs, and or liquidity management, may be held.

Private placement bonds are permitted, provided it can be demonstrated that they conform to quality and diversification guidelines. For clarification purposes, private placements are bonds issued by companies with publicly traded debt that are rated by an industry recognized rating agency, that are legally privately placed, subscription based, and may or may not have a broad issuance, liquidity, dealer support, or are of small deal size.

ICBC can also invest in illiquid private debt securities. Private debt securities are not publicly traded and are not normally rated by an industry recognized rating agency. For private debt that is managed by a legacy external investment manager, the services to be performed are provided in the ASA.

Direct bond investments shall be invested in accordance with the following guidelines:

<u>Quality</u>

All publicly traded bonds must be rated a minimum of BBB- or its equivalent by an industry recognized rating agency. In the case of split ratings, Standard and Poor's (S&P) will be considered the appropriate rating. If not rated by S&P, another equivalent industry recognized credit agency's rating will be used.

<u>Diversification</u>

All category and individual limits include issuer margin exposure from repo and derivative activity.

The following minimum diversity limits will apply at all times:

- Not more than 5% of the market value of the bond portfolio can be invested in the debt of any one company; and

- The bond portfolio's allocation to corporate[2] bonds shall not exceed 25 percentage points above the weighting of corporate bonds within the Index.

Foreign bonds are defined as bonds issued by an entity not domiciled in Canada. This includes "Maple" bonds, which are issued by foreign entities in Canadian dollars. It also includes foreign pay bonds issued by foreign entities; however, it would exclude foreign pay bonds issued by Canadian entities (e.g., Yankee bond issued by a Canadian company but denominated in US dollars).

- Foreign currency exposure will be hedged back to Canadian dollars using derivatives. For clarity, US Money Market Funds are not required to be hedged.

Liquidity

Liquidity will be maintained by holding at least 30% of the combined Canadian bond and money market portfolios in Government of Canada, Government of Canada Agency and major Provincial debt securities at all times, net of posted collateral.

Duration

The duration of the Canadian bond portfolio will be managed within plus or minus 20% of the benchmark index duration.

Related Securities

Coupons, residuals, and synthetic securities will fall under the category and guidelines of the underlying security.

CREDIT

11.3 C CORPORATE BONDS

Corporate bonds will include fixed income securities invested primarily in corporate investment grade and high yield bonds issued in the United States and Canada. Corporate bond investments will be made through BCI's pooled funds.

11.3 D MORTGAGES

It is recognized that ICBC's direct mortgage loans will be liquidated over time and that no additional direct mortgage investments will be made.

Following the transition of the management of ICBC's direct mortgage investments to BCI, mortgage investments will be made in accordance with this Statement through BCI mortgage pooled funds and/or externally managed open- or closed-end pooled funds.

[2] Defined as including fixed income securities issued by: corporations, trusts, income trusts, limited partnerships and non-profit entities (such as airports, universities and pension funds) and includes private debt securities.

Approvals & Authorities

1. Approval for new loans, renewals, assumptions and the placement of secondary debt or encumbrances shall be governed by the Investment Approval Authorities as approved by the Investment Committee from time to time;

2. Approval of the Investment Committee is required to sell the mortgage portfolio, in whole or in part, either directly or through securitization to the public market; and

3. BCI shall be responsible for the day-to-day administration of the mortgage portfolio following the effective date of the transition of these responsibilities from ICBC Management to BCI. The transition of responsibility for the day-to-day administration of the mortgage portfolio may occur in one or more tranches. BCI has the ability to delegate the mortgage administration functions to third party managers with appropriate knowledge, ability, experience and integrity required to complete the assignment competently as determined by BCI.

For the existing mortgage portfolio, the services to be performed are provided in the ASA.

For clarity, the BCI Mortgage program will consist of a broad range of mortgage products, diversified by geographic location, type of mortgage, size of mortgage, and type of real estate. It may include direct mortgage loans and mortgage instruments (e.g., mortgage bonds) as well as real estate loans, real estate-related debt and equity investments, and equity interest in QuadReal. No debt will be assumed or created if, as a result, the Leverage Ratio would exceed 40% of the gross asset value of the Mortgage Program.

The Mortgages asset class includes Mezzanine debt. Mezzanine debt includes subordinate or senior core-plus fixed or floating rate debt obligations secured by real assets (real estate or infrastructure & renewable resources) issued by private corporations. Assets are generally income producing with periodic scheduled repayment of interest and principal. The asset class may also include debt obligations secured by non-income producing real assets (e.g., construction lending, land loans, etc.).

Net asset value on foreign currency denominated investment vehicles may be hedged back to the domestic currency as contemplated in Section 11.9 below. Currency hedging decisions are most appropriately made at the global portfolio level rather than at the asset class level and consider net currency exposures.

For mezzanine debt that is managed by a legacy external investment manager, the services to be performed are provided in the ASA. Mezzanine debt is included in the BCI mortgage program. Any new mezzanine debt investments will be through BCI pooled funds.

11.3 E PRIVATE DEBT

Private Debt is broadly defined as less liquid debt provided primarily to non-public companies. ICBC can invest in private debt (i.e., illiquid private debt securities), in accordance with the strategic asset mix set out in section 6 of the Statement. Private debt securities are not publicly traded and are not normally rated by an industry recognized rating agency. Investments may be made directly by BCI or indirectly through external managers. Any new private debt investments will be through BCI pooled funds.

11.4 EQUITIES

Equity investments will be made through direct holdings of securities (common shares, convertible preferred shares, convertible debentures, options, warrants, installment receipts, rights, etc.), stock index futures contracts, equity linked bonds and swaps or indirectly through externally managed pooled and mutual funds or any combination of the above.

For public equities that are managed by a legacy external investment manager, the services to be performed are provided in the ASA.

Private equity investments will typically consist of long-term debt or equity investments that are made primarily outside of the public market. These are long-term commitments made on behalf of the Fund.

Investments in private equity are permitted within the policy limits set forth in Section 6 of the Statement. Investments may be made directly by BCI or indirectly through external managers.

Direct holdings of securities in segregated accounts shall be invested in accordance with the following guidelines:

Diversification

Diversification will be maintained by restricting the number of equity holdings in any separate asset class to no less than 20 individual holdings. No single issuer will represent more than 10% of the portfolio's equity exposure as calculated by market value.

Liquidity

Liquidity will be maintained by limiting public equity holdings to securities listed on major exchanges. No more than 20% of the public equity portfolio will be invested in companies with market capitalization of less than $100 million.

11.5 REAL ESTATE

It is recognized that ICBC's direct real estate investments will be considered for potential liquidation and/or alignment with BCI real estate pooled funds, and that no additional direct real estate investments will be made outside of BCI's real estate pooled funds.

Following the transition of the management of ICBC's real estate investments to BCI, real estate investments will be made in accordance with this Statement through BCI real estate pooled funds including an equity interest in QuadReal and/or externally managed open- or closed-end pooled funds.

Legacy direct real estate investments – including joint ventures and co-ownership vehicles – shall be in accordance with the following guidelines:

Use of Debt (Leverage)

Leverage will be permitted for direct investments to a maximum of 75% loan-to-value at the property level and to a maximum of 45% of the value of the total real estate portfolio. All new debt will be non-recourse to ICBC.

Approvals & Authorities

1. Approval for acquisitions and disposals shall be governed by the Investment Approval Authorities as approved by the Investment Committee from time to time;

2. The selection of any investment manager, joint venture partner or co-ownership vehicle requires the prior approval of the Investment Committee; and

3. BCI shall be responsible for the day-to-day operations and leasing of the real estate investment portfolio following the effective date of the transition of these responsibilities from ICBC Management to BCI. BCI has the ability to delegate the day-to-day property management functions to third party property managers with appropriate knowledge, ability, experience and integrity required to complete the assignment competently, as determined by BCI. Notwithstanding the foregoing, BCI must obtain the prior approval of the Investment Committee before BCI appoints a third party, other than QuadReal Property Group Limited Partnership or its affiliates, to act as the primary provider of property management services in respect of the real estate investment portfolio.

For the legacy real estate investment portfolio, the services to be performed are provided in the ASA.

11.6 INFRASTRUCTURE AND RENEWABLE RESOURCES

Infrastructure investments encompass equity investments in real assets with relatively stable inelastic demand, providing services to a country, city, or region. Infrastructure investment sectors can generally be broken down between energy & utilities, transportation, social infrastructure, and communications. Renewable resources investments will typically consist of timberland, farmland and energy production assets such as wind and solar.

Infrastructure and renewable resource investments will be made through BCI pooled funds.

Net asset value on foreign currency denominated investment vehicles may be hedged back to the domestic currency as contemplated in Section 11.7 below. Currency hedging decisions are most appropriately made at the global portfolio level rather than at the asset class level and consider net currency exposures.

11.7 DERIVATIVE INSTRUMENTS

Swaps, options, forwards, future contracts and other derivative instruments are permitted as long as they are used to hedge portfolio risks or enhance portfolio returns. These strategies can involve foreign exchange components on a hedged basis. BCI shall have discretion to hedge any foreign exchange exposure in the portfolio. For certainty, repo and reverse-repo transactions shall not be deemed to be derivatives transactions.

Derivatives can only be applied to asset classes contemplated in the investment policy. All derivative usage shall be structured to ensure that the aggregate amount of market exposure of the investments (on an aggregate basis or with respect to any asset class) does not increase as a result of derivative transactions, except as expressly permitted by BCI pooled fund policies.

BCI will manage the collateral for derivatives, including posting securities as collateral for ICBC's obligations under derivative agreements, and receiving securities posted by counterparties as collateral for their obligations to ICBC under those agreements. All ICBC derivative transaction settlements will be debited or credited by BCI using ICBC assets.

Derivative activities related to segregated funds, direct investments, and legacy assets will be disclosed to the Investment Committee on a quarterly basis.

12 ESG AND VOTING RIGHTS

ESG matters are important to consider as part of fiduciary responsibility. Evaluating the risks and opportunities presented by ESG matters can be done in a manner which is consistent with the efficient investment of funds to achieve investment return objectives.

Climate change and reconciliation with Indigenous peoples are specific priorities for ICBC. Climate change presents material risks to the overall performance of the investment portfolio and reconciliation with Indigenous peoples should be considered across investment activities where possible. Investing activities should give specific attention to these priorities to ensure ESG opportunities and risks are considered.

Companies with robust and transparent ESG practices perform better in the long term.

The Board of Directors delegates its voting rights to the legacy external investment managers and to BCI. Voting rights will be exercised in the best financial interests of ICBC. BCI shall vote proxies in accordance with BCI's proxy voting policy, a copy of which has been provided to ICBC.

The voting policies and practices of the legacy external investment managers and BCI are to be reviewed periodically by ICBC Management.

Issues deemed to be of concern to the Board of Directors will be brought to the attention of the Chair of the Investment Committee.

13 SECURITIES LENDING

ICBC may loan its securities, or participate in pooled funds that lend securities provided that:

- the securities lending agent provides an indemnity for losses relating to a borrower failing to return securities on loan;
- lent securities are indemnified by the securities lending agent;
- the loan and collateral are valued daily on a "mark-to-market" basis;

- the collateral consists of highly liquid and marketable securities under normal market conditions; and

- the loans meet the terms and conditions of ICBC's external manager's Securities Lending Programs.

14 POOLED FUNDS

ICBC investments held in pooled funds, other commingled investment funds and alternative investment vehicles shall be invested in accordance with such funds' investment policies and product descriptions. Pooled fund managers shall provide ICBC with product descriptions and policies covering investment constraints, conflicts of interest, voting rights and securities lending.

Pooled fund managers shall inform ICBC of any material changes to these policies in a timely fashion.

15 POLICY REVIEW

This Statement will be reviewed annually by the Investment Committee to confirm that the existing asset allocations will result in the best projected investment return for the selected risk level. Current economic and political conditions will be reviewed by the Investment Committee to ascertain if the necessary conditions exist for the investment policies to succeed. Current guidelines will be reviewed by the Investment Committee to maintain their relevance and updated if changes are required. The annual review will not prohibit the interim modification of the investment policy if there have been fundamental changes which affect the underlying assumptions of the investment policy.

APPENDIX A – ASSET MIX TRANSITION SCHEDULE

This asset mix transition schedule represents management's estimate for the pace of implementation of the Fund's long-term strategic asset mix. It will be reviewed and updated annually in alignment with the anticipated pacing of the portfolio's investments in the illiquid asset classes (i.e., private equity, private debt, mortgages, private equity, real estate and infrastructure & renewable resources).

Asset Class	May 1, 2021	Apr 1, 2022	Apr 1, 2023	Apr 1, 2024	Apr 1, 2025	Apr 1, 2026	Apr 1, 2027	Apr 1, 2028
Fixed Income - Liquidity	**50%**	**47%**	**45%**	**41%**	**36%**	**33%**	**30%**	**27%**
Money Market	5%	5%	5%	5%	2%	2%	2%	2%
Short Bonds (segregated)[1]	45%	42%	40%	33%	26%	15%	3%	-
Government Bonds	-	-	-	3%	8%	16%	25%	25%
Fixed Income - Credit	**20%**	**22%**	**22%**	**22%**	**24%**	**26%**	**28%**	**28%**
Corporate Bonds	9.5%	12%	12%	12%	12%	12%	12%	12%
Private Debt	0.5%	2%	3%	4%	6%	8%	10%	10%
Mortgages[2]	10%	8%	7%	6%	6%	6%	6%	6%
Equity Assets	**30%**	**29%**	**29%**	**30%**	**30%**	**28%**	**26%**	**25%**
Canadian Equity	4%	-	-	-	-	-	-	-
Global Equity	23.5%	25%	24%	24%	22%	18%	14%	13%
Emerging Markets Equity	2%	2%	2%	2%	2%	2%	2%	2%
Private Equity	0.5%	2%	3%	4%	6%	8%	10%	10%
Real Assets	**10%**	**12%**	**14%**	**17%**	**20%**	**23%**	**26%**	**30%**
Real Estate	8%	9%	10%	11%	12%	13%	14%	15%
Infrastructure & RR	2%	3%	4%	6%	8%	10%	12%	15%
Sub Total	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**
Portfolio Leverage	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Total Portfolio	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[1] ICBC's Canadian Bond portfolio ("Short Bonds") includes federal and provincial government bonds as well as investment grade corporate bonds. Investment grade corporate bonds in the Short Bond portfolio are not included in the Liquidity Coverage Ratio calculation as saleable liquid assets.

[2] Mortgages asset class includes Mezzanine Debt.

BCI will trade as close to the transition date as prudent while being mindful of operational considerations such as, but not limited to, market liquidity, trading costs and client fairness. In the event that BCI elects to deviate from the formal transition dates, BCI will disclose such deviations and the practical effect on the Fund's investment portfolio as part of its regular reporting activities.

Basic Insurance and Optional Insurance

ICBC's Optional insurance business is subject to limitations on its holdings of Equity and Real Estate investments. As such, the following asset mixes should be used for the purpose of determining ICBC's discount rate and pricing of Basic and Optional insurance.

Asset Class	Basic Insurance		Optional Insurance	
	Apr 1, 2022	Apr 1, 2023	Apr 1, 2022	Apr 1, 2023
Fixed Income - Liquidity	**46%**	**44%**	**50%**	**48%**
Money Market	5%	5%	5%	5%
Short Bonds (segregated)[3]	41%	39%	45%	43%
Fixed Income - Credit	**22%**	**22%**	**23%**	**23%**
Corporate Bonds	12%	12%	13%	13%
Private Debt	2%	3%	2%	3%
Mortgages[4]	8%	7%	8%	7%
Equity Assets	**30%**	**30%**	**25%**	**25%**
Canadian Equity	-	-	-	-
Global Equity	26%	25%	21%	21%
Emerging Markets Equity	2%	2%	2%	2%
Private Equity	2%	3%	2%	2%
Real Assets	**12%**	**14%**	**12%**	**14%**
Real Estate	9%	10%	9%	10%
Infrastructure & RR	3%	4%	3%	4%
Sub Total	**110%**	**110%**	**110%**	**110%**
Portfolio Leverage	-10%	-10%	-10%	-10%
Total Portfolio	**100%**	**100%**	**100%**	**100%**

[3] ICBC's Canadian Bond portfolio ("Short Bonds") includes federal and provincial government bonds as well as investment grade corporate bonds. Investment grade corporate bonds in the Short Bond portfolio are not included in the Liquidity Coverage Ratio calculation as saleable liquid assets.

[4] Mortgages asset class includes Mezzanine Debt.

APPENDIX B – PARTICIPATING BCI POOLED FUNDS

Asset Class	Pooled Fund	Benchmark	Managers	Opening Frequency
Money Market	Canadian Money Market Fund (ST1)	Canadian Overnight Repo Rate Average (CORRA)	BCI	Any business day
	Canadian Money Market Fund (ST2)	FTSE Canada 91 Day T-Bill Index	BCI	Any business day
	US Dollar Money Market Fund (ST3)	Secured Overnight Financing Rate (SOFR)	BCI	Any business day
Government Bonds	Government Bond Fund	FTSE Canada All Government Bond Index	BCI	Weekly
Mortgages	BCI Quadreal Real Estate Debt Program	ICE BAML 1-3 Year Canada Government Index + 270 bps	Quadreal + External Managers	First business day of each year*
Corporate Bonds	Corporate Bond Fund	50% BAML U.S. Corporate Index (CAD Hedged) 50% BAML BB-B U.S. Cash Pay High Yield Constrained Index (CAD Hedged)	BCI	Weekly
Private Debt	Principal Credit Fund	S&P/LSTA U.S. Leveraged Loan 100 Index	BCI + External Managers	First business day of each year*
Canadian Equity	Indexed Canadian Equity Fund	S&P / TSX Composite Index	BCI	Weekly
	Active Canadian Equity Fund	S&P / TSX Capped Composite Index	BCI + External Managers	Weekly
Global Equity	Indexed Global Equity Fund	MSCI World ex-Canada Net Index	BCI	Weekly
Emerging Market Equity	Indexed Emerging Markets Fund	MSCI Emerging Markets Net Index	BCI	Weekly
	Active Emerging Markets Fund	MSCI Emerging Markets Net Index	BCI + External Managers	Weekly

Private Equity	Private Equity Vintage Funds	PE Fund investments: Morgan Stanley Capital International (MSCI) All Country World Net Index plus 200 basis points Direct/Co-investments: CoC based on the LTCMA Review = 8.3%	BCI + External Managers	As required
Real Estate	Realpool Program	Cost of Capital of 6.8% (nominal)	External Manager**	First business day of each year*
Infrastructure & Renewable Resources	Infrastructure & Renewable Resources Program	Cost of Capital of 6.3% (nominal)	BCI + External Managers	Semi-annually (January, July)
Leverage	Leveraged Bond Fund	Asset benchmark: FTSE Canada Universe All Government Bond Index	BCI	Weekly

* Special openings throughout the year as required.
** QuadReal

APPENDIX C – ICBC STATEMENT OF INVESTMENT BELIEFS

Insurance Corporation of British Columbia (“ICBC”)
Investment Portfolio

ICBC Statement of Investment Beliefs
October 28, 2021

PURPOSE

The investment beliefs described herein reflect the views and values of the Board of Directors of the Insurance Corporation of British Columbia (the “Board”) and provide the foundation upon which investment guidelines and policies are developed. They are designed to achieve the investment objectives of the ICBC investment portfolio by enunciating a set of clear principles and guiding consistent decision-making.

INVESTMENT BELIEFS

Clear governance and decision-making structures are critical to align investment activities with ICBC’s objectives.

1. **Activities that have the greatest potential impact on meeting ICBC’s objectives should be the focus of the Board.**

   The best use of the Board’s time is to focus on managing those areas that have the most significant impact on the portfolio’s success in meeting the long-term objectives.

2. **Insurance claims obligations are a driver of investment strategy.**

   A primary objective for the ICBC investment portfolio is to maintain sufficient assets and liquidity to meet insurance claims obligations. This objective drives the investment policies and risk management of the portfolio.

3. **Environmental, Social and Governance (“ESG”) factors are sources of financial risk that prudent investors must consider when evaluating investments.**

   ESG matters are important to consider as part of fiduciary responsibility. Evaluating the risks and opportunities presented by ESG matters can be done in a manner which is consistent with the efficient investment of funds to achieve investment return objectives.

   Climate change and reconciliation with Indigenous peoples are specific priorities for ICBC. Climate change presents material risks to the overall performance of the investment portfolio and reconciliation with Indigenous peoples should be considered across investment activities where possible. Investing activities should give specific attention to these priorities to ensure ESG opportunities and risks are considered.

Companies with robust and transparent ESG practices perform better in the long term.

The investment portfolio is most effectively managed as a whole, rather than a number of individual components.

4. Strategic asset allocation is the primary driver of portfolio risk and return.

The strategic asset allocation establishes the risk and return characteristics of the total portfolio and also impacts investment-related costs. Adhering to strategic asset allocation targets helps ICBC realize its investment objectives by imposing discipline on the investment decision-making process.

5. Risk and return are related

To obtain higher returns, some amount of risk must be taken. The exposure to investment risk should be focused on investments where the expected return is commensurate with the risk taken, and be effectively measured and managed.

6. A disciplined rebalancing approach maintains the portfolio's risk characteristics over the long term.

Market value fluctuations can cause asset classes to drift from their respective policy weights. A disciplined rebalancing program is value additive and will ensure the desired portfolio characteristics are maintained over the long term. Tolerance bands for each asset class help maintain allocation targets while avoiding excessive rebalancing costs.

7. Deviations from the strategic asset mix target can be used to improve the likelihood of achieving the portfolio's objectives.

Tolerance bands maintained around strategic asset allocation targets provide tactical flexibility to exploit short-term market opportunities. There may be extraordinary circumstances under which a tactical position or investment strategy requires that asset class weights move outside allowable tolerance bands.

The portfolio's investment strategy should consider a broad range of implementation options.

8. Portfolio diversification enhances risk-adjusted returns.

A diversified portfolio is a key element of an effective risk management framework. Diversification across the total portfolio can improve the overall risk/return trade-off.

9. Market inefficiencies create opportunities for active managers to add value.

There is evidence that some active managers can add value net of fees over longer periods of time, but this evidence is market dependent. Consequently, active management may be used in relatively inefficient capital markets where it can be demonstrated that active managers, on average, have been successful at adding value over the market indexes, and where the size of the added value net of fees is sufficient to compensate for the active risk assumed.

10. Investing in non-Canadian equities reduces portfolio concentration risk.

It is prudent to maintain an allocation to international equity markets due to the opportunity to achieve diversification among a large number of securities and economic sectors. The Canadian equity market represents only a small component of global equity market capitalization, and has relatively high sector concentrations.

11. Exposure to foreign exchange risk provides diversification and cash flow benefits.

Investing outside of Canada introduces foreign exchange risk to the investment portfolio. However, some exposure to unhedged foreign currencies can be beneficial because it can reduce equity volatility and improve portfolio diversification. U.S. dollar-denominated assets have the beneficial impact of supporting ICBC's U.S. dollar cash flow requirements.

12. Investment costs should be effectively managed.

Investment-related costs can be an important consideration when making investment decisions and act to reduce the net return to the portfolio. Investment costs need to be monitored and effectively managed to enhance long-term portfolio returns net of fees.

Attachment 5A.2 – Blacklined Statement of Investment Policy and Procedures Dated January 27, 2022

INSURANCE CORPORATION OF BRITISH COLUMBIA

STATEMENT OF INVESTMENT

POLICY AND PROCEDURES

~~April 22, 2021~~January 27, 2022

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INSURANCE CORPORATION OF BRITISH COLUMBIA

Statement of Investment Policy and Procedures

1 PURPOSE

The purpose of this Statement of Investment Policy and Procedures (the “Statement” or “SIPP”) is to establish guidelines which will ensure ICBC’s assets are managed prudently. The Statement will establish eligible investments, asset allocation ranges and the discretion given to fund managers, and consequently dictate the portfolio risk return profile.

2 CORPORATE LIABILITY AND RISK PROFILE

ICBC (the “Corporation” or “ICBC”) is a Crown corporation offering compulsory basic automobile insurance and optional extension insurance.

As of ~~December 31, 2020~~September 30, 2021, ICBC’s liabilities were profiled as follows:

	Liabilities ($000)	Duration in Years
Basic	~~12,761,237~~12,339,620	~~2.71~~3.25
Optional	~~6,920,747~~5,637,403	~~3.23~~2.39
Total	~~19,681,984~~17,977,023	~~2.88~~3.01

ICBC maintains one investment portfolio for both Basic and Optional insurance businesses for the purposes of operational efficiency and prudence. Like other insurers, ICBC’s liabilities are subject to inflation risk and can be sensitive to price increases. ICBC can also have significant cash needs due to volatility of claims payments. However, the relative predictability and volume of premium cash flows considerably reduce ICBC’s cash flow risks.

Enhanced Care Insurance

The implementation of Enhanced Care Coverage Basic insurance is expected to result in a longer average duration profile for Basic claims liabilities and less volatility in ICBC’s operational cash requirements. This transition of ICBC’s corporate liability profile is expected to occur gradually, over multiple years, as legacy tort claims are settled and Enhanced Care liabilities are incurred. During this transition period, ICBC is expected to experience significant negative operational cash flows due to the payout of legacy claims settlements requiring liquidity from the ICBC Investment Fund.

ICBC Risk Tolerance Statement

The Risk Tolerance Statement formalizes the Board of Director’s tolerance for risk related to its investment portfolio. The statement below helps to specify how ICBC Management, British Columbia Investment Management Corporation (“BCI”) and the Board of Directors will monitor the ICBC Investment Fund to ensure it remains within an acceptable level of risk.

"ICBC's prime investment objective is to maintain sufficient assets and liquidity to meet insurance claims obligations while delivering an investment return within prudent investment parameters. In accordance with this objective, the investment portfolio should hold sufficient liquid assets to withstand a stressed financial market or insurance claims environment by maintaining a Liquidity Coverage Ratio of at least 1.5x under either scenario. If the portfolio's Liquidity Coverage Ratio falls below 1.5x there will be an immediate reassessment of the investment portfolio's strategic asset mix. Otherwise, the investment portfolio will be managed in accordance with the Statement of Investment Policy and Procedures."

The Liquidity Coverage Ratio will be reported to the Investment Committee by BCI in the Investment Risk Report.

3 REGULATORY FRAMEWORK

The legislative framework with respect to ICBC's obligations and responsibilities in the management of its investment portfolio is based on the "prudent person rule". This general prudent person standard is set out in section 492 of the *Insurance Companies Act* (Canada). This standard requires ICBC to make investments for its insurance business in the manner that "a reasonable and prudent person would apply in respect of a portfolio of investments to avoid undue risk of loss and to obtain a reasonable return".

The specific statutory framework and asset class limits with respect to ICBC's investments are outlined in Section 29 of the *Insurance Corporation Act* (British Columbia) and Section 2 of the Application of Legislation Regulation, BC Reg. 322/2003 deposited.

The regulatory asset class limits applicable to ICBC's Optional insurance business are as follows~~:~~ (Investment Limits (Insurance Companies) Regulations SOR/2001-396):

1. real estate investments are limited to 10% of total assets~~, as that term is defined in the Investment Limits (Insurance Companies) Regulations, SOR/2001-396~~;

2. ~~the value of participating shares or other ownership interests in unincorporated businesses cannot exceed~~equity investments are limited to 25% of total assets; and

3. investments in (1) and (2) in the ~~aggregate cannot exceed~~aggregateare limited to 35% of assets~~; and~~.

4. ~~commercial and consumer lending cannot exceed 5% of total assets.~~

It should be noted that this Statement has been developed in consideration of the limits established by the legislative framework. For clarity, while ICBC maintains one investment portfolio for the purposes of operational efficiency and prudence, these limits shall be adhered to in respect of the Optional insurance business for the purposes of determining actuarial discount rates and setting insurance rates. Accordingly, the strategic asset mix weighting for the Basic- and Optional-backing assets are provided in Appendix A.

4 ROLES AND RESPONSIBILITIES

1. <u>ICBC Board of Directors</u>

Under Corporate By-Laws, the Board of Directors has the responsibilities to (a) define and control strategies, policies and limitations related to the investment of the Corporation's funds, (b) exercise voting rights attached to corporate securities, and (c) provide for the custody of assets, registration of securities, and disposition of investments. The execution of most of these responsibilities has been delegated to the ICBC Investment Committee of the Board of Directors, BCI, and ICBC Management. The Board of Directors still retains responsibility for major changes to investment policies and procedures.

2. <u>ICBC Investment Committee</u>

The Investment Committee is responsible for recommending investment policies and procedures to the Board of Directors, ensuring investments are managed in compliance with the policies, and monitoring performance.

These responsibilities include making recommendations to the Board of Directors regarding:

a) asset allocation parameters (including tactical asset allocation ranges);

b) risk management parameters (e.g., benchmarks);

c) eligible investments (e.g., eligible BCI funds for investment); and

d) external investment management services.

3. <u>BCI</u>

BCI acts as an agent for investment of ICBC, and is responsible for providing all required day-to-day investment management services pursuant to the Funds Management Agreement dated November 1, 2019 between ICBC and BCI (the "**FMA**"), the First Additional Services Agreement dated November 1, 2019 between ICBC and BCI (the "**ASA**" and together with the FMA, the "**BCI Agreements**").

BCI has the following responsibilities:

a) invests or arranges for the investment of ICBC's assets and ensures ongoing compliance with this Statement;

b) collaborates with ICBC Management in the development of investment policies, procedures, and strategies for consideration by the Investment Committee;

c) recommends asset allocation parameters (including the strategic asset mix and tactical asset allocation ranges) to the Investment Committee;

d) rebalances the portfolio and completes tactical asset allocations within permitted ranges;

e) hires and manages contract arrangements with the custodian and other external providers of related services (e.g., external investment managers, data service providers, etc.) on behalf of ICBC;

f) monitors the activity of external investment managers (including ICBC's legacy external investment managers) and reports on investment manager performance to the Investment Committee;

g) provides performance measurement services and fulfills all reporting requirements outlined in Section 9 of this Statement;

h) attends Investment Committee meetings at the request of the Investment Committee;

i) receives direction from ICBC Management regarding (i) the movement of funds between ICBC and BCI in respect of the Corporations' operational requirements and (ii) changes to the ICBC payment plan receivable;

j) arranges securities lending services; and

k) perform such other duties and provide such other services required to be performed or provided by BCI under the BCI Agreements and any other agreements for Additional Services (as defined in the FMA) entered into between ICBC and BCI from time to time.

4. ICBC Management

ICBC Management is responsible for providing investment advice, policy recommendations, and other information required by the Board of Directors and Investment Committee to discharge their responsibilities, and may work in collaboration with BCI or other external service providers in development of such information. Management is also responsible for ongoing governance and oversight over BCI, and ensuring that procedures are in place to confirm that BCI remains in compliance with this Statement.

ICBC Management has the following responsibilities:

a) recommends investment policies and procedures to the Investment Committee;

b) recommends asset allocation parameters (including the strategic asset mix and tactical asset allocation ranges) to the Investment Committee;

c) recommends eligible investments from among BCI's fund offerings to the Investment Committee;

d) ensures policy compliance, investment performance, and external management fees are monitored and reported to the Investment Committee;

e) recommends the termination of ICBC's legacy external investment managers to the Investment Committee;

f) with respect to ICBC's legacy assets (i.e., external funds, mortgages, real estate), authorize and provide instructions to BCI regarding any dispositions and subsequent reinvestment of those assets and the termination of legacy external investment managers; and

g) ensures adequate cash flows to meet the Corporation's payment obligations.

5. External Investment Managers

ICBC utilizes external investment management services for certain portfolio strategies. For clarity, the external investment managers (other than BCI and through BCI, its affiliate, QuadReal Property Group Limited Partnership ("**QuadReal**")) that continue to manage ICBC assets upon the effective date of the transition of day-to-day investment management responsibilities to BCI are referred to as the "legacy external investment managers". For clarity,

a) all other references to external managers include BCI and to externally managed funds includes funds managed by BCI; and

b) external investment managers specifically exclude existing property managers and mortgage loan servicers.

The legacy external investment managers have the following responsibilities:

a) select securities within each permitted asset class for the portion of the portfolio allocated to the manager, subject to applicable legislation and to any constraints or directives within this Statement or established by the ICBC Investment Committee;

b) participate in a review of this Statement when requested by the Investment Committee;

c) provide a Statement of Investment Policy and Goals for any pooled fund investments;

d) provide quarterly performance reports;

e) inform ICBC Management and BCI of any element of the Statement or any other item that could prevent the achievement of the mandate objectives, and obtain prior approval from ICBC Management to materially deviate from the Statement;

f) inform ICBC Management and BCI of any changes in ownership of the firm or changes in key personnel, investment process, or style; and

g) inform ICBC Management and BCI if any of the investments fall outside of the investment constraints as a result of the Statement or changes to the Statement or applicable legislation.

6. Custodian

The custodian has the following responsibilities:

a) fulfills all their duties as outlined in their service agreement; and

b) fulfills the regular duties of a custodian as required by law.

5 CONFLICT OF INTEREST

All actual, potential, or perceived conflicts of interest between all parties associated with the investment of insurance assets, including officers, directors, designated employees, employees or agents of ICBC, but excluding BCI and external managers retained by BCI, shall be disclosed to the Investment Committee before any decision regarding the specific transactions are completed. If a conflict of interest arises, the party shall disclose such a conflict to the Chair of the Investment Committee or in the Chair's absence, the acting Chair. The party must be excluded from participating in any discussion or decision related to the area of conflict.

The Secretary of the Investment Committee will be responsible for recording the declaration of conflict and will advise the Board of Directors of the details of the conflict.

Guidance on what constitutes conflicts of interest will be provided by:

a. Section 2.04 of the Corporate By-Law No. 9 dated July 28, 2016 of the Insurance Corporation of British Columbia; and

b. The Insurance Corporation of British Columbia's Code of Ethics for officers and employees of ICBC.

BCI and external managers retained by BCI shall not be subject to the above provisions. All actual, potential, or perceived conflicts of interest:

c. with respect to BCI and its officers and employees shall be governed by BCI's *Code of Ethics & Professional Conduct*; and

d. with respect to external managers retained by BCI shall be governed by the CFA Institute's *Code of Ethics and Standards of Professional Conduct*.

6 ASSET ALLOCATION

Strategic Asset Mix

The strategic asset mix is used to set the total return performance benchmark for the portfolio.

It establishes the long-term combination of asset classes normally split into three major groups categorized as fixed income, equities, and real assets. The broad fixed income category includes all interest-bearing instruments, but for the purposes of risk monitoring has been categorized into two sub-groups as liquidity and credit. Liquid fixed income includes money market instruments and highly liquid bonds, while fixed income credit includes corporate bonds, private debt and mortgages. The equity category includes investments exhibiting elements of participation in ownership of companies like common stocks and private equity. The real assets category includes investments exhibiting elements of participation in ownership of physical assets like infrastructure and real estate.

The strategic asset mix is determined in consideration of liquidity, risk constraints, and cash flows in order to meet the long-term investment objectives of the Fund.

Leverage is used to satisfy the ICBC receivables program. The level of leverage in the strategic asset mix is approximately the historical value of the ICBC payment plan receivable.

Asset Class	Strategic Mix
Fixed Income Assets	**55%**
Money Market	2%
Government Bonds	25%
Corporate Bonds	12%
Private Debt	10%
Mortgages	6%
Equity Assets	**25%**
Global Equity	13%
Emerging Markets Equity	2%
Private Equity	10%
Real Assets	**30%**
Real Estate	15%
Infrastructure & Renewable Resources	15%
Sub Total	**110%**
Portfolio Leverage	-10%
Total Portfolio	**100%**

Tactical Asset Mix

The tactical asset mix focuses on short-term asset allocations that attempt to increase investment return or manage risk through opportunistic shifts in asset weightings. Since tactical asset allocation can either add or detract from the overall strategic asset mix return, the extent of tactical asset mix decisions are limited by the following ranges. These ranges are set in consideration of the overall financial strength of ICBC and its sensitivity to negative or positive investment returns.

ICBC recognizes the difficulty in fully funding the long-term allocations in illiquid asset classes. As a temporary measure, the Strategic Asset Mix will track the mandate at a given time and will adjust each year until such time as the fully funded long-term mandates are achieved. The Asset Mix Transition Schedule, showing intended interim asset allocation targets, is shown in Appendix A and should be reviewed annually as implementation progresses, and adjusted as required.

Tactical ranges applicable during the transition mix will be reviewed and updated annually.

Benchmark weights shall be set in alignment with funded allocations in respect of the illiquid asset classes, up to the long-term strategic mix targets. Over or under allocations to these asset classes – and the associated benchmark weights – will be invested by BCI in accordance with BCI's internal proxy asset guidelines.

Due to the significant asset mix transitions effective May 1, 2021, benchmark weights will be set to actual portfolio allocations for a maximum transitional period of five months. The allocation may temporarily be outside of the policy range during the transitional period.

7 INVESTMENT RISK

Diversification of investment risk between asset classes is provided through the asset allocation guidelines set forth in the previous section.

Tactical Asset Mix ~~– May~~ – April 1, ~~2021~~2022 to March 31, ~~2022~~2023			
Asset Class	**Tactical Minimum**	**Strategic Target**	**Tactical Maximum**
Fixed Income - Liquidity	**~~46.0~~43%**	**~~50.0~~47%**	**~~58.0~~55%**
Money Market	~~0.~~0%	5~~.0~~%	10~~.0~~%
Short Bonds (segregated)	~~41.0~~38%	~~45.0~~42%	~~53.0~~50%
Government Bonds	-	-	-
Fixed Income - Credit	**~~17.0~~18%**	**~~20.0~~22%**	**~~23.0~~26%**
Corporate Bonds	~~7.5~~9%	~~9.5~~12%	~~11.5~~15%
Private Debt	~~0.~~0%	~~0.5~~2%	~~2.5~~4%
Mortgages[1]	~~6.0~~4%	~~10.0~~8%	~~13.0~~11%
Equity Assets	**~~22.0~~21%**	**~~30.0~~29%**	**33~~.0~~%**
Canadian Equity	~~2.0%~~-	~~4.0%~~-	~~6.0%~~-
Global Equity	~~15.5~~17%	~~23.5~~25%	~~27.5~~30%
Emerging Markets Equity	~~0.~~0%	2~~.0~~%	4~~.0~~%
Private Equity	~~0.~~0%	~~0.5~~2%	~~2.5~~4%
Real Assets	**~~5.0~~7%**	**~~10.0~~12%**	**~~14.0~~16%**
Real Estate	~~4.0~~5%	~~8.0~~9%	~~12.0~~13%
Infrastructure & RR	~~0.~~0%	~~2.0~~3%	~~5.0~~6%
Sub Total	**100%**	**110%**	**115%**
Portfolio Leverage	0%	-10%	-15%
Total Portfolio	**100%**	**100%**	**100%**

- Investment risk guidelines within each asset class are set out in the definitions of eligible investments.

[1] Mortgages asset class includes Mezzanine Debt.

8 RETURN OBJECTIVES

The return objectives for ICBC's investment portfolio is to achieve superior investment returns through management of its assets subject to level of risk deemed appropriate by the Statement.

ICBC will measure individual asset categories against the appropriate index with added excess returns. Measurement will be assessed net of associated management fees over four-year moving periods.

Below is a list of the appropriate benchmarks for each asset class and the expected incremental return for active management. ~~These~~ The following benchmarks are referred to herein as the "Index".

ASSET CLASS	SUB – CATERGORIES	BENCHMARK
Fixed Income – Liquidity		
Money Market	CAD	FTSE Canada 91-day T-Bill Index
	USD	Secured Overnight Financing Rate (SOFR)
Short Bonds	Short Bonds	FTSE Canada Short term Overall Bond Index
	Legacy Mid Bonds Investments	FTSE Canada Mid term Overall Bond Index
Government Bonds		FTSE Canada All Government Bond Index
Fixed Income – Credit		
Corporate Bonds		50 per cent Investment Grade: Bank of America Merrill Lynch US Corporate Index (CAD Hedged) *Plus* 50 per cent High Yield: Bank of America Merrill Lynch BB-B US Cash Pay High Yield Constrained Index (CAD Hedged)
Private Debt		S&P/LSTA U.S. Leveraged Loan 100 Index (CAD Hedged)
Mortgages	BCI Program	ICE Bank of America Merrill Lynch 1-3 Year Canada + 270 bps
	Legacy Fixed Term Investments	FTSE Canada Short Term Bond Index + 100 basis points

ASSET CLASS	SUB – CATERGORIES	BENCHMARK
	Legacy Mezzanine Investments	ICE BAML 1-3 Year U.S. Corporate/Government Index + 200 basis points (hedged to CAD)
Equities		
Canadian Equities	Large Cap	S&P/TSX Capped Composite Index
	Legacy Small Cap Investments	S&P/TSX Small Cap Index
Global Equities	Large Cap	MSCI World Ex-Canada Net Index
	Legacy Small Cap Investments	MSCI World Small Cap Net Index
Emerging Markets Equities		MSCI Emerging Markets Net Index
Private Equity		MSCI All Country World Net Index plus 200 basis points
Real Assets		
Real Estate	BCI Program	6.8% Nominal
	Legacy Investments	Canadian CPI + 4.25%
Infrastructure & RR		6.3% Nominal

The excess return objective for Short Bonds is 10 basis points. All other excess return objectives are as per BCI's pooled fund policies.

For performance measurement purposes, the benchmark proportion within asset classes will be set to actual to account for the legacy investments.

9 PERFORMANCE MEASUREMENT AND REPORTING

Performance Measurement

Investment returns will be reported to the Investment Committee on a quarterly basis. As a general rule, investments should be priced using market values derived from independent pricing sources in accordance with standard industry practices, and returns determined using time-weighted rates of return.

Private assets that are not regularly traded (e.g., private equity and infrastructure & renewable resources) shall be valued at least annually, in accordance with the valuation policies established by the managers and standard industry practices, and returns, will also be calculated using internal rates of return.

Reporting

BCI will provide ICBC with reports as outlined in the following table:

Report	Frequency
Asset Allocation	Weekly
Performance Report	Monthly; Quarterly
Investment Risk Report	Semi-annually
Investment Strategy Report	Quarterly
Fee Statement	Quarterly
Client Investment Fee Outlook	Annually

Performance reports will include the following information:

- market values and share of overall portfolio of individual asset classes;
- quarterly, annual, and longer-term returns for the total portfolio, individual funds, and performance benchmarks;
- discussion of performance at the total portfolio and asset class levels;
- sources / uses of funds;
- contribution to returns analysis;
- attribution analysis for liquid asset classes;
- comparison of asset class performance with manager universes; and
- a certificate of attestation of compliance with this Statement, and compliance with BCI's internal pooled fund policies.

For clarity, the performance reports will capture all ICBC investment assets (i.e., BCI-managed assets and ICBC's legacy assets).

BCI shall provide ICBC with the information reasonably requested to conduct its evaluation of legacy external investment managers provided for in this Statement pursuant to the ASA.

BCI will report on Environment, Social and Governance ("ESG") matters to the Investment Committee on an annual basis.

BCI will also provide ICBC with additional reports and information as may be reasonably requested from time to time.

10 FUND MANAGEMENT STRUCTURE AND INVESTMENT MANAGER MANDATES

Manager Structure

The ICBC Investment Committee has adopted a diversified manager structure which employs a mix of active and passive styles. Active management has been adopted for a portion of assets because it provides the opportunity to outperform market indices over the long run. Passive management, in the form of index or enhanced index mandates, has been adopted for a portion of the assets because it minimizes the risk of underperformance relative to a benchmark index, is less expensive than active management and facilitates allocation changes (e.g., rebalancing and transitions). Specialist managers are used where there is a potential added value benefit.

Transition to BCI

Approval of the Investment Committee is required to terminate legacy external investment managers. The Investment Committee shall also approve any BCI pooled fund into which ICBC assets can be invested. A schedule of approved eligible BCI pooled funds is maintained in Appendix B. ICBC Management shall authorize legacy external investment manager dispositions and reinvestment into BCI funds, including the date of disposition and how cash and/or securities are moved between the legacy fund and the target BCI fund.

Decisions in respect of dispositions of ICBC's legacy direct mortgage and real estate assets and capital expenditures on the legacy real estate assets shall remain subject to ICBC's *Investment Approval Authorities*, as approved by the Board of Directors. BCI shall be entitled to rely on instructions received from ICBC Management and shall have no obligation to investigate or confirm whether any instructions are compliant with such internal ICBC *Investment Approval Authorities.* All other references to such authorities herein shall be similarly qualified with respect to BCI.

Rebalancing

BCI is responsible for portfolio rebalancing. Portfolio assets will be rebalanced whenever actual allocations to an asset class fall outside the maximum or minimum allocation or whenever it is deemed otherwise appropriate by BCI. Rebalancing may be suspended if market conditions, such as excessive volatility or illiquidity, preclude cost effective rebalancing. Should such conditions occur, the ICBC Investment Committee and the Board of Directors will assess the Fund's asset allocation and market conditions with regard to the appropriateness of rebalancing and approve deviations from the tactical asset mix range as required.

Evaluation of Investment Managers

Investment managers will be reviewed by the Investment Committee at least quarterly. BCI will regularly review the legacy external investment managers and shall report on such managers pursuant to the terms set out in the ASA. BCI shall provide ICBC Management with the information needed to conduct ICBC's review of all other external investment managers on a regular basis as agreed between BCI and ICBC.

Investment manager(s) excluding index managers, will be expected to exceed their applicable index, including an additional return net of fees for active management, and exceed the median manager, as applicable. Quarterly (to the extent practical) and annual returns will be monitored, but the four-year moving average return will be the primary measurement. All return calculations will be determined using time-weighted rates of return based on market values derived from independent pricing sources. Return calculations are in accordance with industry standards.

11 ELIGIBLE INVESTMENTS

ICBC's investment assets can be held in segregated accounts or invested in pooled funds and similar or alternative structures (e.g., limited partnerships) where ICBC's assets are commingled with other investors. Investments held in segregated accounts shall be invested in accordance with the following eligible investments guidelines. Investments held in pooled funds shall be invested in accordance with the pooled funds' investment policies. The Investment Committee shall approve any pooled fund or similar commingled structure into which ICBC assets can be invested.

11.1 FINANCING INSTRUMENTS

BCI may transact in repurchase agreements (repos) and repos are an approved instrument for financing. Leverage will be used in accordance with the strategic asset mix set out in section 6 of the Statement.

For clarity, BCI will not combine the liability portfolio with the asset portfolio for purposes of asset allocation, accounting, performance and risk measurement.

Benchmark(s) for liabilities: Realized cost of financing.

BCI will report on the realized cost of financing.

Leverage may be employed within pooled funds as consistent with BCI's pooled fund policies.

The Fund's use of leverage may result in commitments for which the Fund could retain liability even upon withdrawal, within pooled funds as consistent with BCI's pooled fund policies.

11.2 FIXED INCOME

The broad fixed income category includes all interest-bearing instruments. Liquid fixed income includes Money Market, Short Bonds and Government Bonds while fixed income credit includes Corporate Bonds, Private Debt, and Mortgages.

11.3 LIQUID

11.3 A MONEY MARKET INVESTMENTS

Money market investments held for cash management purposes must have a term to maturity of less than fifteen months at time of purchase and will be consolidated with the bond portfolio for the purpose of measuring credit quality, liquidity, duration, and diversification, as outlined in ~~section 11.2~~ section 11.3B. All non-government guaranteed issuers will be subject to the same due diligence process that is applied to credit in the bond portfolio. Money market investments may include both Canadian and US dollar denominated securities. The following investments will be authorized for cash management purposes:

> Treasury bills; provincial promissory notes; repos; certificates of deposit; bankers acceptances & bearer deposit notes; commercial paper; corporate bonds; asset backed securities; swapped deposits; and derivative instruments.

11.3 B SHORT BONDS

ICBC can invest in bonds directly and through externally managed pooled funds. Direct bond investments shall be in bonds held in the Index and secured and unsecured floating, fixed rate and inflation linked debt obligations denominated in Canadian dollars or any major foreign currency of Canadian and foreign corporations, governments and government agencies, and supranational development banks. Bonds may also include coupons, residuals, and synthetic fixed income securities.

Derivative instruments for the purposes of synthetic indexing, risk control, lowering transaction costs, and or liquidity management, may be held.

Private placement bonds are permitted, provided it can be demonstrated that they conform to quality and diversification guidelines. For clarification purposes, private placements are bonds issued by companies with publicly traded debt that are rated by an industry recognized rating agency, that are legally privately placed, subscription based, and may or may not have a broad issuance, liquidity, dealer support, or are of small deal size.

ICBC can also invest in illiquid private debt securities. Private debt securities are not publicly traded and are not normally rated by an industry recognized rating agency. For private debt that is managed by a legacy external investment manager, the services to be performed are provided in the ASA.

Direct bond investments shall be invested in accordance with the following guidelines:

<u>Quality</u>

All publicly traded bonds must be rated a minimum of BBB- or its equivalent by an industry recognized rating agency. In the case of split ratings, Standard and Poor's (S&P) will be considered the appropriate rating. If not rated by S&P, another equivalent industry recognized credit agency's rating will be used.

<u>Diversification</u>

All category and individual limits include issuer margin exposure from repo and derivative activity.

The following minimum diversity limits will apply at all times:

- Not more than 5% of the market value of the bond portfolio can be invested in the debt of any one company; and

- The bond portfolio's allocation to corporate[2] bonds shall not exceed 25 percentage points above the weighting of corporate bonds within the Index.

Foreign bonds are defined as bonds issued by an entity not domiciled in Canada. This includes "Maple" bonds, which are issued by foreign entities in Canadian dollars. It also includes foreign pay bonds issued by foreign entities; however, it would exclude foreign pay bonds issued by Canadian entities (e.g., Yankee bond issued by a Canadian company but denominated in US dollars).

- Foreign currency exposure will be hedged back to Canadian dollars using derivatives. For clarity, US Money Market Funds are not required to be hedged.

Liquidity

Liquidity will be maintained by holding at least 30% of the combined Canadian bond and money market portfolios in Government of Canada, Government of Canada Agency and major Provincial debt securities at all times, net of posted collateral.

Duration

The duration of the Canadian bond portfolio will be managed within plus or minus 20% of the benchmark index duration.

Related Securities

Coupons, residuals, and synthetic securities will fall under the category and guidelines of the underlying security.

CREDIT

11.3 C CORPORATE BONDS

Corporate bonds will include fixed income securities invested primarily in corporate investment grade and high yield bonds issued in the United States and Canada. Corporate bond investments will be made through BCI's pooled funds.

11.3 D MORTGAGES

It is recognized that ICBC's direct mortgage loans will be liquidated over time and that no additional direct mortgage investments will be made.

Following the transition of the management of ICBC's direct mortgage investments to BCI, mortgage investments will be made in accordance with this Statement through BCI mortgage pooled funds and/or externally managed open- or closed-end pooled funds.

[2] Defined as including fixed income securities issued by: corporations, trusts, income trusts, limited partnerships and non-profit entities (such as airports, universities and pension funds) and includes private debt securities.

Approvals & Authorities

1. Approval for new loans, renewals, assumptions and the placement of secondary debt or encumbrances shall be governed by the Investment Approval Authorities as approved by the Investment Committee from time to time;

2. Approval of the Investment Committee is required to sell the mortgage portfolio, in whole or in part, either directly or through securitization to the public market; and

3. BCI shall be responsible for the day-to-day administration of the mortgage portfolio following the effective date of the transition of these responsibilities from ICBC Management to BCI. The transition of responsibility for the day-to-day administration of the mortgage portfolio may occur in one or more tranches. BCI has the ability to delegate the mortgage administration functions to third party managers with appropriate knowledge, ability, experience and integrity required to complete the assignment competently as determined by BCI.

For the existing mortgage portfolio, the services to be performed are provided in the ASA.

For clarity, the BCI Mortgage program will consist of a broad range of mortgage products, diversified by geographic location, type of mortgage, size of mortgage, and type of real estate. It may include direct mortgage loans and mortgage instruments (e.g., mortgage bonds) as well as real estate loans, real estate-related debt and equity investments, and equity interest in QuadReal. No debt will be assumed or created if, as a result, the Leverage Ratio would exceed 40% of the gross asset value of the Mortgage Program.

The Mortgages asset class includes Mezzanine debt. Mezzanine debt includes subordinate or senior core-plus fixed or floating rate debt obligations secured by real assets (real estate or infrastructure & renewable resources) issued by private corporations. Assets are generally income producing with periodic scheduled repayment of interest and principal. The asset class may also include debt obligations secured by non-income producing real assets (e.g., construction lending, land loans, etc.).

Net asset value on foreign currency denominated investment vehicles may be hedged back to the domestic currency as contemplated in Section 11.9 below. Currency hedging decisions are most appropriately made at the global portfolio level rather than at the asset class level and consider net currency exposures.

For mezzanine debt that is managed by a legacy external investment manager, the services to be performed are provided in the ASA. Mezzanine debt is included in the BCI mortgage program. Any new mezzanine debt investments will be through BCI pooled funds.

11.3 E PRIVATE DEBT

Private Debt is broadly defined as less liquid debt provided primarily to non-public companies. ICBC can invest in private debt (i.e., illiquid private debt securities), in accordance with the strategic asset mix set out in section 6 of the Statement. Private debt securities are not publicly traded and are not normally rated by an industry recognized rating agency. Investments may be made directly by BCI or indirectly through external managers. Any new private debt investments will be through BCI pooled funds.

11.4 EQUITIES

Equity investments will be made through direct holdings of securities (common shares, convertible preferred shares, convertible debentures, options, warrants, installment receipts, rights, etc.), stock index futures contracts, equity linked bonds and swaps or indirectly through externally managed pooled and mutual funds or any combination of the above.

For public equities that are managed by a legacy external investment manager, the services to be performed are provided in the ASA.

Private equity investments will typically consist of long-term debt or equity investments that are made primarily outside of the public market. These are long-term commitments made on behalf of the Fund.

Investments in private equity are permitted within the policy limits set forth in Section 6 of the Statement. Investments may be made directly by BCI or indirectly through external managers.

Direct holdings of securities in segregated accounts shall be invested in accordance with the following guidelines:

Diversification

Diversification will be maintained by restricting the number of equity holdings in any separate asset class to no less than 20 individual holdings. No single issuer will represent more than 10% of the portfolio's equity exposure as calculated by market value.

Liquidity

Liquidity will be maintained by limiting public equity holdings to securities listed on major exchanges. No more than 20% of the public equity portfolio will be invested in companies with market capitalization of less than $100 million.

11.5 REAL ESTATE

It is recognized that ICBC's direct real estate investments will be considered for potential liquidation and/or alignment with BCI real estate pooled funds, and that no additional direct real estate investments will be made outside of BCI's real estate pooled funds.

Following the transition of the management of ICBC's real estate investments to BCI, real estate investments will be made in accordance with this Statement through BCI real estate pooled funds including an equity interest in QuadReal and/or externally managed open- or closed-end pooled funds.

Legacy direct real estate investments – including joint ventures and co-ownership vehicles – shall be in accordance with the following guidelines:

Use of Debt (Leverage)

Leverage will be permitted for direct investments to a maximum of 75% loan-to-value at the property level and to a maximum of 45% of the value of the total real estate portfolio. All new debt will be non-recourse to ICBC.

Approvals & Authorities

1. Approval for acquisitions and disposals shall be governed by the Investment Approval Authorities as approved by the Investment Committee from time to time;

2. The selection of any investment manager, joint venture partner or co-ownership vehicle requires the prior approval of the Investment Committee; and

3. BCI shall be responsible for the day-to-day operations and leasing of the real estate investment portfolio following the effective date of the transition of these responsibilities from ICBC Management to BCI. BCI has the ability to delegate the day-to-day property management functions to third party property managers with appropriate knowledge, ability, experience and integrity required to complete the assignment competently, as determined by BCI. Notwithstanding the foregoing, BCI must obtain the prior approval of the Investment Committee before BCI appoints a third party, other than QuadReal Property Group Limited Partnership or its affiliates, to act as the primary provider of property management services in respect of the real estate investment portfolio.

For the legacy real estate investment portfolio, the services to be performed are provided in the ASA.

11.6 INFRASTRUCTURE AND RENEWABLE RESOURCES

Infrastructure investments encompass equity investments in real assets with relatively stable inelastic demand, providing services to a country, city, or region. Infrastructure investment sectors can generally be broken down between energy & utilities, transportation, social infrastructure, and communications. Renewable resources investments will typically consist of timberland, farmland and energy production assets such as wind and solar.

Infrastructure and renewable resource investments will be made through BCI pooled funds.

Net asset value on foreign currency denominated investment vehicles may be hedged back to the domestic currency as contemplated in Section 11.~~9~~7 below. Currency hedging decisions are most appropriately made at the global portfolio level rather than at the asset class level and consider net currency exposures.

11.7 DERIVATIVE INSTRUMENTS

Swaps, options, forwards, future contracts and other derivative instruments are permitted as long as they are used to hedge portfolio risks or enhance portfolio returns. These strategies can involve foreign exchange components on a hedged basis. BCI shall have discretion to hedge any foreign exchange ~~risk of externally managed funds~~exposure in the portfolio. For certainty, repo and reverse-repo transactions shall not be deemed to be derivatives transactions.

Derivatives can only be applied to asset classes contemplated in the investment policy. All derivative usage shall be structured to ensure that the aggregate amount of market exposure of the investments (on an aggregate basis or with respect to any asset class) does not increase as a result of derivative transactions, except as expressly permitted by BCI pooled fund policies.

BCI will manage the collateral for derivatives, including posting securities as collateral for ICBC's obligations under derivative agreements, and receiving securities posted by counterparties as collateral for their obligations to ICBC under those agreements. All ICBC derivative transaction settlements will be debited or credited by BCI using ICBC assets.

Derivative activities related to segregated funds, direct investments, and legacy assets will be disclosed to the Investment Committee on a quarterly basis.

12 ESG AND VOTING RIGHTS

ESG matters are important to consider as part of fiduciary responsibility. Evaluating the risks and opportunities presented by ESG matters can be done in a manner which is consistent with the efficient investment of funds to achieve investment return objectives.

Climate change and reconciliation with Indigenous peoples are specific priorities for ICBC. Climate change presents material risks to the overall performance of the investment portfolio and reconciliation with Indigenous peoples should be considered across investment activities where possible. Investing activities should give specific attention to these priorities to ensure ESG opportunities and risks are considered.

Companies with robust and transparent ESG practices perform better in the long term.

The Board of Directors delegates its voting rights to the legacy external investment managers and to BCI. Voting rights will be exercised in the best financial interests of ICBC. BCI shall vote proxies in accordance with BCI's proxy voting policy, a copy of which has been provided to ICBC.

The voting policies and practices of the legacy external investment managers and BCI are to be reviewed periodically by ICBC Management.

Issues deemed to be of concern to the Board of Directors will be brought to the attention of the Chair of the Investment Committee.

13 SECURITIES LENDING

ICBC may loan its securities, or participate in pooled funds that lend securities provided that:

- the securities lending agent provides an indemnity for losses relating to a borrower failing to return securities on loan;
- lent securities are indemnified by the securities lending agent;

- the loan and collateral are valued daily on a "mark-to-market" basis;
- the collateral consists of highly liquid and marketable securities under normal market conditions; and
- the loans meet the terms and conditions of ICBC's external manager's Securities Lending Programs.

14 POOLED FUNDS

ICBC investments held in pooled funds, other commingled investment funds and alternative investment vehicles shall be invested in accordance with such funds' investment policies and product descriptions. Pooled fund managers shall provide ICBC with product descriptions and policies covering investment constraints, conflicts of interest, voting rights and securities lending.

Pooled fund managers shall inform ICBC of any material changes to these policies in a timely fashion.

15 POLICY REVIEW

This Statement will be reviewed annually by the Investment Committee to confirm that the existing asset allocations will result in the best projected investment return for the selected risk level. Current economic and political conditions will be reviewed by the Investment Committee to ascertain if the necessary conditions exist for the investment policies to succeed. Current guidelines will be reviewed by the Investment Committee to maintain their relevance and updated if changes are required. The annual review will not prohibit the interim modification of the investment policy if there have been fundamental changes which affect the underlying assumptions of the investment policy.

APPENDIX A – ASSET MIX TRANSITION SCHEDULE

This asset mix transition schedule represents management's estimate for the pace of implementation of the Fund's long-term strategic asset mix. It will be reviewed and updated annually in alignment with the anticipated pacing of the portfolio's investments in the illiquid asset classes (i.e., private equity, private debt, mortgages~~ & mezzanine debt~~, private equity, real estate and infrastructure & renewable resources).

Asset Class	May 1, 2021	Apr 1, 2022	Apr 1, 2023	Apr 1, 2024	Apr 1, 2025	Apr 1, 2026	Apr 1, 2027	Apr 1, 2028
Fixed Income - Liquidity	**50%**	**47%**	**45%**	**41%**	**36%**	**33%**	**30%**	**27%**
Money Market	5%	5%	5%	5%	2%	2%	2%	2%
Short Bonds (segregated)[1]	45%	42%	40%	33%	26%	15%	3%	-
Government Bonds	-	-	-	3%	8%	16%	25%	25%
Fixed Income - Credit	**20%**	**~~21~~22%**	**~~21~~22%**	**22%**	**24%**	**26%**	**28%**	**28%**
Corporate Bonds	9.5%	12%	12%	12%	12%	12%	12%	12%
Private Debt	0.5%	~~1~~2%	~~2~~3%	4%	6%	8%	10%	10%
Mortgages[2]	10%	8%	7%	6%	6%	6%	6%	6%
Equity Assets	**30%**	**~~30~~29%**	**~~30~~29%**	**30%**	**30%**	**28%**	**26%**	**25%**
Canadian Equity	4%	-	-	-	-	-	-	-
Global Equity	23.5%	~~27~~25%	~~26~~24%	24%	22%	18%	14%	13%
Emerging Markets Equity	2%	2%	2%	2%	2%	2%	2%	2%
Private Equity	0.5%	~~1~~2%	~~2~~3%	4%	6%	8%	10%	10%
Real Assets	**10%**	**12%**	**14%**	**17%**	**20%**	**23%**	**26%**	**30%**
Real Estate	8%	9%	10%	11%	12%	13%	14%	15%
Infrastructure & RR	2%	3%	4%	6%	8%	10%	12%	15%
Sub Total	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**	**110%**
Portfolio Leverage	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Total Portfolio	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[1] ICBC's Canadian Bond portfolio ("Short Bonds") includes federal and provincial government bonds as well as investment grade corporate bonds. Investment grade corporate bonds in the Short Bond portfolio are not included in the Liquidity Coverage Ratio calculation as saleable liquid assets.

[2] Mortgages asset class includes Mezzanine Debt.

BCI will trade as close to the transition date as prudent while being mindful of operational considerations such as, but not limited to, market liquidity, trading costs and client fairness. In the event that BCI elects to deviate from the formal transition dates, BCI will disclose such deviations and the practical effect on the Fund's investment portfolio as part of its regular reporting activities.

Basic Insurance and Optional Insurance

ICBC's Optional insurance business is subject to limitations on its holdings of ~~Private Debt,~~ Equity and Real Estate investments. As such, the following asset mixes should be used for the purpose of determining ICBC's discount rate and pricing of Basic and Optional insurance.

Asset Class	Basic Insurance		Optional Insurance	
	~~May~~Apr 1, ~~2021~~2022	Apr 1, ~~2022~~2023	~~May~~Apr 1, ~~2021~~2022	Apr 1, ~~2022~~2023
Fixed Income - Liquidity	**~~49~~46%**	**~~46~~44%**	**~~54~~50%**	**~~51~~48%**
Money Market	5%	5%	5%	5%
Short Bonds (segregated)[3]	~~44~~41%	~~41~~39%	~~49~~45%	~~46~~43%
Fixed Income - Credit	**~~19~~22%**	**~~20~~22%**	**~~21~~23%**	**~~22~~23%**
Corporate Bonds	~~9.0~~12%	~~11~~12%	~~10~~13%	13%
Private Debt	~~0.5~~2%	~~1~~3%	~~0.5~~2%	~~1~~3%
Mortgages[4]	~~9.5~~8%	~~8~~7%	~~10.5~~8%	~~8~~7%
Equity Assets	**~~32~~30%**	**~~32~~30%**	**25%**	**25%**
Canadian Equity	~~4%~~-	-	~~3%~~-	-
Global Equity	~~25~~26%	~~29~~25%	~~20~~21%	~~22~~21%
Emerging Markets Equity	2%	2%	2%	2%
Private Equity	~~1~~2%	~~1~~3%	~~0~~2%	~~1~~2%
Real Assets	**~~10~~12%**	**~~12~~14%**	**~~10~~12%**	**~~12~~14%**
Real Estate	~~8~~9%	~~9~~10%	~~8~~9%	~~9~~10%
Infrastructure & RR	~~2~~3%	~~3~~4%	~~2~~3%	~~3~~4%
Sub Total	**110%**	**110%**	**110%**	**110%**
Portfolio Leverage	-10%	-10%	-10%	-10%
Total Portfolio	**100%**	**100%**	**100%**	**100%**

[3] ICBC's Canadian Bond portfolio ("Short Bonds") includes federal and provincial government bonds as well as investment grade corporate bonds. Investment grade corporate bonds in the Short Bond portfolio are not included in the Liquidity Coverage Ratio calculation as saleable liquid assets.
[4] Mortgages asset class includes Mezzanine Debt.

APPENDIX B – PARTICIPATING BCI POOLED FUNDS

Asset Class	Pooled Fund	Benchmark	Managers	Opening Frequency
Money Market	Canadian Money Market Fund (ST1)	Canadian Overnight Repo Rate Average (CORRA)	BCI	Any business day
	Canadian Money Market Fund (ST2)	FTSE Canada 91 Day T-Bill Index	BCI	Any business day
	US Dollar Money Market Fund (ST3)	Secured Overnight Financing Rate (SOFR)	BCI	Any business day
Government Bonds	Government Bond Fund	FTSE Canada All Government Bond Index	BCI	Weekly
Mortgages	BCI Quadreal ~~Mortgage~~Real Estate Debt Program	ICE BAML 1-3 Year Canada Government Index + 270 bps	Quadreal + External Managers	First business day of each year*
Corporate Bonds	Corporate Bond Fund	50% BAML U.S. Corporate Index (CAD Hedged) 50% BAML BB-B U.S. Cash Pay High Yield Constrained Index (CAD Hedged)	BCI ~~+ External Managers~~	~~First business day of each year*~~Weekly
Private Debt	Principal Credit Fund	S&P/LSTA U.S. Leveraged Loan 100 Index	BCI + External Managers	First business day of each year*
Canadian Equity	Indexed Canadian Equity Fund	S&P / TSX Composite Index	BCI	Weekly
	Active Canadian Equity Fund	S&P / TSX Capped Composite Index	BCI + External Managers	Weekly
Global Equity	Indexed Global Equity Fund	MSCI World ex-Canada Net Index	BCI	Weekly
Emerging Market Equity	Indexed Emerging Markets Fund	MSCI Emerging Markets Net Index	BCI	Weekly
	Active Emerging Markets Fund	MSCI Emerging Markets Net Index	BCI + External Managers	Weekly

Private Equity	Private Equity Vintage Funds ~~(2021)~~	PE Fund investments: Morgan Stanley Capital International (MSCI) All Country World Net Index plus 200 basis points Direct/Co-investments: CoC based on the LTCMA Review = 8.3%	BCI + External Managers	As required
Real Estate	Realpool Program	Cost of Capital of 6.8% (nominal)	External Manager**	First business day of each year*
Infrastructure & Renewable Resources	Infrastructure & Renewable Resources Program	Cost of Capital of 6.3% (nominal)	BCI + External Managers	Semi-annually (January, July)
Leverage	Leveraged Bond Fund	Asset benchmark: FTSE Canada Universe All Government Bond Index	BCI	Weekly

* Special openings throughout the year as required.
** QuadReal

APPENDIX C – ICBC STATEMENT OF INVESTMENT BELIEFS

Insurance Corporation of British Columbia ("ICBC") Investment Portfolio

ICBC Statement of Investment Beliefs October 28, 2021

PURPOSE

The investment beliefs described herein reflect the views and values of the Board of Directors of the Insurance Corporation of British Columbia (the "Board") and provide the foundation upon which investment guidelines and policies are developed. They are designed to achieve the investment objectives of the ICBC investment portfolio by enunciating a set of clear principles and guiding consistent decision-making.

INVESTMENT BELIEFS

Clear governance and decision-making structures are critical to align investment activities with ICBC's objectives.

1. **Activities that have the greatest potential impact on meeting ICBC's objectives should be the focus of the Board.**

   The best use of the Board's time is to focus on managing those areas that have the most significant impact on the portfolio's success in meeting the long-term objectives.

2. **Insurance claims obligations are a driver of investment strategy.**

   A primary objective for the ICBC investment portfolio is to maintain sufficient assets and liquidity to meet insurance claims obligations. This objective drives the investment policies and risk management of the portfolio.

3. **Environmental, Social and Governance ("ESG") factors are sources of financial risk that prudent investors must consider when evaluating investments.**

   ESG matters are important to consider as part of fiduciary responsibility. Evaluating the risks and opportunities presented by ESG matters can be done in a manner which is consistent with the efficient investment of funds to achieve investment return objectives.

   Climate change and reconciliation with Indigenous peoples are specific priorities for ICBC. Climate change presents material risks to the overall performance of the investment portfolio and reconciliation with Indigenous peoples should be considered across investment activities where possible. Investing activities should give specific attention to these priorities to ensure ESG opportunities and risks are considered.

Companies with robust and transparent ESG practices perform better in the long term.

The investment portfolio is most effectively managed as a whole, rather than a number of individual components.

4. Strategic asset allocation is the primary driver of portfolio risk and return.

The strategic asset allocation establishes the risk and return characteristics of the total portfolio and also impacts investment-related costs. Adhering to strategic asset allocation targets helps ICBC realize its investment objectives by imposing discipline on the investment decision-making process.

5. Risk and return are related

To obtain higher returns, some amount of risk must be taken. The exposure to investment risk should be focused on investments where the expected return is commensurate with the risk taken, and be effectively measured and managed.

6. A disciplined rebalancing approach maintains the portfolio's risk characteristics over the long term.

Market value fluctuations can cause asset classes to drift from their respective policy weights. A disciplined rebalancing program is value additive and will ensure the desired portfolio characteristics are maintained over the long term. Tolerance bands for each asset class help maintain allocation targets while avoiding excessive rebalancing costs.

7. Deviations from the strategic asset mix target can be used to improve the likelihood of achieving the portfolio's objectives.

Tolerance bands maintained around strategic asset allocation targets provide tactical flexibility to exploit short-term market opportunities. There may be extraordinary circumstances under which a tactical position or investment strategy requires that asset class weights move outside allowable tolerance bands.

The portfolio's investment strategy should consider a broad range of implementation options.

8. Portfolio diversification enhances risk-adjusted returns.

A diversified portfolio is a key element of an effective risk management framework. Diversification across the total portfolio can improve the overall risk/return trade-off.

9. Market inefficiencies create opportunities for active managers to add value.

There is evidence that some active managers can add value net of fees over longer periods of time, but this evidence is market dependent. Consequently, active management may be used in relatively inefficient capital markets where it can be demonstrated that active managers, on average, have been successful at adding value over the market indexes, and where the size of the added value net of fees is sufficient to compensate for the active risk assumed.

10. Investing in non-Canadian equities reduces portfolio concentration risk.

It is prudent to maintain an allocation to international equity markets due to the opportunity to achieve diversification among a large number of securities and economic sectors. The Canadian equity market represents only a small component of global equity market capitalization, and has relatively high sector concentrations.

11. Exposure to foreign exchange risk provides diversification and cash flow benefits.

Investing outside of Canada introduces foreign exchange risk to the investment portfolio. However, some exposure to unhedged foreign currencies can be beneficial because it can reduce equity volatility and improve portfolio diversification. U.S. dollar-denominated assets have the beneficial impact of supporting ICBC's U.S. dollar cash flow requirements.

12. Investment costs should be effectively managed.

Investment-related costs can be an important consideration when making investment decisions and act to reduce the net return to the portfolio. Investment costs need to be monitored and effectively managed to enhance long-term portfolio returns net of fees.

APPENDIX 5B

BCI LONG-TERM CAPITAL MARKET EXPECTATIONS

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1. On an annual basis, the British Columbia Investment Management Corporation (BCI) publishes its Long-Term Capital Market Expectations report (BCI Report) highlighting return forecasts for various asset classes over a 15-year time horizon. The August 2022 edition, included as Attachment 5B.1 to this Appendix, contains revisions to the original BCI Report released on March 2022. The August 2022 edition reflects updates made to the expected return on assets to take into account the impacts of increased market volatility due to rising interest rates and geopolitical events. A summary of return expectations by asset class can be found in the BCI Report, page 2, Figure 1.

2. **Fixed Income Assets (Liquidity & Credit)**: The fixed income component of the New Money Rate formula is the largest portion of the investment portfolio and comprises ICBC's money market, bond, private debt and mortgage portfolios. The weightings according to ICBC's asset mix transition schedule as at April 1, 2023 and April 1, 2024, along with the respective contributions to forecast yield of each portfolio, are presented in Figures 5B.1 and 5B.2 below.

Figure 5B.1 – Weighted Yield for Fixed Income Assets – Liquidity

Fixed Income Portfolio - Liquidity	April 1, 2023 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)	April 1, 2024 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)
Money Market	5	0.12	5	0.12
Short Bonds	39	1.36	33	1.16
Government Bonds	-	-	3	0.11
Total	**44**	**1.48**	**41**	**1.39**

Figure 5B.2 – Weighted Yield for Fixed Income Assets – Credit

Fixed Income Portfolio - Credit	April 1, 2023 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)	April 1, 2024 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)
Corporate Bonds	12	0.64	12	0.64
Private Debt	3	0.20	4	0.26
Mortgages *	7	0.40	6	0.34
Total	**22**	**1.24**	**22**	**1.24**

* Mortgages asset class includes Mezzanine Debt.

3. To provide an example of the calculation, Private Debt has an expected return of 6.5%[1] which, when multiplied by the strategic weight of 3%, contributes 0.20% of forecast yield to the portfolio as a whole.

4. **Equity Assets:** The equity component of the New Money Rate formula represents the second-largest portion of the investment portfolio and includes ICBC's Global, Emerging Markets and Private Equity portfolios. A breakdown of the weightings according to ICBC's asset mix transition schedule at April 1, 2023 and April 1, 2024 along with the contribution to the forecast yields of the portfolios are included in Figure 5B.3 below.

Figure 5B.3 – Weighted Yield for Equity Assets

Equity Portfolio	April 1, 2023 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)	April 1, 2024 Strategic Asset Mix Weighting (%)	Contribution to Forecast Yield (%)
Global Equity	25	1.60	24	1.54
Emerging Markets Equity	2	0.16	2	0.16
Private Equity	3	0.26	4	0.35
Total	**30**	**2.02**	**30**	**2.05**

5. **Real Assets**: Real Assets constitute Real Estate and Infrastructure assets.

6. ICBC's strategic asset allocation for real estate assets is 10% for the fiscal year 2023/24 and 11% for the fiscal year 2024/25. Currently, the portfolio is comprised of ICBC's directly-owned properties as well as pooled funds with underlying real estate property holdings, including BCI funds. ICBC expects any new real estate investments will be purchases of units of BCI's Real Estate Program. Accordingly, the 15-year expected return of BCI's Real Estate Program of 6.7% has been chosen as the best estimate of the forecast yield for real estate assets over the investment horizon.[2]

7. ICBC's strategic asset allocation for infrastructure investments is 4% for fiscal year 2023/24 and 6% for fiscal year 2024/25. ICBC expects that additional infrastructure investments purchased with Basic premiums will be units of BCI's Infrastructure & Renewable Resources

[1] *Long-Term Capital Market Expectations*, BCI, August 2022, page 2, Figure 1.
[2] *Long-Term Capital Market Expectations*, BCI, August 2022, page 2, Figure 1.

program. Accordingly, the 15-year expected return of BCI's Infrastructure & Renewable Resources program of 6.1% is judged to be the best estimate of the forecast yield for infrastructure assets over the investment horizon.[2]

8. Real Assets are expected to contribute 0.91% of return for the first 12-month period beginning April 1, 2023 and 1.10% of return for the second 12-month period beginning April 1, 2024.

9. **Portfolio Leverage:** ICBC's strategic asset allocation currently targets a 10% leverage ratio in the portfolio. For purposes of calculating returns, the cost of this leverage is taken to be equivalent to Money Market rates. Accordingly, the 15-year expected return of BCI's Canadian Money Market program of 2.4% is judged to be the best estimate of the forecasted cost of leverage over the investment horizon.[3]

10. **Diversification and Rebalancing Premium:** The Diversification and Rebalancing Premium represents the expected incremental return on ICBC's investment portfolio realized through regular rebalancing activities to maintain the asset weights of the strategic asset mix. The Diversification and Rebalancing Premium estimate of 0.25% was determined by a forward-looking stochastic modelling process completed by BCI and is conservatively adjusted for ICBC's illiquid investment assets that are not regularly rebalanced. The impact is applied to the full portfolio and is added to the expected return on investment assets.

[3] *Long-Term Capital Market Expectations*, BCI, August 2022, page 2, Figure 1.

Attachment 5B.1 – BCI Long-Term Capital Market Expectations Report

Long-Term Capital Market Expectations

AUGUST 2022 EDITION

REFERENCE DOCUMENT FOR THE INSURANCE CORPORATION OF BC

Prepared by: Strategic Asset Allocation, Investment Strategy & Risk, BCI

August 2022

Contents

Executive Summary

BCI's Investment Strategy & Risk department – in collaboration with each asset class – develops long-term capital market expectations to help clients select strategic asset mixes.

The expected net returns have been developed with a 15-year time horizon in mind, which reflects the long-term nature of our clients' liabilities. It is important to note that the returns illustrated below do not account for any added value achieved through active management.

Figure 1 summarizes BCI's return expectations for ICBC's investment portfolio. The return expectations for each asset class are based on an updated economic outlook and data available as at June 30, 2022. The calculation methodologies used are consistent with those outlined in the report titled "Long-Term Capital Market Expectations: 2020 Edition" dated August 2020.

Figure 1: Summary of August 2022 Expected Net Returns by Asset Class

Asset Class (Returns in CAD)	15-Year
Canadian Money Market	2.4%
US Money Market (unhedged)	2.3%
Short-Term Universe Bonds	3.5%
Government Bonds	3.8%
Corporate Bonds (hedged to CAD)	5.3%
BCI Real Estate Debt (hedged to CAD)	5.7%
Private Debt (hedged to CAD)	6.5%
Canadian Equity	6.6%
Global Equity (unhedged)	6.4%
EM Equity (unhedged)	8.3%
Private Equity (unhedged)	8.6%
BCI Real Estate (hedged to CAD)	6.7%
Infrastructure & RR (hedged to CAD)	6.1%
Weighted Average Net Annualized Rate of Return[1,2]	**6.0%**
Diversification & Rebalancing Effect	**0.25%**
Total Expected Net Annualized Rate of Return	**6.3%**

Numbers may not add due to rounding.

[1] Based on the long-term strategic asset mix as outlined in the Statement of Investment Policies & Procedures.

[2] The cost of financing is included.

Overview of Process

This report summarizes BCI's outlook for the next fifteen years and provides an overview of the assumptions and methodologies used. In developing BCI's outlook, market expectations and consensus forecasts are used to generate a starting point, with further adjustments made to reflect BCI's perspective of global markets.

BCI's long-term capital market expectations are assessed at several levels:

1. They are reviewed internally, including approval by BCI's senior management.
2. They are reviewed by our clients' internal and external actuaries and compared to their firm's expectations to ensure alignment between funding and investment policies.
3. They are benchmarked against the expectations developed by investment consulting firms and other investment managers to ensure reasonableness. Any significant variations need to be explained through program differences.
4. The methodologies are periodically assessed by independent third-parties to ensure industry best practices. At the beginning of 2021, BCI engaged a third-party to perform an independent review, with the resulting analysis and observations demonstrating that BCI's assumption-setting methodologies are broadly in line with industry practices, are conceptually appropriate and take into consideration all key building blocks that are part of sound expected return estimates.

Total Portfolio – Diversification and Rebalancing Effect

BCI calculates the impact of rebalancing a well-diversified portfolio by first determining the median stochastic return of the total portfolio over the long-term – in our case, 15 years – by running it through a stochastic model that assumes that the fund's assets are rebalanced once per year. This prevents the asset mix from deviating from the strategic policy targets. The rebalancing and diversification benefit are then isolated by calculating the difference between the median stochastic return of the total portfolio and the weighted average of each asset class' long-term average rates of return. The rebalancing and diversification benefit is then further adjusted to account for the fact that private markets cannot be easily rebalanced – in other words, any perceived benefit due to rebalancing private markets is removed. Applying this methodology to ICBC's current long-term policy targets, the rebalancing and diversification effect is **25 basis points**.

Subsequent Changes to the Economic Outlook

In developing BCI's outlook, market expectations are used as a starting point, with further adjustments made to reflect BCI's perspective of global markets. The initial 2022 return expectations were published in March 2022. However, given the shifts in the economic and political environment, the expected returns were updated using a more recent economic outlook and data available as of June 30, 2022.

To best explain the change in the August 2022 expected net returns versus the initial March 2022 expectations, the following is a review of how six key factors have evolved:

- Compared to the initial March 2022 model, near-term **real GDP** forecasts have declined slightly while near-term **inflation** forecasts remain elevated as of June 30, 2022. However, over the long-term, the growth and inflation forecasts are largely unchanged compared to the initial assumptions, which has resulted in negligible changes to the asset class returns.

- The initial March 2022 model reflected the expectation that **bond yields** would gradually increase over time. However, bond yields increased much faster than originally anticipated, which has pulled forward assumed capital losses. With bond yields now closer to BCI's assumed ultimate level as of June 30, 2022, fixed income returns have increased.

- Given recent market volatility, **credit spreads** have widened and are approximately at historical median levels as of June 30, 2022. While we had anticipated that spreads would revert to median levels in the initial model, this reversion occurred faster than anticipated. This has led to higher expected returns for credit asset classes.

- While **equity prices** have declined significantly since the initial expecations, corporate earnings as of June 30, 2022 have remained relatively stable thus far. Our approach is to assume a gradual reversion to median valuation levels (based on forward P/E's). Given higher valuations in recent years, previous expectations had already built in an adjustment reserve with no specific direction on the timing. Recognizing recent market movements, we're now releasing some of the valuation adjustments that were previously held in reserve, resulting in increased expected returns for equity asset classes.

- The initial March 2022 model assumed a relatively neutral outlook for the **Canadian dollar** relative to major currencies, resulting in minor impacts on unhedged foreign assets. Since the initial model, the long-term outlook for the Canadian dollar has improved on a relative basis, creating downward pressure on the expected returns for unhedged foreign assets due to assumed currency losses. Furthermore, the long-term expected cost of hedging has remained relatively stable due to assumed interest rate differentials.

- While expected returns for fixed income have increased in conjunction with rising bond yields, the cost of financing has followed suit. As a result, the cost at which ICBC can borrow at the total portfolio level has increased and so too have the borrowing costs for Real Estate, Private Equity, and Infrastructure & RR, resulting in lower expected returns.

A comparison of the updated August 2022 15-year expected returns to the initial March 2022 return expectations can be found in **Figure 2** below.

Figure 2: Comparison of 15-year Expected Net Returns

Asset Class (Returns in CAD)	August 2022	March 2022	Delta
Canadian Money Market	2.4%	1.1%	+1.3%
US Money Market (unhedged)	2.3%	1.0%	+1.3%
Short-Term Universe Bonds	3.5%	1.7%	+1.8%
Government Bonds	3.8%	2.3%	+1.5%
Corporate Bonds (hedged to CAD)	5.3%	3.7%	+1.6%
BCI Real Estate Debt (hedged to CAD)	5.7%	4.3%	+1.4%
Private Debt (hedged to CAD)	6.5%	5.9%	+0.6%
Canadian Equity	6.6%	6.0%	+0.6%
Global Equity (unhedged)	6.4%	5.9%	+0.5%
EM Equity (unhedged)	8.3%	7.6%	+0.7%
Private Equity (unhedged)	8.6%	9.3%	-0.7%
BCI Real Estate (hedged to CAD)	6.7%	6.9%	-0.2%
Infrastructure & RR (hedged to CAD)	6.1%	6.2%	-0.1%
ICBC Long-Term Policy Mix[1]	**6.3%**	**5.8%**	**+0.5%**

[1] Includes diversification/rebalancing effect of 0.25% and the cost of financing.

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CHAPTER 6

OPERATING EXPENSES AND ALLOCATION INFORMATION

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A INTRODUCTION

1. ICBC's total corporate operating expenses are all costs to run ICBC's Insurance and Non-insurance business, excluding claims payments, broker commissions and premium taxes. Autoplan Care Enhancements (ACE)[1] expense – the project delivering the new Enhanced Care Coverage, Rate Affordability Action Plan (RAAP)[2] expense, costs associated with the Transformation Program (TP)[3] completed in 2016, and cost-recoverable government initiatives are excluded as these costs are not borne by Basic insurance premiums. Total corporate operating expenses are allocated between Basic insurance, Non-insurance and Optional insurance using the BCUC-approved financial allocation methodology.

2. In this Chapter, ICBC defines operating expenses as either controllable or non-controllable as some of ICBC's operating expenses, such as year to year changes in pension and post-retirement benefit expense, are driven by factors that are mainly beyond ICBC's direct control. ICBC strives to be a low-cost, operationally excellent organization by keeping controllable operating expenses as low as possible while still ensuring it is adequately staffed to maintain appropriate service levels and manage claims.

3. The new Enhanced Care model, which came into effect on May 1, 2021, largely removed legal costs from the system, significantly increased the benefits that injured customers are eligible for, and improved rate affordability. As was the case during the transition to Enhanced Care, ICBC is continuing to focus on prudent management of administration costs and seeking to improve and simplify business processes. ICBC anticipates its staffing requirements in legal-based claims-related areas to gradually reduce as injury claims that occurred prior to the implementation of Enhanced Care continue to settle.

[1] In accordance with the Government Directive of January 25, 2020 with respect to Funding Autoplan Care Enhancements (ACE) from Optional Insurance approved by Order in Council (OIC) No. 046 (046/20), February 6, 2020, ACE is 100% funded by Optional insurance. All ACE costs prior to February 6, 2020 are allocated between Basic insurance and Optional insurance in accordance with the financial allocation methodology approved by the BCUC.

[2] In accordance with the Government Directive of February 13, 2018 with respect to Funding Rate Affordability Action Plan (RAAP) from Optional Insurance approved by Order in Council (OIC) No. 084 (084/18), March 5, 2018, RAAP is 100% funded by Optional insurance. All RAAP costs prior to March 5, 2018 are allocated between Basic insurance and Optional insurance in accordance with the BCUC-approved financial allocation methodology.

[3] In accordance with the Government Directive of April 19, 2010 with respect to the Transformation Program (TP) approved by Order in Council (OIC) No. 222 (222/10), April 29, 2010, TP was 100% funded from Optional insurance, up to $400 million. TP was completed in 2016 within the $400 million funding envelope. Remaining are depreciation expenses related to capitalized costs.

A.1 OVERVIEW OF CORPORATE OPERATING EXPENSES

4. In 2021/22, operating expenses were lower than budgeted due to lower average (full time equivalents) FTEs[4] and related costs. Fewer overall FTEs were mainly the result of higher attrition rates and recruitment challenges experienced in hiring to address staffing requirements during the transition to the Enhanced Care model, as well as the return of higher claims volume. Non-compensation expenses were lower due to savings from continuing COVID-19 impacts resulting from supply chain issues and resource constraints. Additionally, pension expenses were lower than budgeted due to a higher than planned discount rate for pension liabilities.

5. In the 2022/23 outlook, controllable operating expenses are expected to increase to $821 million, $61 million higher than 2021/22 actual. The increase in controllable expenses is due to expected increase in staffing as recruitment continues to fill vacancies to address staffing needs for Enhanced Care and to maintain adequate service levels in contact centers and driver licensing offices, while continuing to manage and progressively wind down legal-based claims. Further increase in controllable operating expenses is primarily due to anticipated general wage increases that will be negotiated under the Collective Agreement and approved by the Public Sector Employers' Council (PSEC) Secretariat, merit increases for management and confidential employees, individual length of service increases and higher project expenses to support ICBC's five-year corporate strategy which defines priorities to 2025.

6. Controllable operating expenses are forecasted to increase to $848 million in 2023/24, $27 million higher than the 2022/23 outlook. The increase is mainly driven by anticipated compensation increases for unionized employees that will be negotiated under the Collective Agreement, merit increases for management and confidential employees, inflation and previously negotiated contract price increases. Staffing in claims-related areas is expected to gradually reduce as injury claims that occurred prior to the implementation of Enhanced Care continue to settle. Further information is provided in Section D.1.1 of this Chapter.

7. Controllable operating expenses are forecasted to increase to $870 million in 2024/25 and $902 million in 2025/26. The increase is primarily driven by general salary increases for unionized employees, inflation, sustainment expenses and expenses to support ICBC's 2025 strategy.

[4] Average FTEs represents the sum of the number of FTEs measured at each month of the year, divided by the number of months in the fiscal year. It represents an average over a period of time, rather than at a point in time.

8. The 2022/23 outlook for pension and post-retirement benefit expense of $66 million, which is part of the non-controllable portion of total corporate operating expenses, has decreased by $35 million from the 2021/22 actual of $101 million. This decrease in pension expense is mainly driven by the increase in discount rate from 3.3% in 2021/22 to 4.1% in 2022/23 which reduces the current service cost and contributed to an improvement in the financial position of the plans (i.e., from net deficit to net asset position), therefore, increasing interest income, which further reduces pension expense.

9. The pension and post-retirement benefit expense is estimated to further decrease by $13 million in the 2023/24 forecast mainly driven by an increase in the discount rate from 4.1% in 2022/23 to 4.9% in 2023/24. As the pension and post-retirement benefit expense is based on a number of long-term assumptions at a point in time, this expense is held constant for 2024/25 and 2025/26. Further information is provided in Section D.5 of this Chapter.

10. Overall, operating expense increases are primarily driven by anticipated compensation increases for unionized employees that will be negotiated under the Collective Agreement, and approved by the PSEC Secretariat, merit increases for management and confidential employees, inflation and previously negotiated contract price increases.

A.2 STRUCTURE OF THE CHAPTER

11. The remainder of this Chapter sets out the following:

- Section B explains how the operating expense amount used for Basic insurance ratemaking is derived using corporate operating expenses, and references the actuarial analysis where these expenses are used.
- Section C explains how corporate operating expenses are allocated to Basic insurance.
- Section D describes the corporate operating expenses by expense categories, with a focus on variances between the 2021/22 actuals and the 2022/23 outlook, and between the 2022/23 outlook and the forecast years.
- Section E contains concluding remarks.

12. Similar to the 2021 RRA, Chapter 6, Operating Expenses and Allocation Information, ICBC presents the variance between outlook versus actual and historical information on FTEs,

compensation, and operating expenses by division in Chapter 8 Appendix 8C Detailed Operating Expense Information.

13. Similarly, ICBC is providing its updated cost allocation tables as part of its compliance reporting in Chapter 8, Appendix 8D, Cost Allocation Tables (previously included as Appendix 7I in the 2021 RRA), as this Appendix presents information of actual results from previous years. Appendix 8D contains cost allocation tables showing detailed views of the amount of ICBC's 2020/21 and 2021/22 corporate operating expenses that are allocated to Basic insurance, Non-insurance and Optional insurance, using the BCUC-approved financial allocation methodology and the resulting allocation percentages.

B OPERATING EXPENSES IN THE ACTUARIAL RATE LEVEL INDICATION ANALYSIS

14. The financial reporting view of operating expenses presented in Chapter 6 are amounts that ICBC expects to spend in each fiscal year to run ICBC's business operations. On the other hand, as discussed in Chapter 3, Actuarial Indicated Rate Change Analysis, the Basic rate indication represent the associated costs ICBC expects to spend to service the policies written during the policy year (PY) 2023[5] period. Therefore, the operating expenses forecasts in this Chapter are not directly comparable to the forecasts of claims servicing costs, road safety and loss management (RSLM) and general expenses that are included in the calculation of required premium in Chapter 3 of this Application. For further details on how financial reporting differs from rate setting, please refer to Section C of the Participants' Reference Guide.

15. As policies issued during PY 2023 may remain in force up until March 30, 2026, forecasts presented in Figure 6.1 include periods to 2025/26, namely 2023/24, 2024/25, and 2025/26 fiscal years.

16. The operating expense information presented in this Chapter includes 2021/22 actual (the previous year), 2022/23 outlook (the current year) and the 2023/24, 2024/25 and 2025/26 forecasts (forecast years). The 2022/23 outlook forms the basis for the 2023/24 and future year forecasts.

17. The operating expense forecasts are prepared based on the information available as of August 31, 2022. The forecast years are developed using expected changes in business

[5] PY 2023 is the 24-month period beginning April1, 2023 and ending March 31, 2025 in accordance with *Special Direction IC2.*

impacting cost drivers (transaction volume, initiatives in progress, key priorities, etc.). ICBC used the following methods in developing the forecast years.

- Compensation costs are forecasted based on the staffing projections for the forecast years as follows:
  - To forecast staffing requirements across claims-related roles (including First Notice of Loss, Injury/Recovery, Claims Customer Services, Material Damage, Claims Administration and Claims Legal Services), Insurance and Driver Licensing (DL) contact centres, Driver Licensing Office staff (including Driver Examiners and DL client service representatives) and Special Investigation Unit, ICBC uses an integrated staffing model, which uses projected business/work volumes (in the case of claims, actuarially forecasted claims intake and pending levels by claims type), productivity/workload benchmarks expectations, as well as retirement, promotion and training assumptions.
  - For other business areas, where the integrated staffing model is not used, the staffing levels are determined based on the anticipated business needs, taking into account historical staffing levels, expected attrition, anticipated workload and organizational initiatives and priorities.
  - Compensation costs are determined for each position based on known and approved compensation levels and estimated cost of employee benefits.
- Non-compensation costs are forecasted based on previously negotiated contract prices, expected transaction volumes, inflation and historical trends.

18. The forecasts are developed after consulting with business leaders using high-level estimates and are not prepared at the same level of granularity as actuals and outlook, as a similar level of detail is not available for forecast years. Senior management reviews these estimates to ensure it reflects anticipated business needs.

B.1 FINANCIAL REPORTING VIEW OF OPERATING EXPENSES

19. The Basic portion of the financial forecasts presented in Figure 6.1 of this Chapter are used as the basis to derive the claims servicing costs and other expenses associated with PY 2023. The forecasts of claims servicing expenses associated with PY 2023 are based on actuarial methodology and are shown in Chapter 3, Appendix C.6, Unallocated Loss Adjustment Expenses (ULAE).[6] The forecasts of RSLM, Insurance Services, Administration and Other, and Non-insurance Operations Basic expenses associated with PY 2023 are shown in Chapter 3, Appendix D Expense and Miscellaneous Revenue.

[6] The abbreviation ULAE refers to 'unallocated loss adjustment expenses', which are considered to be claims-related costs in the actuarial analysis in Chapter 3, Actuarial Indicated Rate Change Analysis.

Figure 6.1 – Total Corporate Operating Expenses by Line of Business and Allocation to Basic Insurance

($ Millions)	2021/22 Actual			2022/23 Outlook			2023/24 Forecast			2024/25 Forecast			2025/26 Forecast		
Operating Expense Components[1]	**Corporate (A)**	**Basic (B)**	**Basic % (C=B/A)**	**Corporate (D)**	**Basic (E)**	**Basic % (F=E/D)**	**Corporate (G)**	**Basic (H)**	**Basic % (I=H/G)**	**Corporate (J)**	**Basic (K)**	**Basic % (L=K/J)**	**Corporate (M)**	**Basic (N)**	**Basic % (O=N/M)**
Claims Services	$428	$284	66%	$433	$291	67%	$438	$298	68%	$443	$305	69%	$452	$313	69%
Road Safety and Loss Management (RSLM)	55	48	87%	52	46	88%	53	47	88%	54	47	88%	55	48	88%
Insurance Services[2]	125	76	61%	129	77	60%	133	82	62%	136	83	61%	140	85	61%
Administration and Other	129	62	48%	133	65	49%	140	69	49%	152	75	49%	166	82	49%
Non-insurance Operations	125	125	100%	140	140	100%	137	137	100%	138	138	100%	142	142	100%
Total Corporate Operating Expenses[3]	**$862**	**$594**	**69%**	**$887**	**$618**	**70%**	**$901**	**$632**	**70%**	**$923**	**$648**	**70%**	**$955**	**$670**	**70%**

[1] Rounding may affect totals and percentages.
[2] Includes Merchant Fees as shown in the Figure 6.2.
[3] Total Corporate Operating Expenses under columns A, D, G, J and M correspond to Figure 6.2, Total Corporate Operating Expenses for 2021/22 Actual, 2022/23 Outlook, 2023/24 Forecast, 2024/25 Forecast, and 2025/26 Forecast.

C ALLOCATION OF TOTAL CORPORATE OPERATING EXPENSES

20. This Section discusses the portion of ICBC's outlook and forecast for total corporate operating expenses that are allocated to the Basic insurance line of business by applying the BCUC-approved financial allocation methodology. As noted in the 2021 RRA, the transition to Enhanced Care model results only in a small increase in the allocation of claims services expense to Basic insurance. [7] With an increased focus on enhanced care that began as part of RAAP product reform, ICBC created support and recovery specialist positions to support customer care and recovery. These positions continue to support the provision of enhanced accident benefit claims under Enhanced Care and are allocated 100% to Basic insurance. ICBC is not proposing alterations to allocation methodologies for total corporate operating expenses in this Application. ICBC will be undertaking a review of its financial allocation methodology and reporting its findings to BCUC in December 2023, in accordance with the BCUC's 2021 RRA Decision.[8]

21. ICBC has now commenced the initial steps of the financial allocation methodology review process, including a documentation of the existing model, and is also in the final phases of the procurement for an external consultant. The objective of the review is to fulfill the BCUC's 2021 RRA directive and to assess if the current model should be maintained. The review will examine:

- The tradeoff between model precision and simplicity
- Reliance on manual processes/subjective measures and model complexity
- Adaptability to ICBC's evolving business model

The objective of the recommended approach will be to ensure a fair and equitable methodology for allocation of ICBC costs and revenues; meet the requirements of the provisions of sections 23 and 49 of the *Insurance Corporation Act*; and be based on existing allocation criteria, which require that indirectly attributable revenues and costs rely on fully allocated costing 'pro-rata' methodology that incorporates the principles of cost causality.

[7] Chapter 6, Operating Expenses and Allocation Information, Section C.1.
[8] 2021 RRA Decision and Order G-307-21, section 4.2 (Financial Allocation Methodology Review).

C.1 BUSINESS CHANGE IMPACTS ON ALLOCATION

22. As shown in Chapter 8, Appendix 8D, Section B, the percentage of total corporate operating expenses allocated to Basic insurance has remained consistent over the past several fiscal periods, at 68% to 70%.

23. In moving to the new Enhanced Care model on May 1, 2021, as shown in Figure 6.1 above, the percentage of total corporate operating expenses allocated to Basic insurance is forecast to remain in the same range, between 69% and 70%, over the forecast fiscal periods beyond May 2021.

D COST DRIVERS AFFECTING TOTAL CORPORATE OPERATING EXPENSES

24. In this Section, ICBC discusses total corporate operating expenses, including the 2021/22 actual results, 2022/23 outlook and a forecast for 2023/24 to 2025/26. Figure 6.2 summarizes total corporate operating expenses by expense category. Key drivers explaining the variances between the 2021/22 actual and 2022/23 outlook amounts and forecast years are addressed in the paragraphs that follow this figure. ICBC's total corporate operating expenses are expected to increase on average 4.8% year over year between 2022/23 and 2025/26. The forecasted increase in corporate operating expenses is discussed below.

D.1 CORPORATE OPERATING EXPENSES BY EXPENSE CATEGORY

25. Figure 6.2 presents Corporate Operating Expenses by expense category. The subsections that follow expand on the drivers behind increases in various expense categories.

Figure 6.2 – Corporate Operating Expenses by Expense Category

($ Millions)[1]	2021/22 Actual	2022/23 Outlook	2023/24 Forecast	2024/25 Forecast	2025/26 Forecast
Net Compensation	$490	$516	$540	$551	$564
Professional, Administrative and Other Expenses	133	146	154	162	171
Project and Depreciation Expenses	66	86	80	80	86
Merchant Fees	37	40	41	43	46
Road Improvements and Traffic Safety	34	33	34	35	36
Controllable Operating Expenses	**$760**	**$821**	**$848**	**$870**	**$902**
Pension and Post-Retirement Benefit Expense	101	66	53	53	53
Total Corporate Operating Expenses	**$862**	**$887**	**$901**	**$923**	**$955**

[1] Rounding may affect totals.

26. The controllable operating expenses outlook for 2022/23, as shown in Figure 6.2, is $821 million. This reflects an increase of $61 million over the 2021/22 actual of $760 million. The increase in controllable expenses reflects recruitment efforts to increase staffing to address needs for Enhanced Care and to maintain adequate service levels in contact centres and driver licensing offices, while continuing to manage and progressively wind down legal-based claims. The increase also results from anticipated general wage increases to be negotiated under the Collective Agreement, merit increases for management & confidential staff and higher project expenses to support ICBC's five-year corporate strategy which defines priorities to 2025. Professional, administrative and other expenses were lower in 2021/22 due to the continued impacts of the COVID-19 pandemic, these expenses are expected to return to normal in 2022/23.

27. The controllable operating expenses forecast of $848 million for 2023/24 reflects an increase of $27 million over the 2022/23 outlook of $821 million. The increase is mainly driven by compensation increases for unionized employees (per the Collective Agreement) and merit increases for management and confidential employees.

28. Controllable operating expenses are forecasted to increase to $870 million in 2024/25 and $902 million in 2025/26. The increase is primarily driven by general wage increases for unionized employees and other inflationary increases. This increase in controllable operating expenses is expected to be partially offset with savings from fewer FTEs. ICBC anticipates its staffing requirements in legal-based claims-related areas to gradually reduce as injury claims that occurred prior to the implementation of Enhanced Care continue to settle.

29. Pension and post-retirement benefit expense is presented as a separate line item in Figure 6.2 to segregate changes in controllable operating expenses so that trends in operating expenses are not skewed by this item. Pension and post-retirement benefit expenses vary from year to year primarily due to external factors, such as valuation of the pension plan assets, market-based discount rate, inflation rate, life expectancy and extended health care cost trends. The $35 million decrease in the 2022/23 outlook over the 2021/22 actual is mainly driven by an increase in the discount rate from 2021/22 to 2022/23 which reduces the current service cost and contributed to an improvement in the financial position of the plans (i.e., from net deficit to net asset position), therefore, increasing interest income, which further reduces pension expense. Further information is provided in Section D.5 of this Chapter.

30. The pension and post-retirement benefit expense is estimated to further decrease by $13 million in 2023/24 mainly driven by an increase in the discount rate from 2022/23 to 2023/24. As the pension and post-retirement benefit expense is based on a number of long-term assumptions at a point in time, this expense is held constant for 2024/25 and 2025/26. Further information is provided in Section D.5 of this Chapter.

D.1.1 NET COMPENSATION

31. The net compensation expense line item is the largest component of ICBC's operating expenses. It includes salaries and employee benefits, but does not include pension and post-retirement benefit expenses. Employee benefits that are part of net compensation include extended health and dental, basic life insurance, Long-term Disability for Management and Confidential employees, WorkSafeBC, Employment Insurance (EI), Canada Pension Plan (CPP) and Employee Health Tax (EHT) costs. In general, changes in ICBC's compensation costs are attributable to a combination of factors including the number of FTEs, negotiated wage increases for unionized employees (as explained in paragraph 37), the mix of employees (e.g., Management and Confidential, Bargaining Unit, professional, administrative, etc.) and changes in employee benefits costs or compensation levels in a particular year.

32. Figure 6.3 presents net compensation details for 2021/22 actuals, the 2022/23 outlook and 2023/24 to 2025/26 forecasts.

Figure 6.3 – Compensation Details

($ Millions)[1]	2021/22 Actual	2022/23 Outlook	2023/24 Forecast	2024/25 Forecast	2025/26 Forecast
Net Compensation (excluding Pension and Post-Retirement Benefit Expense)	$490	$516	$540	$551	$564
Pension and Post-Retirement Benefit Expense	101	66	53	53	53
Total Compensation	**$591**	**$582**	**$593**	**$604**	**$617**

[1] Rounding may affect totals.

33. The 2022/23 outlook of net compensation is expected to increase by $26 million to $516 million compared to 2021/22 actual. The increase in net compensation expense is mainly driven by an increase in average FTEs due to ICBC's resumption of recruitment efforts to maintain adequate service levels in contact centres and driver licensing offices as traffic volume returns to levels that existed prior to the COVID-19 pandemic. Additionally, the increase in net compensation expenses is also attributed to general wage increases as negotiated under the Collective Agreement and merit increases for management & confidential staff.

34. The 2023/24 forecast for net compensation is $540 million, a $24 million increase over the 2022/23 outlook of $516 million, and is mainly driven by rising inflation and higher cost of living.

- $20 million provision for general wage increases that will be negotiated under the Collective Agreement and reported and approved by the Public Sector Employers' Council (PSEC) Secretariat, as well as individual length of service increases.
- $4 million provision for expected merit increase in salaries for management and confidential employees and other increases are due to changes in staff mix, individual job progression, promotion and other factors.

35. The net compensation is expected to further increase to $551 million in 2024/25 and $564 million in 2025/26. The negotiated increases per the Collective Agreement and other increases are expected to be partially offset with the decrease in average FTEs. Further information is provided in the Section below.

D.1.2 NUMBER OF FTES

36. Figure 6.4 summarizes ICBC's total actual FTEs[9] and contractors[10] from 2021/22 to 2025/26 forecast, and provides a breakdown of the FTE count by employee group for 2021/22 actual, 2022/23 outlook and expected breakdown for 2023/24 to 2025/26 forecast. FTEs are expected to remain consistent between 2021/22 to 2025/26.

[9] Total ICBC FTEs exclude contractors as well as employees seconded to support RAAP and ACE (funded 100% by Optional insurance), FTEs working on cost recoverable Government initiatives, and FTEs who are front-line investment managers. TP ended in 2016/17; therefore, there are no associated FTEs in subsequent periods. Total FTEs reflect labour resources that support ICBC's core operations, including projects that are not part of RAAP or ACE. Discussion in this Chapter focuses on ICBC FTEs.

[10] Contractors support project work and temporarily backfill resources. Contractors may be retained to provide specialized skills not readily available at ICBC or to meet temporary fluctuations in workload.

Figure 6.4 – Average FTEs by Employee Group

Average FTEs[1] by Employee Group[2]	2021/22 Actual	2022/23 Outlook	2023/24 Forecast	2024/25 Forecast	2025/26 Forecast
Bargaining Unit	4,217	4,281	4,280	4,195	4,198
Management and Confidential	1,256	1,312	1,301	1,281	1,269
Total ICBC FTEs	**5,473**	**5,593**	**5,581**	**5,476**	**5,467**
Contractors	48	44	30	30	30
Total ICBC FTEs (including contractors)	**5,521**	**5,637**	**5,611**	**5,506**	**5,497**

[1] Average FTEs represents the sum of the number of FTEs measured at each month of the year, divided by the number of months in the fiscal year. It represents an average over a period of time, rather than at a point in time.
[2] Rounding may affect totals.

37. The 2022/23 outlook for the Bargaining Unit FTEs of 4,281 is higher than 2021/22 actual of 4,217 FTEs by 64 FTEs mainly due to resumption of recruitment efforts to address staffing needs to reach and maintain adequate service levels in contact centres as traffic volume returns to levels that existed prior to the COVID-19 pandemic and to address the backlog of driver knowledge and road tests. In addition, staffing increases also include positions in Information Services and Human Resources to manage growing volume and to manage and maintain systems solutions and address other priorities that were postponed while ICBC was focused on delivering Enhanced Care and other key business strategies.

38. In 2023/24, 2024/25 and 2025/26 forecast years ICBC anticipates its staffing requirements in legal-based claims-related areas to gradually reduce as injury claims that occurred prior to the implementation of Enhanced Care continue to settle.

39. Overall, FTEs are forecast to reduce to 5,581 in 2023/24, 5,476 in 2024/25 and 5,467 in 2025/26.

D.1.3 RESPONSE TO BCUC ORDER G-307-21

40. In 2021 RRA, ICBC anticipated a gradual reduction in legal-based claims FTEs attributed to the transition to Enhanced Care as claims that occurred prior to May 1, 2021 settle and decrease in volume. As per Order G-307-21, BCUC directed ICBC to provide an analysis of the expected compensation savings that will be achieved and the forecast versus actual savings achieved in 2022/23 and 2023/24 related to wind down of legal-based claim models.

41. The implementation of Enhanced Care has had the largest impact on the Claims Injury and Legal Services division which includes ICBC's injury handling departments as well as Claims Legal Services. When comparing the 2021 RRA forecasted FTEs for 2022/23 and 2023/24 fiscal years to the 2022/23 and 2023/24 forecast included in the 2023 RRA, ICBC is still on track to achieve the reduction in staffing that was initially anticipated. Figure 6.5 below illustrates the forecasted FTEs for this division in 2022/23 and 2023/24 that were included in the 2021 RRA as compared to the updated forecast included in this filing.

Figure 6.5 – Forecasted Injury Handling FTEs included in the 2021 and 2023 RRAs

Claims Injury & Legal Services FTE Forecasts	2022/23 Outlook/Forecast	2023/24 Forecast
2021 RRA	1,489	1,383
2023 RRA	1,487	1,344

42. While ICBC is still on target to achieve the expected reduction in claims related FTEs levels associated with the wind down in legal-based claims, the expected savings in net compensation costs is not on target due to pressures that are unrelated to the transition to Enhanced Care. These pressures include the effects of rising inflation and higher cost of living which are expected to result in higher than anticipated general wage increases for unionized employees (per the Collective Agreement), as well as increases due to changes in staff mix, individual job progression and other factors. In addition, costs of employee benefits including health and dental care costs, CPP costs, EI costs and other compensation-related costs are higher as these are estimated as a percentage of net compensation costs. The 2023 RRA forecast for net compensation in the claims line of business is higher than 2021 forecast by 2.6 % increase in 2022/23 and 5.8% in 2023/24.

D.2 PROFESSIONAL, ADMINISTRATIVE AND OTHER EXPENSES

43. Professional, administrative and other expenses include professional services (i.e., costs for legal, actuarial, audit and other miscellaneous services), computer costs, building operating expenses. Other administrative expenses include bad debts expenses, postage, outside information processing, printing stationery and supplies, telecommunication, advertising, travel and accommodation and other operating expenses.

44. Professional, administrative and other expenses are expected to increase by $13 million to $146 million in 2022/23 outlook, due to the following factors:

- Inflationary increases and other contractual commitments such as:
    a. Higher hardware and software support and maintenance, maintenance of database infrastructure and data management support.
    b. Building operating expenses due to an expected increase in operating expenses for existing facilities. These include property tax, security, utilities and other building operating expenses.
    c. Costs for legal, actuarial, audit and other miscellaneous services.
- Higher staff related expenses, including staff training, employment expenses, travel and accommodation and other expenses.
    a. With the launch of Enhanced Care on May 1, 2021, some processes were completely redesigned, contributing to a steep learning curve for new Enhanced Care claims employees, thus, contributing to higher staff training expenses.
    b. Higher employment expenses to manage recruitment efforts to address staffing needs to maintain adequate service levels in contact centres and driver licensing offices.
    c. Travel and accommodation and other expense patterns are expected to be higher in 2022/23, compared to 2021/22, which was lower due to COVID-19 impacts.
- The remainder of the variance between 2022/23 outlook and the 2021/22 actual is comprised of smaller miscellaneous increases across various expense categories at or under $1 million.

45. These expenses are expected to increase from $146 million in 2022/23 outlook to $154 million in 2023/24, $162 million in 2024/25 and further to $171 million in 2025/26 due to inflationary increases, project sustainment expenses and other contractual commitments.

D.3 PROJECTS AND DEPRECIATION EXPENSES

46. Project expenses reflect project costs, which are primarily information technology and facilities related projects, excluding TP, RAAP and ACE projects. It includes internal costs (e.g., compensation costs associated with FTEs charged to the projects) and external costs, such as professional fees and computer costs. Each year, the project expenses budget is allocated to

individual projects based on corporate priorities. The actual project expenses vary based on initiatives being implemented, available resources and allocation between capital and expense portions of the projects.

47. Depreciation expenses are associated with capital expenditures from current and prior years. ICBC's capital expenditures are comprised of infrastructure required to meet business objectives, replacement of assets that have reached the end of their useful lives, and regular cyclical replacement of information technology and facility improvements.

48. In 2022/23, projects and depreciation expenses are expected to increase by $20 million from $66 million to $86 million, due to the following factors:

- Planned critical sustainment projects, annual renewal and maintenance and other project expenses to support ICBC's 2025 strategy. Some of this work was delayed or deferred in prior years as resources were focused on delivery of RAAP project and more recently ACE project. The increase include some mandatory and critical sustainment project expenses like upgrading and refreshing Data Centre Network. In addition, expected project expenses in FY 2022/23 to support ICBC's corporate priorities to 2025 which includes Usage-based Insurance (incenting lower usage of vehicles which in-turn will help decrease claim costs), Streamline claims processes program (to redesign and implement a new operating model for non-injury claims operations and handling processes) and other annual renewal and maintenance project expenses to improve and modernize existing systems.
- The project expense spend was lower in FY 2021/22 as a number of projects were deferred to FY 2022/23 due to resourcing challenges and supply chain issues.

49. The project expenses are expected to reduce to $35 million in 2023/24 to support ongoing critical sustainment projects and strategic priorities and thereafter in future years expected to remain consistent with 2023/24.

50. The depreciation expense is expected to remain consistent in 2022/23, 2023/24 and 2024/25 with 2021/22 actuals. The depreciation expense is expected to increase by $6 million mainly due to new IS renewal and Maintenance charges starting in FY 2025/26 (i.e., start of new five year cycle refreshes).

D.4 MERCHANT FEES

51. Merchant fees or “interchange fees” as the term is used in the banking industry, are amounts paid for debit or credit card transactions. The fees are determined by the transaction volume, type of credit or debit card product, and the financial institution. Merchant fee increases/decreases are primarily a function of premium revenue as well as anticipated consumers’ use of various payment methods.

52. Merchant fees typically increase every year and they are expected to increase by $3 million, from $37 million in 2021/22 to $40 million in 2022/23, primarily due to an increase in insurance premiums, resulting from expected growth in vehicle volume. Thereafter, merchant fees are expected to grow by approximately $1 to $3 million each year in 2023/24, 2024/25 and 2025/26 in line with anticipated growth in premium revenue.

D.5 PENSION AND POST-RETIREMENT BENEFIT EXPENSE

53. The change in the discount rate, which is influenced by market factors beyond ICBC’s control, is the primary driver of the change in pension and post-retirement benefit expense over the forecast period.

54. ICBC contributes to defined benefit pension plans that provide pensions for employees other than certain employees of the former Motor Vehicle Branch. Pensions are based on length of service and average earnings. The pension plan assets are held in trust separately from ICBC’s assets.

55. ICBC provides separate post-retirement benefits for Bargaining Unit retirees and for Management and Confidential retirees. The Bargaining Unit plan provides for extended health benefits in accordance with the Collective Agreement. Eligible Bargaining Unit employees can also elect to purchase additional coverage through a voluntary plan at no cost to ICBC. The Management and Confidential post-retirement benefit plan applies only to employees hired before September 1, 2013 and provides extended health benefits and dental coverage. There are no specific assets set aside to fund these benefits.

56. The 2022/23 outlook for pension and post-retirement benefit expense is $66 million, which is $35 million lower than the 2021/22 actual of $101 million. The forecast pension and post-retirement benefit expense is determined by ICBC's external pension actuary, AON, at the beginning of each fiscal year based on the assumptions and financial position at the prior year's end. Pension and post-retirement benefit expense is subject to volatility resulting from changes in market-based discount rate for pension liabilities. The change in the outlook for 2022/23 as compared to the 2021/22 actual is due to the following main factors:

- A decrease of $24 million due to an 80-basis-point increase in discount rate, from 3.3% in 2021/22 to 4.1% in 2022/23.
- A decrease of $15 million due to an improvement in the net deficit position from $368 million to the net asset position of $59 million.
- An increase of $4 million due to an increase in forecasted payroll.

57. The pension and post-retirement benefit expense[11] is estimated to further decrease by $13 million in the 2023/24 forecast due to the following main factors:

- A decrease of $17 million due to an 80-basis-point increase in discount rate, from 4.1% in 2022/23 to 4.9% in 2023/24.
- An increase of $4 million due to an increase in the inflation rate and rate of compensation increase assumptions.

58. As the pension and post-retirement benefit expense is based on a number of long-term assumptions at a point in time, this expense is held constant for the 2024/25 and 2025/26 forecasts.

E CONCLUSION

59. ICBC continues to focus on prudent management of administration costs, realizing efficiencies from its investments in new technology, and seeking to improve and simplify business processes. ICBC anticipates its staffing requirements in legal-based claims-related areas to gradually reduce as injury claims that occurred prior to the implementation of Enhanced Care continue to settle.

[11] Based on AON estimates as of August 31, 2022.

CHAPTER 7

BUSINESS OPERATIONS

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A ICBC'S BUSINESS OPERATIONS

1. ICBC is delivering an affordable and sustainable auto insurance system for British Columbians in line with the Government's commitment to make life more affordable for British Columbians while delivering services that people can count on. To support this, ICBC's corporate strategy[1] focuses on four key goals, which are highlighted below:

- To Make Insurance More Affordable.
- To be Customer Driven.
- To be Smart and Efficient.
- To be Future Focused.

2. Each business area within ICBC develops specific strategies to guide ICBC towards its goals. This Chapter consists of two appendices, which focus on the work being done in Insurance and Claims Operations divisions in relation to ICBC's corporate strategy.

3. Appendix 7A, Insurance Distribution provides information about the impact Enhanced Care and the introduction of online insurance renewals will have on Autoplan brokers. Appendix 7B, Claims Cost Management provides information on the impact Enhanced Care is having on claims operations, as well as other claims initiatives that are designed to enable ICBC to continue to service claims customers with quality and timely support and manage its claims costs in order to reduce the cost pressures on automobile insurance rates.

[1] More information on the corporate strategy is contained in the 2022/23 – 2024/25 Service Plan.

APPENDIX 7A

INSURANCE DISTRIBUTION

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A OVERVIEW

1. ICBC Autoplan insurance is sold through a province-wide independent Autoplan broker distribution network of approximately 900 locations throughout BC. Autoplan brokers are licensed professionals and the face of ICBC to the customer during the insurance transaction process, including acting as vehicle licensing agents and auto insurance brokers.

2. In recent years, Autoplan brokers have supported customers through some of the most significant changes in ICBC's history, including the introduction of PolicyCenter, Enhanced Care and online Autoplan renewals. They have also been instrumental in ensuring that customers could seamlessly renew and make changes to their insurance policies during more than two years when British Columbians were living under COVID-19 pandemic conditions.

3. Autoplan brokers have been central to the success of initiatives that have transformed auto insurance in BC. Initiatives, such as Enhanced Care and online insurance renewals, are highlighted below. Section B, addresses how Enhanced Care has made vehicle insurance more affordable for British Columbians and how brokers have played an instrumental role in its implementation. ICBC's focus on being customer driven has led to delivering online insurance renewals this year. Section C below, focuses on the broker's role in modernizing insurance transactions.

4. To compensate brokers for the support they provide, ICBC uses a payment schedule of fixed fees to pay for Basic transactions. These "Basic fees" are a fixed dollar amount paid on completed transactions for Basic insurance. ICBC reviews this schedule each year and announces adjustments, if any, to principal Autoplan brokers every December. Section D contains further information on broker remuneration.

B ICBC LEANED ON BROKERS TO HELP LAUNCH ENHANCED CARE

5. As frontline advisors in the distribution of Autoplan insurance products and services, brokers were critical to the successful launch of BC's new auto insurance model, Enhanced Care, which took effect on May 1, 2021. The changes to insurance products under Enhanced Care were extensive and required brokers to develop a high degree of knowledge not only on the product changes, but also how the shift from a third party coverage to first party coverage impacted each of their customers. ICBC relied on brokers to help educate customers, address their questions and recommend changes to their insurance coverages as needed. The move to Enhanced Care also had a significant impact on broker processes, procedures and ICBC's insurance

administration platform, PolicyCenter. Throughout these changes, Autoplan brokers' expertise has ensured that customers are given accurate advice about the right insurance coverage for the type of risks that their vehicle(s) represent, which provides customers with peace of mind over their insurance transaction. As ICBC's largest transformational change in its history, the launch of Enhanced Care would not have been possible without the longstanding support of brokers.

C ONLINE RENEWALS WILL MODERNIZE INSURANCE TRANSACTIONS

6. In spring 2022, ICBC took an important step toward modernizing the way customers interact with their broker to transact certain Autoplan insurance renewals. For policies renewing May 1 or later, ICBC introduced a new online service channel that allows eligible customers to use the online service to renew the same ICBC coverage as their existing policies, change their listed drivers and how they use their vehicle and update their address.

7. A key aspect of the online option is to ensure a robust and viable broker-partner distribution network across BC to allow customers continued access to face-to-face services, as they require it, particularly for complex transactions. For online renewal transactions, Autoplan brokers are still relied upon to assist customers with their insurance needs. Customers choose the broker location they want to do business with, just as they do for in-person transactions. The broker is required to review all policies their customers initiate online and may reach out to the customer if they think it is warranted.

8. For their remuneration, the broker is paid the same flat fee for Basic transactions whether their assistance was conducted in person, over the phone or through an online transaction. Maintaining the broker's involvement in the transaction provides safeguards and peace of mind to customers that their renewal transactions are correct and the right coverages have been applied to meet their insurance needs.

9. With the launch of online renewals, ICBC has been monitoring the performance of the new service. From May 1 to October 31, 2022, approximately 9% of eligible policies have renewed online.[1] Furthermore, about 75% of customers who start an eligible online renewal completed the transaction online.

[1] Approximately 50% of non-fleet policies are eligible to be renewed online.

D ICBC COMMITTED TO FAIR BROKER REMUNERATION

10. ICBC has committed to ensuring fair remuneration for brokers. The current “Strategic Accord” (2019-2027) between ICBC and brokers represented by their professional associations, states, “In the event of any material product or ease of business change, ICBC remains committed to fair remuneration.” ICBC has a long history of managing broker Basic fees so as not to compound other cost pressures, in order to help keep Basic insurance premiums more affordable.

11. The last Basic fee increase was 1.5% made on January 1, 2022 and reflected an incremental inflationary increase. With this increase, Basic fees account for approximately 3% of the Basic premium ICBC collects. Overall, the increase has a minimal impact on the Basic insurance rates.

12. When determining fair remuneration, ICBC consults with brokers through the Memorandum of Understanding Council to gather information about how ICBC changes impact brokers. ICBC’s annual review of Basic fees also takes into consideration economic factors such as the rate of inflation as well as extraordinary operational pressures, such as worldwide supply chain constraints and industry-wide staffing shortages. ICBC must balance the financial and economic pressures impacting brokers’ ability to conduct ICBC’s services with the insurer’s own financial stability and its commitment to keeping insurance rates affordable for customers.

13. Figure 7A.1 shows how stable Basic fees have remained since 2013, including several years of low or no increase. As part of its commitment to provide Autoplan brokers with fair remuneration for the services they provide, ICBC will be increasing most Basic fees effective January 1, 2023. For the vast majority of Basic transactions, this will mean an average broker fee increase of $0.81 per transaction.

Figure 7A.1 – Broker Basic Fees for New, Renewal and Change Transactions

Year	New	Renew	Change
2013	$14.00	$12.95	$10.57
2014	$14.00	$12.95	$10.57
2015	$14.42	$13.34	$10.89
2016	$14.68	$13.58	$11.09
2017	$14.83	$13.72	$11.20
2018	$14.83	$13.72	$11.20
2019	$14.83	$13.72	$11.20
2020	$14.83	$13.72	$11.20
2021	$16.02	$14.82	$12.10
2022	$16.26	$15.04	$12.28
2023	$17.15	$15.87	$12.95

14. The Autoplan Agency Agreement requires ICBC to notify brokers about the next year's remuneration plan on or before December 31 each year. ICBC is able to provide the 2023 information in this Application because broker principals have recently been notified.

E CONCLUSION

15. Autoplan brokers continue to play a critical role in the distribution of ICBC's insurance, regardless of which channel the customer is reaching out from to address their insurance needs. In addition to being ICBC's insurance distribution arm, they provide information and advice that enable ICBC's customers to properly rate and insure their vehicles and make informed decisions regarding their insurance purchase. ICBC is committed to providing brokers with fair remuneration for the services they provide to ICBC and its customers. The planned increase to most Basic fees starting January 2023 reflects this commitment.

APPENDIX 7B

CLAIMS COST MANAGEMENT

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A INTRODUCTION

1. This Appendix provides information on the impact that Enhanced Care is having on Claims Operations (Claims Customer Service & Material Damage Services and Claims Injury & Legal Services) as well as information on other Claims initiatives that are designed to enable ICBC to continue to provide quality and timely claims services to its customers and manage its claims costs in order to reduce the cost pressures on automobile insurance rates.

2. The cost of servicing and paying out claims continues to represent, by far, the largest cost component of ICBC's revenue requirements. Before Enhanced Care was implemented on May 1, 2021, ICBC was challenged with increasing claims costs, particularly Bodily Injury (BI) claims costs, which had increased at rates much higher than inflation. Even with significant efforts to manage claims costs described in previous revenue requirements filings, successive annual net losses put a strain on ICBC's capital position, placing in jeopardy its ability to provide British Columbians with affordable Basic insurance coverage.

3. In response, the Government announced two initiatives to return ICBC to stable financial footing:

- The Rate Affordability Action Plan (RAAP) product reform, which came into effect on April 1, 2019, focused on reducing litigation and BI claims costs and improving accident benefits.[1]
- The Enhanced Care Model, which replaced the legal-based insurance system[2] on May 1, 2021. Enhanced Care is focused on providing significantly improved accident benefits (referred to as Enhanced Accident Benefits, or EAB) coverage and ensuring customers have the care they need in the event they are injured in a motor vehicle related crash.

4. Both RAAP product reform and Enhanced Care affect Claims operations and have had a favourable impact on forecasted BI claims costs. RAAP product reform has helped to address increasing BI claims costs for claims that occurred during the period from April 1, 2019 to

[1] Government of British Columbia, *Government directs changes to make ICBC work for B.C. drivers again. (February 6, 2018)* Accessed on December 5, 2018, https://news.gov.bc.ca/releases/2018ag0003-000164.

[2] The legal-based insurance system refers to the insurance models where an at-fault motorist could be sued by another party injured in a crash for damages such as pain and suffering, future care and wage loss. There are two legal-based models in effect in BC prior to the implementation of Enhanced Care (i.e., the legal-based model in effect for crashes occurring prior to the implementation of RAAP product reform in April 1, 2019, and the model in effect after implementation of RAAP product reform and prior to the implementation of Enhanced Care on May 1, 2021).

April 30, 2021. BI claims that are still outstanding from this period and those that arose prior to the implementation of RAAP product reform will continue to be handled under the legal-based models. As such, ICBC must ensure that it has an appropriate number of adjusting and litigation staff experienced in the handling of these claims.

5. ICBC now has over one and a half years of experience under the new Enhanced Care Model which has enabled it to achieve its goal “To Make Insurance Affordable” by delivering an affordable and sustainable automobile insurance system for British Columbians. As shown in ICBC’s 2021/22 Annual Service Plan Report, in its first year of operation, Enhanced Care has delivered the expected claims cost savings and improved ICBC’s financial position. In addition, in fiscal year 2021/22 we have seen better than expected results in resolving the injury claims that occurred prior to implementation of Enhanced Care. Going forward, ICBC’s injury claims services will continue to focus on the goal “To Be Customer Driven” by refining and improving upon its delivery of EAB. As well, it will continue to efficiently and effectively resolve the remaining BI claims that were made prior to the implementation of Enhanced Care.

6. As is the case throughout North America, ICBC’s Material Damage (MD) claims costs have also been increasing over the last decade, in part due to contemporary vehicles containing a greater amount of technology and using more lightweight materials to achieve fuel efficiency standards. In addition, supply chain issues due to the impact of the COVID-19 pandemic continue to affect the availability of new vehicles and Original Equipment Manufacturer (OEM) and aftermarket vehicle parts. These factors contribute to more complex and expensive vehicle repairs and higher total loss settlements.

7. Under Enhanced Care, MD costs play an increasingly important role in the Basic insurance rate indication. MD costs have become a larger proportion of Basic insurance costs as litigation and legal-based injury claims costs have been largely removed from the system. Continued modernization of ICBC’s collision repair and glass programs and investment in technology to streamline claims processes will help to keep repair costs as low as possible and are part of ICBC’s goals “To be Smart & Efficient” and “To Make Insurance Affordable”.

8. This Appendix is organized as follows:

- Section B provides information on ICBC's handling of injury claims, including those that occurred under the legal-based products and those that have occurred since May 1, 2021 under the Enhanced Care Model.
- Section C provides information on the modernization of ICBC's MD programs and the implementation of MD best practices that focus on creating efficiencies to enable ICBC to manage its MD claims costs and improve customer and employee experience.
- Section D discusses ICBC's Counter-Fraud Program. Exaggerated and fraudulent claims continue to impact claims costs. As discussed in Section D.2, ICBC expects that certain types of fraud will become less common under Enhanced Care, while others may increase. ICBC is continuing its efforts to reduce instances of fraudulent claims and to mitigate the impact of fraud on claims costs.

B INJURY CLAIMS HANDLING

9. This Section provides information on ICBC's handling of injury claims. Since the introduction of Enhanced Care, most new injury claims are being handled as EAB claims and without the need for legal representation.[3] As a result, ICBC has shifted its injury claims focus from BI and litigation management, to providing proactive disability management and benefit decisions that are rooted in evidence-based care. Evidence-based care is the integration of the best available evidence with the knowledge and considered judgments from stakeholders and experts.

10. Under Enhanced Care, an injured customer's doctor or primary health care provider will lead the development of the patient's recovery plan, working with the patient and their health care team, including physiotherapists, chiropractors, occupational therapists and others. ICBC staff will work together with health care providers, informed by the most up-to-date research to help ensure the best possible recovery outcome. This is a more collaborative approach between ICBC, its customers and their treatment providers compared to the adversarial, legal-based environment that existed in the past where fault and liability had to be established as a pathway to benefits.

[3] There will still be a small number of injury claims that occur after May 1, 2021 that will be handled under the legal-based model. These are primarily injury claims made against BC motorists in jurisdictions that are not under a "no-fault" insurance model.

B.1 MANAGING THE LEGAL-BASED INJURY CLAIMS (BI PENDING)

11. As of September 2022, ICBC had approximately 62,000 active legal-based injury claim exposures to resolve. Managing these injury claims and associated costs requires file handling by experienced injury claims specialists. ICBC anticipates that these roles will continue to be required for many years to come, although they will gradually reduce as the legal-based injury claims that occurred prior to the implementation of Enhanced Care continue to settle or wind down. For more information on BI pending volumes, please see Chapter 8, Appendix 8F Injury Claims Transition to the Enhanced Care Model and Legal Representation Conversion Rate.

12. ICBC strives to provide fair settlements to injured customers while managing legal-based injury claims in a reasonable and timely manner. Claims Injury Services has data-informed strategies in place to manage the risk segments related to its BI pending files. These strategies are intended to accelerate the closure of claims and include the bulk settlement of files and data-informed settlement approaches. There are also litigation strategies in place to manage the range of complexity in BI claim exposures.

13. Claims Injury Services also uses advanced analytics to manage the risk and complexity of the BI pending files. These analytics also help the business determine the appropriate staffing levels to balance the business needs of both legal-based and Enhanced Care claims.

14. With the transition of the majority of Claims Injury Services staff to roles handling Enhanced Care claims, ICBC still needs to ensure that there is sufficient experienced injury claims staff to effectively manage the remaining legal-based injury claim files. As such, there is an ongoing commitment to continue training of Claims Injury Services staff.

B.2 ONGOING NEED FOR LEGAL SERVICES TO EFFECTIVELY MANAGE LEGAL-BASED CLAIMS

15. While Enhanced Care is expected to reduce the amount of legal work required in the future, ICBC must maintain appropriate levels of legal services resources to effectively manage legal-based claims. In addition to the existing BI pending, ICBC will still receive some legal-based injury claims under Enhanced Care for Out-of-Province claims occurring in tort jurisdictions as well as some other limited circumstances.[4] The legal resources will continue to be a combination of internal and external legal defence resources. It is important that the legal resources have the

[4] Exceptions to the limit on actions and proceedings for vehicle-related injury claims in BC are set out in Section 116(2) of the *Insurance (Vehicle) Act*.

necessary business knowledge and experience required for the timely resolution of injury claims in order to help reduce or manage legal-based claims costs.

16. With the introduction of Enhanced Care and the gradual reduction of the legal-based BI pending files over time, the remaining files are more complex and are more challenging to resolve or likely to proceed to trial. The nature of the claims being advanced increases the amount of effort that legal resources have to spend defending claims at a time when some experienced defence counsel are leaving the practice area. Given the significant and ongoing demand for legal-based work, ICBC continues to monitor legal services resourcing in an effort to ensure it can meet its current needs and expected demands.

17. Most of the legal-based BI pending claims arise from crashes that occurred prior to the introduction of product reforms under the RAAP on April 1, 2019. Due to the time required to resolve litigated claims, ICBC expects the co-existence period, where it will be managing legal-based claims that fall under the different insurance models, to last for many more years. ICBC may have some BI claims that will be open for more than 21 years (e.g., infant claims).

18. On average, the cost and length of time to defend legal-based claims continues to increase. Settlement demands are high and the litigation of claims is increasingly more complex. Legal-based claims are requiring additional expense to investigate, resolve or defend at trial and are resolving closer to their scheduled trial dates. There has been an increase in settlement demands on litigated claims of approximately 8% as of the end of FY 2021/22 compared to FY 2020/21. ICBC's focus is on resolving legal-based claims fairly, which includes defending insured British Columbians against settlement demands that ICBC believes to be unreasonable.

19. As noted in Chapter 2, there are constitutional challenges to a number of recent legislative changes involving ICBC:

- The British Columbia Court of Appeal (BCCA) determined that the Civil Resolution Tribunal has exclusive jurisdiction to determine whether injuries are minor. The Trial Lawyers Association of British Columbia filed leave to appeal to the Supreme Court of Canada (SCC) and we expect to know by June 2023 whether the SCC will grant leave. In the event that the SCC decides to hear the appeal and overturns the BCCA decision, there could be a significant increase in the number of litigated claims.

- The British Columbia Supreme Court (BCSC) determined that the disbursement limit of six percent of either the total damages awarded by the court or the amount agreed to in settlement, in section 5 of the *Evidence Act*, is of no force or effect. This decision has been appealed by the Attorney General and ICBC. An appeal date is set for January 25 and 26, 2023. In the event that the BCSC decision is upheld, it is reasonably expected that there will be an increase in the amount of work to be handled by legal resources. The cost of the adverse BCSC decision is already reflected in the provision for unpaid claims.

- A challenge to the constitutionality of the Enhanced Care Model has also recently been commenced. There are no dates set for this action.

20. Since the implementation of Enhanced Care, legal resources supporting ICBC in defending legal-based claims have been uncertain about what the future demand will be for their services in litigating ICBC's remaining legal-based injury claims. Some legal defence resources have, or are, shifting to other areas of legal practice while others are retiring. It can be challenging for ICBC and for external defence firms to recruit and retain experienced defence counsel, paralegals and legal assistants.

21. ICBC continues to monitor its legal resourcing needs based on the demand for legal-based work. ICBC expects that the number of positions in Claims Legal Services will decrease over time as litigation needs reduce as a result of the introduction of Enhanced Care. However, existing legal-based files may take many years to resolve. In the interim, ICBC will continue to train legal service providers in order to mitigate the loss of experienced defence counsel and ensure sufficient legal resourcing to meet demand.

B.3 COST MANAGEMENT UNDER ENHANCED CARE

22. Under Enhanced Care, an injured customer's return to work or return to function will be overseen by ICBC. Claims Recovery Services staff (e.g., recovery specialists) will work with and take clinical recommendations from healthcare providers to ensure a safe and timely return to meaningful and productive activity. This may include the development of a return to work/function plan.

23. Risk management strategies have been implemented to support execution of evidence-based best practices in health care. Risk management strategies include leader

oversight activities such as file reviews and case conferences with experts that have been established based on file criteria. This will allow the customer to receive the appropriate care that is needed within a timeframe that is expected based on their injury.

24. For customers who are more seriously injured, the clinical expertise of a healthcare provider with skills in disability management may be required to assist in the return to work/function process. This clinical expertise will ensure that those with more serious challenges can transition back to function as soon and as fully as possible.

25. Enhanced Care will continue to have a government regulated fee structure which outlines the maximum amount ICBC will pay for services provided by health care providers. This provides consistent and predictable fees for health care providers.

26. In recognition of the importance of proper early treatment for injuries, ICBC is working in partnership with health care providers and associations, including the Doctors of BC, to establish health care protocols stressing the incorporation of evidence-based practices for examination, assessment, diagnosis and treatment of injuries. Consultations with health care providers and associations are ongoing to further refine the service model and delivery design.

27. To improve medical support for customers ICBC has implemented an external Comprehensive Medical Assessment (CMA) service. The CMA is a resource in circumstances where a customer requires further diagnostic clarification and when recovery is not progressing as expected. The CMA provides an independent multidisciplinary perspective to develop treatment recommendations. These recommendations will support a customer’s recovery and provide ICBC with clarity about the continued level of customer support that is required.

28. ICBC continues to maintain and strengthen its relationships with external stakeholders to help support Enhanced Care. This is accomplished through regular dialogue along with quarterly joint stakeholder meetings with the Injury Recovery Design Panel, Healthcare Practitioner Advisory Group and the Disability and Advocacy Advisory Group. These stakeholder discussions provide opportunities to improve the recovery journey for our customers.

B.4 CLAIMS INJURY SERVICES AND CLAIMS RECOVERY SERVICES STAFFING

29. The transition to Enhanced Care has required Claims Injury Services staff to be trained to handle claims under the new model. As a result, ICBC created a unit with a specific focus on training and ongoing development for claims staff within Enhanced Care. In addition, an

Enhanced Care Certificate Program was developed to allow for increased ease of transition of ICBC employees to Enhanced Care.

30. ICBC's goal with respect to its overall injury claim staffing is to maintain an appropriate balance between claims intake and closures to handle claims in both legal-based and Enhanced Care models. This approach ensures that open injury claims are resolved within expected timeframes based on the level of complexity that they represent and the needs of customers. To forecast staffing requirements across all claims specialists, management and administrative roles, ICBC uses an integrated staffing model, which uses actuarially forecasted claims intake by claims type, productivity, workload benchmark expectations, as well as attrition, promotion and training assumptions. Overall, staffing requirements in legal-based claims-related areas are expected to gradually reduce as these claims continue to settle.

C MODERNIZING ICBC'S MATERIAL DAMAGE PROGRAMS

31. The period from 2020 through 2022 has presented a unique set of conditions, which continue to have considerable influence on Material Damage (MD) program operations. Ongoing COVID-19 related supply chain disruptions continue to negatively affect parts availability, leading to prolonged repair times, increased rental costs and limited storage space for non-driveable vehicles. A lack of microchip supply has hampered the production of new vehicles, driving used car prices higher along with repair thresholds.[5] The average cost to repair vehicles is increasing across the industry, which is consistent with higher average repair costs and vehicle values. For further information on MD cost trends, please see Chapter 3, Actuarial Indicated Rate Change Analysis, Section B.1.

32. Notwithstanding COVID-19 related challenges, ICBC concluded implementation of the new Collision and Glass Programs (MD RAAP) in March of this year. Modernized equipment requirements were met by all program participants in March 2021 and technical training requirements in March 2022. All ICBC Collision Suppliers now adhere to modernized standards, delivering material improvements in the overall quality of vehicle repairs across the province through greater utilization of OEM procedures and equipment.

33. Increased industry standards have resulted in a need for additional internal training which keeps pace with our repair network. In response, ICBC has ensured all estimating staff have

[5] A higher repair threshold could result in a decision to repair a vehicle rather than replace it; thereby, increasing repair time, cost and rental vehicle periods.

access to industry standard training materials and introduced a dedicated OEM research team which works closely with vehicle manufacturers to ensure the safe and cost-effective application of repair procedures. The constantly evolving nature of vehicle technology, along with associated repair procedures and equipment will continue to drive increased costs for our supplier network.

34. In consideration of the above noted pressures, compliance and control processes have been updated as part of MD RAAP to ensure a greater number of Quality Assurance (QA) assessments relative to the previous program; QA is a measure of administrative accuracy and correct cost effective repair decisions. Overall industry performance has been strong in this regard, with an average provincial score of 95.29% for Collision and 92.71% for Glass in 2021. In addition, initial 2022 analysis indicates an approximate 1% reduction in leakage (repair estimate errors) amongst collision repair program participants.

35. In the second quarter of 2020, ICBC implemented the MD Account Service team. This group acts as the primary point of contact with the Collision and Glass industries; delivering monthly performance scorecards and associated coaching, as well as general training on program procedures and adherence. This new function has provided ICBC key insights into opportunities for program refinement, for example the technology enhancements discussed below.

36. Technology enhancements made under MD RAAP, such as the QA Assessment application,[6] repair facility locator and performance scorecards continue to be refined as follows:

- The QA Assessment application is currently undergoing changes to address supplier feedback.
- Adjustments have been made to the repair facility locator to improve public awareness of high performing suppliers.
- Industry performance scorecards, which were initially handled via a third party vendor, have now been transitioned to an in-house ICBC developed solution with more robust functionality.

37. Key Performance Indicators (KPIs) represent an opportunity to better leverage data and analytics for further improvement in MD programs as ICBC continues to evolve and learn from

[6] The QA Assessment application was introduced as part of MD RAAP and includes dashboards that can be accessed by both ICBC staff and repair facilities.

live data in an effort to better differentiate supplier performance. For example, ICBC uses severity (average cost of repair) and cycle time (average length of repair) as KPIs for collision repair facilities.

38. The Post Implementation Business Review (PIBR) of the MD Collision and Glass programs was completed and released to industry in March 2021. The report told us that direct costs for collision repair facilities in BC increased by 2% between calendar years 2017 to 2019. Using that cost information, ICBC increased the labour rate for collision and commercial repair facilities by 2.58% in April 2021. ICBC did not receive sufficient data from glass suppliers to understand the financial health of BC's auto glass industry, therefore the PIBR did not result in a change to Glass supplier compensation.

39. Since the completion of PIBR, industry conditions, stemming from the macro economic impact of COVID-19, have changed considerably; placing further cost pressures on all MD suppliers. Specific to Collision Repairers, there has been a steady decrease in the number of facilities and technicians. These declines have resulted in a shortfall in repair capacity and a corresponding increase in cycle-time (first notice of loss to repair completion). In consideration of these factors, a strategic decision was made to increase collision supplier labour rates in excess of inflation in order to better support a sufficient number of repair facilities and qualified technicians.

40. In response, ICBC is providing annual rate increases to all MD suppliers that could total up to approximately 19% over the next three years in an effort to help address ongoing cost pressures of these suppliers. The rates applied to the industries are shown in Figure 7B.1 below effective July 1, 2022:

Figure 7B.1 – Supplier Rate Increases

Industry	Year One	Year Two [2] (July 1, 2023)	Year Three [2] (July 1, 2024)
Collision[1]	3% (effective July 1, 2022) 10% rate equivalent (combined labour rate and administrative fees) effective November 28, 2022	BC Consumer Price Index (CPI) capped at 3%	BC CPI capped at 3%
Glass	3% (effective July 1, 2022)	BC CPI capped at 3%	BC CPI capped at 3%
Commercial[1]	10% (effective November 28, 2022)	BC CPI capped at 3%	BC CPI capped at 3%
Towing	6.7% (effective July 1, 2022)	N/A	BC CPI capped at 3%

[1] On April 2021, Collision and Commercial received a 2.58% increase.
[2] ICBC will calculate the annual BC CPI based on a measurement period of May-April to capture increases to inflation in the months leading up to the July effective date.

41. In addition to the increases to supplier rates, work is currently underway at ICBC in support of long-term industry viability through its Labour Education Training and Safety (LETS) program. The LETS program aims to tackle the primary challenge facing the collision and towing industries, a lack of new workforce talent entering the market. This program uses a multifaceted approach which will offer salvage vehicles for hands-on repair experience, financial assistance for Collision Technician apprenticeships and safe recovery training for towing suppliers. In addition, ICBC's creative services team and Auto Careers BC (an Automotive Retailers Association (ARA) program), have partnered on an initiative aimed at attracting and retaining talent through informative and educational means.

42. **Glass** - Windshield repair ratios increased from a baseline of 27% (FY 2018/19) to 28.3% (FY 2021/22). Windshield replacement costs continue to rise, driven by the price of glass itself, as well as the increased prevalence of Advanced Driver Assistance Systems (ADAS), which require recalibration as part of the windshield replacement process. ICBC is investigating program amendments that would further incentivize windshield repair over replacement, offsetting the number of required calibrations and overall glass claim costs.

43. **Commercial** - The introduction of ICBC's Commercial Repair Program, launched in January 2022, gave ICBC and commercial repair facilities the foundation to streamline and modernize the way we process commercial claims (vehicles with a gross vehicle weight equal to or exceeding 8,800 kg). Key changes include a 10% labour rate increase for contracted Commercial Collision Repair program facilities, introduction of a formal agreement and supporting program guide for qualifying suppliers, as well as minimum equipment and repair facility

requirements. Both ICBC and program suppliers have committed to the adoption of Mitchell Truckmax electronic estimating, this will replace existing end-of-life estimating tools, significantly improving processes, reporting and governance. Commercial Collision Repair Program facilities will now be included on ICBC's Repair Facility Locator for customer reference and recently implemented vendor profiles will provide better management of commercial claims.

44. **Towing** - ICBC is improving its towing policies, procedures and processes that directly affect customers, towing suppliers and staff. Key elements of this effort include simplifying the Towing and Storage Rate Payment Schedule, standardizing the invoice format and submission process, as well as formalizing a program guide; providing increased clarity in the application of rates and service expectations. ICBC is engaging the ARA and Towing Liaison Committee in the design of the program and activities. Guiding principles include leveraging existing programs and industry expertise, informed decision making through data-driven and measurable outcomes and developing evidence-based tactics to address gaps.

C.1 OTHER IMPROVEMENTS TO MATERIAL DAMAGE OPERATIONS

45. The Streamline Claims Processes Program (SCPP) project is underway and is anticipated to take two to three years to complete. SCPP will introduce new capabilities (technological and procedural) that are expected to be released on a quarterly basis. SCPP will improve processes to remove redundant activities, speed up task completion and automate routine processes. These changes will improve the ability for both customers and external providers to interact with ICBC, as well as enhance the overall on-the-job experience of employees. Key improvement areas include:

- Enabling customer notifications (e.g., text or email) for claim status updates.
- Enabling additional customer self-serve and auto-serve capabilities on the Claims Portal.
- Improving icbc.com to provide more information to customers thereby reducing the frequency of inquiry calls to our Contact Centre.
- Claims systems enhancements to improve intake and the organization of work such as electronic intake and Straight Through Processing for additional vendors.

C.2 SUMMARY

46. ICBC has successfully implemented its MD RAAP initiatives which have resulted in several positive outcomes including an increase in the number of MD claims receiving QA assessments, formalized performance coaching internally and externally, and a material reduction in leakage.

47. In the 2021 Revenue Requirements Proceeding ICBC expected to define a long term MD Strategy and roadmap by the end of calendar year 2021. However, given current industry conditions, including major supply chain disruptions and inflationary pressure, the MD strategy developed in 2021 requires revision, with an increased priority on securing the long-term supply of MD vendors and supporting technicians. An updated strategy will be available by the end of the 2022/23 fiscal year.

D COUNTER-FRAUD PROGRAM

48. This Section provides an overview of ICBC's ongoing efforts to reduce instances of fraudulent claims and mitigate the impact of fraud on claims costs. ICBC's overall counter–fraud program remains essentially the same as it has in prior years, although, as discussed below, Enhanced Care will have an impact on the types and severity of fraud that ICBC expects to encounter and ICBC is making the consequential adjustments to its operations. ICBC is not yet able to quantify how the counter-fraud program will impact Enhanced Care claims costs. Nevertheless, ICBC believes that its counter-fraud program will continue to reduce claims costs and positively impact future Basic insurance rates.

D.1 COUNTER-FRAUD PROGRAM REDUCES THE IMPACT OF FRAUD ON CLAIMS COSTS

49. ICBC continues to manage the ongoing risk of fraudulent claims that were opened under the legal-based system. However, as discussed below, RAAP Product Reform and the new Enhanced Care model are having an impact on the types of fraud being committed and detected by ICBC. ICBC continues to make adjustments to its counter-fraud program as fraud risks emerge and evolve.

50. The four pillars of ICBC's overall fraud strategy include deterrence, detection, enforcement and prevention. ICBC's counter-fraud tactics and initiatives relate to one or more of these strategic pillars, some of which are highlighted below.

51. ICBC informs the public about its commitment to fight fraud on icbc.com and in other corporate publications. These efforts help customers and suppliers understand that all British Columbians ultimately pay for fraudulent claims. For example, ICBC includes warnings on its online claims portal and in various claim forms to ensure our customers know that it is an offence to provide false or misleading information to ICBC about a claim. We also deter fraud by enabling the public to report fraud anonymously online or by phone.

52. ICBC's efforts to deter and detect fraud also extend to its supplier network. This includes sending out treatment verification surveys to its customers in an effort to deter and detect supplier fraud. These surveys ask customers to verify that they received the health care treatments billed to ICBC by healthcare providers. ICBC also uses billing integrity reports to identify billing anomalies from health care providers. Anomalies may indicate non-compliant billing practices and/or potential fraud. In addition, claims staff are trained to identify and report potential incidents of supplier fraud to ICBC's Supplier Management department. If fraud is detected, Supplier Management refers the case to the Special Investigation Unit (SIU) for further investigation.

53. In 2022, ICBC initiated an operational review of total theft and total fire claims handling. Both of these types of claims have a higher risk of fraud. The goal of the review was to ensure that these claims, along with the associated risk of fraud, are managed efficiently and effectively. Opportunities for improvements were identified and implemented, including updating procedures and training.

54. SIU's cyber unit conducts open-source investigations of information that is publicly available online, such as a post from a public social media account that suggests fraudulent activity. These investigative efforts are instrumental in combating exaggerated and fraudulent injury claims, especially for claims under the pre-RAAP insurance model that have the potential for high claim settlements.

55. Under Enhanced Care, ICBC expected the number of exaggerated injury claims to decrease and therefore, the number of cyber investigations on injury claims would also decrease. As such, the total number of SIU full-time equivalents (FTE) is also expected to decrease over the next few years. While the full impact of Enhanced Care on the SIU's workforce is still to be determined, the SIU continues to monitor case trends and assess its staffing needs under the new insurance model.

56. Whenever potential claims fraud is detected, a number of work areas collaborate to investigate the claim and enforce appropriate consequences where applicable. The work of the detection unit, formerly referred to as the triage unit, screens potential cases to ensure SIU officers and investigators are assigned to cases with the highest risk of fraud. The Investigative Claims Teams (ICT) serve as the central handling unit for most injury claims involving fraud. Severe and catastrophic, WorkSafeBC, out-of-province and employee claims, however, are not managed by the ICT. Due to the specialized nature of these claims, the original claims representative works directly with the SIU on claims that need a fraud investigation. There are also specialized units that handle non-injury claims that have a risk of fraud: total theft, total fire, hit-and-run and coverage breach scenarios.

57. ICBC fraud analytics software tool, NetReveal, generates potential fraud alerts which signal investigative opportunities that may not otherwise be apparent to a claims representative. ICBC has utilized NetReveal since 2017 and the majority of its benefits have been through the identification of potential instances of fraud in pre-Enhanced Care injury claims. With the implementation of Enhanced Care in May 2021 and the expected reduction in the number of fraud files, ICBC has determined that the benefits of NetReveal are no longer viable. ICBC's contract with BAE Systems for NetReveal expires near the end of 2022. A new fraud analytics tool is being developed internally and will be available shortly thereafter. ICBC will continue to monitor the effectiveness of the fraud analytics tool in the Enhanced Care Product.

D.2 COUNTER-FRAUD PROGRAM WILL EVOLVE UNDER ENHANCED CARE

58. ICBC's counter-fraud program was designed for pre-Enhanced Care claims and it continues to evolve to address new challenges that are inherent under the Enhanced Care model. For instance, under Enhanced Care there is less incentive to exaggerate an injury due to the elimination of payments for pain and suffering that were available under the legal-based system; however, the higher limits under EAB coverage may present an increased potential for other types of fraud, such as the Income Replacement Benefit (IRB) coverage. These factors are reflected in the evolution of the counter-fraud program. In response to these risks, ICBC developed fraud management guidelines specific to Enhanced Care claims. ICBC also developed and delivered fraud training to Claims recovery specialists to help them transition to the new Enhanced Care model and to increase their awareness of fraud risks under the new model. ICBC has a dedicated team of benefit analysts who review all IRB claims to ensure accurate documentation is on file to calculate payments. ICBC's QA team recently completed a review on the handling of EAB claims

with a risk of fraud and a review of the outcomes and recommendations for improvements is underway. ICBC has hired an external consulting firm to complete a review of the SIU operations, which is expected to be completed in early 2023. The operational review will include a full-scale assessment of all of the functions and activities of the SIU to ensure they can continue to effectively investigate fraud under Enhanced Care.

59. The counter-fraud program continues to reduce claims costs under Enhanced Care. As ICBC moved into Enhanced Care on May 1, 2021, estimating injury claims fraud savings under the new model will not be possible at this time due to a lack of data under the new model. However, ICBC is looking at various options and alternatives to estimate savings until sufficient amounts of data are collected and can be used for estimating fraud savings. Further information on the quantification of fraud savings is provided as part of ICBC's compliance reporting in Chapter 8, Appendix 8E Fraud Investigation Metrics.

E CONCLUSION

60. In order to ensure that British Columbians have an affordable and sustainable automobile insurance system, the Government introduced the Enhanced Care model to replace the legal-based insurance system as of May 1, 2021. These changes build upon the RAAP product reforms that came into effect on April 1, 2019. The improved accident benefits ensure that anyone injured in a crash will get the care they need for as long as they need it.

61. The Enhanced Care model allows ICBC staff to work collaboratively with customers who are injured, their health care providers and employers, in order to achieve the best possible outcome for the customer's return to function.

62. For vehicle repairs from a crash or other insured perils, MD RAAP is driving efficiencies in the vehicle repair industry and will ensure that customers receive safe, proper, quality repairs and improved customer experience.

63. Challenges still exist to keep claims costs under control, including managing the BI pending, controlling material damage costs and reducing instances of fraud. ICBC is continuing its effort to keep claims costs down through Enhanced Care and its other initiatives.

CHAPTER 8

COMPLIANCE REPORTING

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A INTRODUCTION

1. In the 2021 Revenue Requirements Application (RRA), ICBC created a central location for the presentation of BCUC-directed compliance reports with the introduction of Chapter 7, Compliance Reporting. This Chapter continues to assemble all the BCUC-directed compliance measures, as discussed in Section B, separate from the rate-related content comprising the rest of the Application. This structure allows readers to identify and focus on the content supporting the requested rate change from the content discussing ICBC's ongoing performance, which has no direct impact on the rate. Each report has an appendix dedicated to the performance of the BCUC-directed reports, as listed in Figure 8.1 below.

2. This Chapter contains 11 individual compliance reports, under 10 Appendices, providing a historical perspective with outlooks that are derived from actual performance, forecasts, internal corporate plans and priorities, including external and internal factors available as of the second quarter extending to the end of the fiscal year of March 31. The compliance reports do not provide projections for policy year (PY) 2023, nor do they generally impact the actuarial indicated rate change, which is forward looking:

- Compliance Reporting – Covers the fiscal year (FY) 2022/23 of April 1, 2022 to March 31, 2023 and may also include prior historical year information.
- Actuarial Indicated Rate Change – Provides projections for PY 2023 of April 1, 2023 to March 31, 2025.

B HOW THIS CHAPTER IS ORGANIZED

3. The individual compliance reports are attached as appendices to the Chapter and are provided in accordance with the BCUC directives set out in Figure 8.1.

4. Every three years, ICBC is required to report on its Information Technology (IT) Strategic Plan in the RRA, unless there is a material change to the corporate strategy and IT strategy during the period.[1] ICBC's 2021 RRA contained a report detailing its IT Strategic Plan and is not expected to provide an update until the 2023 RRA. As such, Appendix 8K, Information Technology (IT) Strategic Plan is a holding place with no content for this Application.

[1] Order G-139-18 dated July 26, 2018, Letter L-17-18 dated July 4, 2018 and Order G-21-20 dated February 14, 2020.

Figure 8.1 – Compliance Reports

Appendix	BCUC Directive Reference	Summary of Directives and Content of Appendices
8A **Performance Measures**	August 19, 2019 Decision on the 2019 RRA (Order G-192-19), page 35 and Appendix B as amended by the October 28, 2021 Decision on the 2021 RRA (Order G-307-21), pages 57 and 58.	The BCUC approved ICBC's list of amended performance measures as proposed in the 2019 RRA and as amended in the 2021 RRA. ICBC has reported on these performance measures in Attachment 8A.
8B **Investment Performance Information for 2021/22**	April 6, 2010 Decision on the Streamlined Regulatory Process (Order G-65-10), page 12.	BCUC directed ICBC to report investment performance information as part of future RRAs. This report is provided in Appendix 8B.
8C **Detailed Operating Expense Information**	Order G-65-10, page 14 and the August 16, 2012 Decision on the RRA for the 2012 Policy Year (Order G-109-12), pages 37 and 38.	BCUC approved the content for detailed historical information, as proposed, in Order G-65-10, dated April 6, 2010. In Order G-109-12, BCUC directed ICBC to continue to file this information in full RRAs, including divisional information. Appendix 8C includes explanations of variance of outlook to actual and divisional operating expense information.
8D **Cost Allocation Tables**	January 19, 2005 Decision on the Financial Allocation Methodology Application (Order G-9-05) and subsequent decisions.[2]	ICBC operates as an integrated organization across the Basic and Optional insurance businesses. The detailed allocation of operating expenses between Basic and Optional insurance has therefore been provided in every RRA as an appendix. Appendix 8D includes the allocator descriptions and the approved allocators using actual cost detail for the 2020/21 and 2021/22 fiscal years.
8E **Fraud Investigation Metrics**	May 14, 2014 Decision on the 2013 RRA (Order G-63-14), page 44 and May 27, 2016 Decision on the 2015 Revenue Requirements (Order G-74-16), page 33.	BCUC requested ICBC, starting in the 2014 RRA, to include information on fraud investigations and the positive outcomes that may arise from these investigations. Information to address these directives is provided in Appendix 8E.
8F **Injury Claim Transition to the Enhanced Care Model and Legal Representation Conversion Rate**	Order G-192-19, pages 35 and 36 and Appendix B.	In accordance with ICBC's proposal in the 2019 RRA, ICBC presented performance metrics assessing the impact of the Rate Affordability Action Plan (RAAP) product reforms in the 2021 RRA as well as providing information on the Legal Representation Conversion Rate. As of May 1, 2021, RAAP product reforms have been superseded by the Enhanced Care Model. ICBC has therefore discontinued the RAAP product reform metrics and placed the focus of this appendix on the transition from the legal-based injury claim model to the Enhanced Care Model.

[2] The original overall financial allocation methodology was approved in 2005 with other specific components accepted in the May 18, 2005 Negotiated Settlement Agreement (Order G-46-05), the 2006 RRA, the 2007 RRA, and subsequent work effort studies and independent third-party reviews regarding claims services costs.

Appendix	BCUC Directive Reference	Summary of Directives and Content of Appendices
8G Road Safety	May 19, 2015 Decision on the 2014 Revenue Requirements (Order G-81-15), pages 38 and 39.	The BCUC approved ICBC's proposal to file its road safety report as part of the annual RRA. Reviewing road safety matters in the annual RRA review process is appropriate and more regulatory efficient than by way of a separate filing. The current content of the road safety report in Appendix 8G is consistent with that established in the 2014 RRA proceeding.
8H Government Initiatives	May 16, 2017 Decision on other Matters in the 2016 RRA (Order G-71-17), page 8.	BCUC approved ICBC's proposal to continue reporting government initiatives annually as a chapter in each RRA. The content is now shown in Appendix 8H is consistent with the equivalent chapter content from prior RRAs.
8I Historical Information Table and	Order G-65-10, page 11	BCUC directed ICBC to include historical statistics as specified in an information request response from the 2009 Streamlined Regulatory Process Proceeding.[3]
Basic Insurance Information Sharing (BIIS)	May 20, 2004 Negotiated Settlement Agreement (NSA) Decision (Order G-49-04).	BCUC approved the 2004 NSA on sharing ICBC's aggregated Basic insurance data for premiums, sales volume and loss experience.
8J 2022/23 Annual Information Technology (IT) Capital Expenditure Plan	Order G-139-18	BCUC agreed to the content and format of the IT Capital Expenditure Report as provided in Appendix 8J.
8K Information Technology (IT) Strategic Plan	July 26, 2018 Decision on ICBC's Application to Streamline IT Compliance Reporting Requirements (Order G-139-18), pages 10 and 11.	The BCUC approved ICBC's proposal to reduce the filing frequency of the IT strategic plan to once every three years, but directed ICBC to file an IT strategic plan whenever there is a material change to the corporate strategy and IT strategy. As the three-year period has not lapsed, nor is there a material change to the corporate or IT strategy, ICBC will not be filing an IT Strategic Plan. Appendix 8K is a holding place with no content for this Application.

C CONCLUSION

5. ICBC submits that the set of appendices comprising this Chapter is representative and consistent with the compliance reporting that BCUC requires as part of a RRA to ensure that ICBC's provision of Basic insurance product and services are adequate, just and reasonable and are in line with BCUC directives contained in Figure 8.1 Compliance Reports.

[3] Response to information request 2009 ST BCUC.19.1-3.

APPENDIX 8A
PERFORMANCE MEASURES

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A INTRODUCTION

1. In this Appendix, ICBC will address the reporting of its performance measures and metrics over the coming years. The purpose of the BCUC-Approved Performance Measures is to provide information that will help the BCUC assess whether ICBC's provision of Basic insurance service to customers is adequate, efficient, just and reasonable and are a reflection of the work undertaken and discussed in Chapter 7, Business Operations. The measures are:

- Service Measures
  - Insurance Services Satisfaction
  - Driver Licensing Services Satisfaction
  - Claims Services Satisfaction (First Notice of Loss (FNOL) & Closed Claims)
- Financial Measures
  - Basic Minimum Capital Test (MCT) Ratio
  - Basic Loss Ratio
  - Investment Return
- Efficiency Measures
  - Loss Adjustment Expense Ratio (LAER)
  - Insurance Expense Ratio (Corporate)
  - Expense Ratio (Corporate)
  - Basic Insurance Expense Ratio
  - Basic Non-Insurance Expense Ratio

2. ICBC also monitors a closely related set of corporate performance measures under its corporate strategy; these are captured in ICBC's 2022/23 – 2024/25 Service Plan (Service Plan). Section B, ICBC's Corporate Strategy and Performance Measures, discusses how the corporate strategy is designed to deliver an affordable and sustainable auto insurance system. The corporate strategy and the related corporate performance measures guide ICBC when prioritizing investments and projects and when making staffing decisions.

3. For this Application, ICBC has added a new section to this Appendix, Section C Transparency and Accountability in Reporting, which discusses how ICBC provides important information through publicly available reporting to keep stakeholders well-informed.

4. The detailed results of BCUC's approved performance measures are in Section D BCUC-Approved Performance Measures. For greater clarity, ICBC has made several enhancements to how information is presented in this Application compared to previous filings. The performance measure "Basic Insurance and Non-Insurance Expense Ratios" has been re-categorized from the Financial Measures category to the Efficiency Measures category, as the measure provides more information about operational efficiency than financial stability. Also, ICBC has provided additional data supporting the Basic Loss Ratio and calculation of the Basic MCT Ratio, which can be found in Section D.2.2.3.

5. Section E, Affordability Performance Measures in the Service Plan, contains a discussion of two Service Plan performance measures. During the 2021 RRA process, ICBC noted that performance measures under the corporate strategic goal "To Make Insurance Affordable" were under development; they are now reported as Service Plan performance measures. The two measures provided for some additional insight in this Application are "percentage of claims costs that goes to customer" and "average cost for a vehicle-related claim".

B ICBC'S CORPORATE STRATEGY AND PERFORMANCE MEASURES

6. Each year, ICBC's corporate strategy is reported in the Service Plan covering a three-year period. The Service Plan is prepared under the direction of ICBC's Board of Directors.

7. While the first two years of the corporate strategy were focused on overhauling the auto insurance system through the implementation of Enhanced Care, the focus of the next two to three years shifts to finding ways to improve in all operations, better serve customers, and enhance the employee experience. The corporate strategy is framed around four goals:

- **To make insurance affordable:** ICBC is committed to delivering an affordable and sustainable insurance system for British Columbians. This goal will be achieved through significant reductions in claims costs and legal expenses, including the transition to Enhanced Care.

- **To be customer driven:** ICBC aims to be customer driven by becoming more flexible, and having customer needs shape improvements in the design and delivery of products and services. This goal will be realized through implementation of a corporate-wide customer experience model and the introduction of usage-based products.

- **To be smart & efficient:** This goal will be achieved by investing in data, analytics and technology, and streamlining processes, to improve efficiency and make better decisions.

- **To be future focused:** ICBC will help shape the future of insurance and mobility in BC through partnerships and workplace practices. Key to this will be preventing crashes as mobility evolves, and building a talented, diverse, and engaged workforce.

8. In ICBC's Service Plan, corporate performance measures and associated metrics are identified for each of the four goals, with targets set for the years ahead.

C TRANSPARENCY AND ACCOUNTABILITY IN REPORTING

9. ICBC is committed to transparency and accountability to our stakeholders. To support this, ICBC provides timely reporting and strives to present information in a way that is easy to understand and with appropriate context.

10. As required under the Insurance Corporation Act and the Budget Transparency and Accountability Act, ICBC is accountable for filing an annual report about its activities and results for the preceding year. The results of the corporate performance measures contained in the Service Plan were published in the Annual Service Plan Report 2021/22 released in August 2022, reflecting corporate results up to the end of fiscal year 2021/22. The Annual Service Plan Report reflects ICBC's results against the plan, and includes the actual metrics achieved for each of the corporate performance measures described in the Service Plan. In this way, the corporate performance measures are used to evaluate how well ICBC is executing against its corporate strategic goals from year to year. Since ICBC operates on an integrated basis, these measures are provided on a corporate basis (i.e., include Basic insurance and Optional insurance information).

11. To further enhance transparency and accountability, and support public trust, ICBC has produced a supplemental report to the Annual Service Plan Report titled "Year in Review" highlighting ICBC's initiatives and results from 2021 to 2022. The report is designed to inform customers of ICBC's financial and operational results in a manner that is accessible and understandable to many of our customers.

12. ICBC also publishes its Annual Service Plan Report, annual statements and schedules of financial information and the most recent statement of operations on a quarterly basis on icbc.com under company information. The current and historical copies of the quarterly statement of

operations are available on the BCUC website dating back to fiscal year 2020/21. With the Report for the First Quarter Ended June 30, 2022 and going forward, the MCT ratio will be split between Basic and Optional coverages to increase transparency.

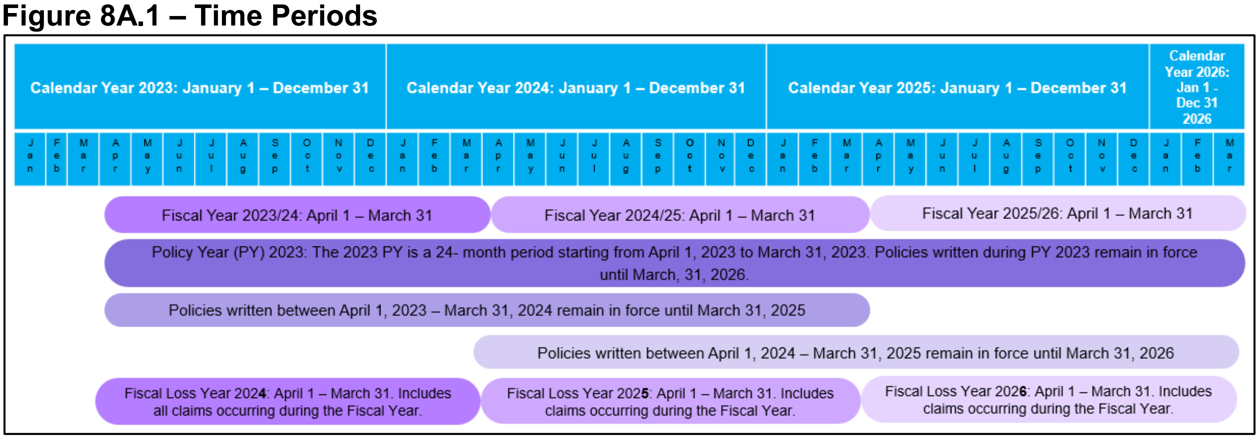
13. ICBC has also undertaken a joint study of jurisdictional comparisons in partnership with other public insurers being Saskatchewan Government Insurance and Manitoba Public Insurance. The October 2022 report titled, Canadian Private Passenger Vehicle Insurance Rate Comparison, presents comparisons of similar coverage and associated costs of insurance across Canada. However, it needs to be noted that there are several factors influencing the outcomes of each province and that the report is not a comparison of equal factors (e.g., differences in product).

14. In addition to the information available on icbc.com, the BCUC has created a page housing links to BCUC compliance reports for Rate Design filings, IT Capital Expenditure Plans and Performance Measures. There is also a list of confidential IT Capital Project reports to keep the public informed of BCUC's continued oversight of ICBC's provision of universal compulsory vehicle insurance for BC motorists.

C.1 UNDERSTANDING PERFORMANCE MEASURES

15. ICBC uses several timelines for capturing data and reporting the results of ICBC operations and fiscal performance. Figure 8A.1 below provides a visualization of various time periods that are referred to in this Appendix. Further details on timelines can be found in the 2023 RRA - Participants' Reference Guide.

Figure 8A.1 – Time Periods



16. Performance measures are based on the 12-month fiscal year period, with the actual results being retrospective in nature, covering historical data up to the end of the most recent

fiscal year. They are designed to provide an overview of ICBC's business efficiency and financial results using data available from the second quarter covering the period of April 2022 to September 2022.

17. Rate setting is prospective. It sets rates for the upcoming policy year of April 1, 2023 to March 31, 2025 and includes costs that may extend up to 50 years or more into the future. Due to the different timelines and components, providing a direct cause-and-effect relationship between performance measures and actuarial indicated rate change is not feasible.

18. The Outlooks for the BCUC-Approved Financial Measures are derived from the financial Outlook information as of the second quarter of the fiscal year associated with the filing of the Application. Outlooks are adjusted to reflect actual performance, forecasts, internal corporate plans and priorities, including external and internal factors. Future targets are established in conjunction with the budget process for the next fiscal year (i.e., 2023/24) and are published in the annual Service Plan tabled in February.

19. The Insurance Services Satisfaction targets are established in the fiscal year before the year to be measured. For example, ICBC set the targets for fiscal year 2022/23 in 2021/22 after reviewing the results of the prior year's performance for 2020/21. The performance measures are the actual results of customer experience surveys for ICBC services sought in fiscal year 2020/21.

20. ICBC's financial allocation methodology approved by the BCUC enables the Insurance Expense Ratio, Loss Ratio and Non-insurance Expense Ratio to be shown for Basic insurance only and are reflective of the latest BCUC-accepted changes to certain allocators at the time when the financial statements were prepared. All other performance measures are presented as an integrated basis comprising both Basic insurance and Optional insurance.

21. Investment Return benchmarks and targets are explained in Chapter 5, Attachment 5A.1-Statement of Investment Policy and Procedures dated January 27, 2022. The results are reported in this Appendix as one of the BCUC-Approved Financial Measures.

D BCUC-APPROVED PERFORMANCE MEASURES

22. This Section provides the compliance reporting on the BCUC-Approved Performance Measures including the changes to the performance measures as discussed in the 2021 RRA and approved by BCUC in the October 28, 2021 Decision on the 2021 Policy Year Rate Change (G-307-21).

D.1 OVERVIEW OF PERFORMANCE MEASURES AND RESULTS

23. ICBC operates as an integrated business and most performance measures presented in this Section are for the entire corporation, including both Basic insurance and Optional insurance. The BCUC-approved financial allocation methodology enables the Minimum Capital Test (MCT) Ratio, Loss Ratio, Insurance Expense Ratio, and Non-Insurance Expense Ratio to be shown for Basic insurance only. Where performance measures are presented for Basic insurance, the allocation is based on the approved allocation methodology, as updated using the most recent BCUC-approved changes to certain allocators at the time when the financial statements were prepared.

24. Figure 8A.1 is a summary table of the performance measures' results; the subsequent subsections provide a detailed discussion for each measure.

Figure 8A.1 – BCUC Performance Measures Results

	PERFORMANCE MEASURES	2019/20 Actual	2020/21 Actual	2021/22 Target/ Outlook[1,2]	2021/22 Actual	2022/23 Target/ Outlook[1,2]
Service[3]	Driver Licensing Satisfaction	92%	92%	92%	91%	76%
	Insurance Services Satisfaction	96%	96%	95%	96%	84%[4]
	Customer Services Satisfaction (FNOL & Closed Claims)	92%	92%	92%	89%	73%
Financial[5,6,7]	Basic MCT Ratio[8]	(18%)	57%	78%	92%	91%
	Basic Loss Ratio	111.4%	79.6%	89.7%	73.5%	83.2%
	Investment Return	Benchmark +0.09%	Benchmark +0.11%	Policy Market Benchmark Return	Benchmark Return + 0.23%	Benchmark Return
Efficiency[5,6,7]	Loss Adjustment Expense Ratio (LAER)	15.4%	15.9%	9.1%	9.0%	11.0%
	Insurance Expense Ratio (Corporate)	17.1%	19.9%	18.9%	20.0%	17.7%
	Expense Ratio (Corporate	19.4%	22.5%	22.1%	23.4%	21.1%
	Basic Insurance Expense Ratio	10.1%	10.8%	11.0%	12.1%	11.2%
	Basic Non-insurance Expense Ratio	3.9%	4.8%	5.2%	5.8%	5.6%

1 Service metrics are targets for 2021/22 and outlooks for 2022/23. Financial and Efficiency ratios are outlooks. Investment Return is a target.

2 The fiscal year (FY) 2021/22 Outlook values for the measures in this report are as at the second quarter (Q2) of FY 2021/22 and the FY 2022/23 Outlook values are as at Q2 of the current fiscal year.

3 Effective 2022/23, satisfaction will be measured based on the portion of customers who select the top two choices on a seven-point scale instead of the portion of customers who select the top two choices on a four-point scale. As a result of this change, targets and results beginning in 2022/23 appear much lower than those of previous years. Further details are outlined below.

4 As of May 1, 2022, this measure now includes online renewals.

5 The 2020/21 Actual Financial and Efficiency ratios are impacted by the two COVID-19 rebates processed in FY 2020/21. The COVID-19 rebates lowered the corporate premiums earned by $950 million and Basic premiums earned by $522.5 million. Excluding the COVID-19 rebates, the 2020/21 Actual Financial and Efficiency Measure ratios would be more favourable.

6 ICBC approved the Relief Rebate ($396 million); this resulted in lower earned premiums for 2021/22 and higher Actual Basic Loss Ratio, LAER and all Expense ratios. Excluding the rebate, the 2021/22 Actual Financial and Efficiency ratios would be more favourable.

7 The Basic insurance financial ratios and the Basic efficiency performance measures exclude government initiatives, which are cost recoverable, and projects costs that are funded by Optional insurance, including the Transformation Program (TP) costs, Rate Affordability Action Plan (RAAP) costs, and Autoplan Care Enhancements (ACE).

8 The long-term capital management target for the Basic MCT is 145%.

D.2 PERFORMANCE MEASURES EXPLANATORY NOTES

D.2.1 SERVICE MEASURES

25. The three elements that are foundational to a customer's driving experience in BC are: getting a driver's licence, buying or renewing auto insurance, and filing a vehicle accident claim.

These interactions are important to ICBC's customers and so are important for monitoring performance, to ensure that ICBC is continuously striving to meet customer expectations.

26. ICBC measures customer satisfaction across the three main lines of business: Driver Licensing, Insurance, and Claims. For each line of business, ICBC undertakes surveys that aim to measure customer service performance based on the percentage of satisfied customers for each of these major transaction types or services:

- **Driver licensing office experience:** Customers who recently completed a knowledge test, a road test, or renewed a driver licence.
- **Insurance experience:** Customers who recently purchased or renewed their policy or made changes to it. As of May 1, 2022, this measure includes online renewals.
- **Claims experience:** Customers satisfied with their claims transaction; this percentage is an average of the following claims measures:
  - First Notice of Loss (FNOL): customers who recently started the claim process.
  - Closed claims: customers who recently completed the claim process.

27. Figure 8A.2 reflects the historical results for satisfaction measures and targets for FY 2022/23. As will be described in the following subsection D.2.1.1, the drop in FY 2022/23 Outlooks compared to all other data points is a result of recent changes to the measurement framework, and not an anticipated drop in customer satisfaction. Subsections D.2.1.2 through D.2.1.4 then describe each of the service measures and their results in detail.

Figure 8A.2 – Customer Value and Service Measures

	2019/20 Actual	2020/21 Actual	2021/22 Target	2021/22 Actual	2022/23 Outlook
Driver Licensing Satisfaction	92%	92%	92%	91%	74%
Insurance Services Satisfaction	96%	96%	95%	96%	86%
Claims Services Satisfaction	92%	92%	92%	89%	71%

D.2.1.1 CHANGES TO SERVICE SATISFACTION MEASUREMENT FRAMEWORK

28. As part of ICBC's "Customer Driven" goal, in 2022/23 ICBC is evolving the customer measurement framework to include additional insights and is transitioning from a four-point

satisfaction measurement scale to a calibrated seven-point scale. Expanding the scale from four to seven measurement points provides customers with more response choices and allows them to better distinguish their level of satisfaction. This refined data will help identify areas that ICBC can focus on to improve the experience for customers.

29. With the four-point scale, customers who felt somewhat satisfied (rating of three out of four) and very satisfied (rating of four out of four) were included in the Satisfaction score. Beginning in 2022/23, only customers who rate as satisfied (six out of seven) and very satisfied (seven out of seven) will be included in the Satisfaction score. As a result, ICBC will no longer measure “somewhat satisfied” as a positive outcome as ICBC strives to improve its overall customer experience. Because of this shift, both targets and Satisfaction scores will be lower in future years.

30. The recent Service Plan includes the new seven-point scale. In a continued effort to ensure close alignment of the BCUC-Approved Performance Measures and ICBC’s Service Plan, ICBC will also transition to a seven-point scale for the BCUC-approved measures. The BCUC-approved survey questions will not change and will continue as part of the evolved measurement framework.

31. In June 2021, ICBC began collecting satisfaction data on the seven-point scale in addition to the four-point scale to gain insight into the potential implications of the change. Targets for future years are set on the seven-point scale, based on insights from the data collected since June. It is important to note that the lowering of targets beginning in 2022/23 is a result of changing the scale, and not an anticipated drop in customer satisfaction.

32. To illustrate how results from the four-point and seven-point scale compare, results for a parallel test of both scales from the period of June to November 2021 are included below for each of ICBC’s service areas.

Customer Satisfaction for Driver Licensing Services

New	1	2	3	4	5	6	7
	Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Satisfied	Very Satisfied

→ 74% ← (6–7)

→ 90% ← (3–4)

Prior	1	2	3	4
	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied

Customer Satisfaction for Insurance Services

New	1	2	3	4	5	6	7
	Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Satisfied	Very Satisfied

→ 86% ←

→ 96% ←

Prior	1	2	3	4
	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied

Customer Satisfaction for Claims Services

New	1	2	3	4	5	6	7
	Very Dissatisfied	Dissatisfied	Somewhat Dissatisfied	Neutral	Somewhat Satisfied	Satisfied	Very Satisfied

→ 70% ←

→ 89% ←

Prior	1	2	3	4
	Very Dissatisfied	Somewhat Dissatisfied	Somewhat Satisfied	Very Satisfied

D.2.1.2 DRIVER LICENSING SERVICES SATISFACTION

33. Each year, ICBC conducts approximately 1.6 million transactions relating to the issuance of driver licences or driver examinations[1]. The Driver Licensing Satisfaction measure represents the percentage of customers satisfied with their transaction with ICBC, which includes issuing or renewing a licence, taking a knowledge test or taking a road test. A random sampling of

[1] Driver Licensing offices also handle other transactions on behalf of Government, including issuance of service cards and administrative transactions such as address changes, which are not within the scope of this service measure.

approximately 5,000 surveys completed throughout the year informs the Satisfaction measure, which is weighted to reflect the total number of transactions for each service type.

34. ICBC's FY 2021/22 Driver Licensing customer satisfaction result was 91%, slightly below the target of 92%. Challenges included increasing transaction volumes at the time COVID-19 pandemic safety measures were in place, which had an impact on appointment availability and wait times.

35. Based on the new seven-point scale measurement framework, the Driver Licensing customer satisfaction FY 2022/23 Outlook is 74%.

D.2.1.3 INSURANCE SERVICES SATISFACTION

36. Independent insurance brokers process over three million Autoplan policies each year. The Insurance Services Satisfaction measure represents the percentage of customers satisfied with their recent insurance purchase and renewal transaction. This measure is based on a survey of approximately 5,000 customers throughout the year. This measure has typically shown the positive experience customers have through ICBC's broker partners.

37. The target for FY 2021/22 was 96%. The score for the FY 2021/22 was 96%, meeting target. Reduced premiums introduced with Enhanced Care continue to contribute to the high level of customer satisfaction. Autoplan brokers continue to support in-person and phone transactions, with consistent levels of service. On March 17, 2022, ICBC launched online renewals for personal policies expiring May 1, 2022 onwards. ICBC's Broker network continues to support customers with their online renewal process by reviewing each online renewal for completeness and will contact the customer if they have any concerns.

38. Based on the new seven-point scale measurement framework, the Insurance customer satisfaction FY 2022/23 Outlook is 86%.

D.2.1.4 CLAIMS SERVICES SATISFACTION

39. As ICBC operates its Basic and Optional lines of business on an integrated basis, the survey results do not distinguish whether the claim has a Basic insurance coverage or an Optional insurance coverage.

40. ICBC continues to maintain the Customer Satisfaction question as the key metric in the FNOL and Closed Claims surveys.[2] The overall Claims Services Satisfaction is an average of the survey results from FNOL and Closed Claims surveys. Other standard questions such as those needed to calculate First Call Resolution in the FNOL survey remain consistent over time.

41. There are significant differences in what each survey is intended to cover.

- The FNOL survey focuses solely on the claims reporting experience, beginning with the adjuster receiving the call from the customer reporting the claim. The survey is conducted two days after a claim is reported. At this stage, it is not possible to determine the categorization of the claim.[3]
- The Closed Claims survey, for closed injury and material damage claims, focuses on customers' claims experience following FNOL, including multiple process points and interactions with ICBC staff.[4]

42. Claims Services Satisfaction scores for the FNOL and Closed Claims surveys are provided in Figure 8A.3.

- FNOL Survey. This measure is used to determine customer satisfaction associated with reporting their claim through an ICBC call centre. Although slightly lower compared to the previous year, the result for FY 2021/22 continues to be strong at 95%.
- Closed Claims Survey. The Closed Claims measure is used to determine customer satisfaction with the end-to-end claims process based on when a claim is closed. The result for FY 2021/22 slightly decreased from the previous year by -2ppt to 84%.
- Overall Claims Services Satisfaction. FY 2021/22 Claims Services Satisfaction result of 89% was under the target of 92%.

[2] The claims services satisfaction result is based on the response to a single survey question (e.g., for the Closed Claims survey, the question is: "…would you say that you were very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with the service you received?").
[3] For example, ICBC can distinguish in approximate terms only among claims for Basic insurance only, claims which involve Basic insurance and Optional insurance coverages, or claims for Optional insurance only through the organizational unit that manages each claim. Claims involving cross-unit management make this segmentation imprecise.
[4] The survey does not include those claimants who are in advance support and recovery unit as these claimants are severely injured.

Figure 8A.3 – Actual Claims Services Satisfaction Results

Surveys	2020/21 Actual	2021/22 Actual
FNOL	97%	95%
Closed Claims	86%	84%
Overall Claims Services Satisfaction (average of the above)	**92%**	**89%**

43. Various factors influenced Claims Satisfaction levels, including claims volumes returning closer to pre-COVID-19 pandemic levels faster than anticipated, and the increased service demand for claims handling outpacing the ability to recruit requisite staff. This resulted in customers experiencing longer than normal response times and service delays. And as ICBC anticipated, with the launch of Enhanced Care on May 1, 2021, there was a need to hire new and re-train claims-related staff on new or redesigned processes, contributing to a learning curve for new Enhanced Care claims employees and resultant impacts on claims handling.

44. To address these challenges, ICBC has focused on recruitment efforts to meet service demands including hiring relevant experience from outside the organization. Additionally, enhancements to training are in place to optimize skill development needs. ICBC has also engaged in process and work segmentation improvements to streamline the customer experience and improve the overall responsiveness of teams. Furthermore, ICBC is adapting best practice standards in Enhanced Care case management and is utilizing a quality assurance program to evaluate success in executing to these standards.

45. Based on the new seven-point scale measurement framework, the Claims customer satisfaction FY 2022/23 Outlook is 71%.

D.2.2 FINANCIAL MEASURES

46. ICBC reports on three Financial performance measures:

- The **Basic MCT Ratio** is a measure of long-term financial stability; it is used to assess whether ICBC has sufficient Basic capital to protect policyholders from financial risk. It is the ratio of capital available to minimum capital required.
- The **Basic Loss Ratio** is a measure of the ratio of total Basic insurance claims and related costs to Basic insurance premium dollars earned.

- **Investment Return** measures ICBC's performance in its investment portfolio. It is a combination of the investment income generated and the change in market value of ICBC's investment portfolio, compared to a policy market benchmark.

47. A more in-depth description of each performance measure is given in the corresponding sections below.

48. The major factors that have adversely impacted financial stability for ICBC have been increases in bodily injury (BI) and material damage (MD) claims costs, and for several years, Basic insurance rates were not set to cover costs, or to maintain and build capital. The Provincial Government and ICBC introduced product reforms to the legal-based insurance product through the Rate Affordability Action Plan (RAAP) on April 1, 2019, and implemented the Enhanced Care model on May 1, 2021. Over the long term, these changes to the Basic insurance product will remove a considerable amount of claims costs and claims risk from the system.

49. The transition to Enhanced Care has been positive, improving affordability as seen from the reduction in insurance costs compared to the pre-Enhanced Care era.

D.2.2.1 FY 2021/22 RESULTS

50. The FY 2021/22 financial results were significantly favourable, primarily the result of higher-than-expected investment income mostly due to equity distributions, as well as equity gains triggered by the transition to a new asset mix for the investment portfolio and regular trading activities throughout the fiscal year. In addition, the results benefitted from the impact of the 11.5 percentage point capital build in the PY 2021 Basic rate.

51. FY 2021/22 claims costs were lower than expected primarily due to a higher (favourable) rate used to discount claims and lower costs on prior years' injury claims.

52. In addition, a judgment that had ruled the Civil Resolution Tribunal (CRT) jurisdiction over minor injury claims as unconstitutional was overturned; this decision also had a positive impact on prior years' claims costs. Partially offsetting the favourable claims costs, the BC Supreme Court ruled the Disbursements and Expert Evidence Regulations as unconstitutional; this decision had a negative impact on claims costs.

53. The strong financial performance in FY 2021/22 enabled the province and ICBC to provide a Relief Rebate of $396 million to eligible customers to help ease some of the financial challenges facing drivers in BC and aligns with the province's strategic goals.

D.2.2.2 FY 2022/23 OUTLOOK

54. There have been more challenging macro-economic conditions in FY 2022/23 to date than in the previous year. From the beginning of FY 2022/23, there has been unusually high inflation causing an unprecedented repricing of interest rate expectations resulting in significant deterioration in global financial markets, which has resulted in a sharp decline in both equity and fixed income asset prices. Due to the decline in investment markets, ICBC has experienced realized and unrealized investment losses resulting in an unfavourable impact on capital levels and the MCT results. Uncertainty remains in the global investment markets as a result of inflation and interest rate volatility.

55. Higher claims costs in FY 2022/23 have resulted in a higher Basic Loss Ratio as compared to FY 2021/22. Claims cost pressures include: a higher than anticipated BC Consumer Price Index resulting in increases to Enhanced Care claims products that are indexed to inflation; high parts and labour costs as well as delays in repairs and settlements; and bodily injury (BI) claims in the legal-based system (pre-Enhanced Care) emerging higher than expected. These adverse impacts are partially offset by higher prevailing interest rates which have led to a higher (favourable) rate to discount claims, as well as some favourable emergence from prior year's Enhanced accident benefits claims.

56. The outlook financial forecast results are not without risk. Given that Enhanced Care is still a new product for which the actuarial analysis continues to rely substantially on external and immature internal data, there remains more than normal risk to the forecast. There is uncertainty regarding changes in customers' mobility choices and driving behaviours going forward, in both the short and long term. Other significant risks include the emergence of large BI claims on the remaining book of open injury claims under the legal-based product, as well as uncertainty with inflation and global investment markets. A challenge to the minor injury cap remains outstanding and, if successful, would have a significant unfavourable impact. On the other hand, a successful appeal on the July 2022 Evidence Act decision may provide a favourable impact. Due to these uncertainties, and the potential for others, provisions were included in the FY 2021/22 and FY 2022/23 outlooks to account for adverse events that could negatively impact the Basic MCT and Basic Loss Ratios. If risks and adverse events do not manifest by the fiscal year-end and the

provision is not required, the Basic MCT and Basic Loss ratios as shown for FY 2022/23 will be more favourable.

57. Summary results for the financial performance measures are provided below in Figure 8A.4, together with their outlook values for FY 2022/23:

Figure 8A.4 – Financial Measures

	2019/20 Actual	2020/21 Actual	2021/22 Target[1]/ Outlook[2]	2021/22 Actual	2022/23 Target[1]/ Outlook[3]
Basic MCT Ratio	(18%)	57%	78%	92%	91%
Basic Loss Ratio	111.4%	79.6%	89.7%	73.5%	83.2%
Investment Return[4]	Benchmark +0.09%	Benchmark +0.11%	Policy Market Benchmark Return	Benchmark +0.23%	Policy Market Benchmark Return

[1] Targets are specifically for investment return only. The Investment Return is not a forecasted value but is determined as at fiscal year end.
[2] The 2021/22 Outlook is as of Q2 of FY 2021/22. The Basic MCT Ratio and the Basic Loss Ratio use claims cost information as of August 2021.
[3] The 2022/23 Outlook is as of Q2 of FY 2022/23. The Basic MCT Ratio and the Basic Loss Ratio use claims cost information as of August 2022.
[4] Benchmark (BM) is the four-year annualized Policy Market Benchmark Return.

D.2.2.3 BASIC MCT RATIO

58. The Basic MCT Ratio is used to assess whether ICBC has sufficient Basic capital to protect policyholders from financial risk and to provide long-term financial stability. As prescribed in *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004, as amended (Special Direction IC2)*, for Basic insurance, ICBC must use the Guideline for Minimum Capital Test for Federally Regulated Property and Casualty Insurance Companies issued by the Office of the Superintendent of Financial Institutions ("OSFI") in determining the MCT Ratio. On December 12, 2022 *Special Direction IC2* was amended by Order in Council 666/2022, December 12, 2022 (B.C. Reg. 269/2022), extending the temporary suspension of the requirement to achieve and maintain a Basic capital level of at least 100% of MCT for the policy year 2023.

59. The MCT Ratio is the capital available divided by the minimum capital required. Capital available is primarily calculated from the sum of the retained earnings (deficit) and other components of equity. Capital required is calculated using a risk-based formula which is the sum of pre-determined risk factors related to items on the balance sheet including balance sheet

assets, premium liabilities and unpaid claims. A higher MCT ratio is generally better than a lower one as it is a measure of the capital adequacy of an insurer.

60. In Figure 8A.5, the components of the Basic MCT ratio are provided with reference to the OSFI guideline effective January 1, 2019. Figure 8A.6 provides the components of capital available (line A of Figure 8A.5).

Figure 8A.5 – Calculation of Basic MCT Ratio by Risk Component

Line	Components of MCT Ratio ($ Millions)	2021/22 Outlook[1]	2021/22 Actual	2022/23 Outlook[2]
[A]	**Total Capital Available**[3]	**1,838**	**2,233**	**2,110**
	Components of Capital Required			
[B]	Insurance Risk	1,126	1,038	991
[C]	Market Risk	2,121	2,247	2,184
[D]	Credit Risk	309	379	318
[E]	Operational Risk	382	381	377
[F]	Diversification Credit	408	393	375
[G]	Total Capital Required at 150% MCT [B] + [C]+ [D] +[E] – [F]	3,530	3,652	3,495
[H]	**Total Minimum Capital Required ([G]/1.5)**	**2,353**	**2,435**	**2,330**
[I]	**MCT Ratio ([A] / [H])**	**78%**	**92%**	**91%**

[1] The 2021/22 Outlook is measured as of Q2 of FY 2021/22.
[2] The 2022/23 Outlook is measured as of Q2 of FY 2022/23.
[3] See Figure 8A.6 for Calculation of Basic Capital Available.

Figure 8A.6 – Calculation of Basic Capital Available Component

Line	Components of Capital Available ($ millions)[1]	2021/22 Outlook	2021/22 Actual	2022/23 Outlook
[A]	**Opening Equity (Deficit)**	**1,228**	**1,228**	**2,274**
	Change During the Year:			
[B]	Net Income (Loss)	477	1,302	(17)
[C]	Pension and Post-Retirement Benefits Actuarial Gain / (Loss)	33	336	(4)
[D]	Change in Unrealized Gains / (Loss), NCI[1] and Other	156	(592)	(82)
[E]	**Ending Equity (Deficit) [A]+[B]+[C]+[E]**	**1,894**	**2,274**	**2,171**
[F]	Intangible Assets	(56)	(41)	(61)
[G]	**Total Capital Available [E] + [F]**	**1,838**	**2,233**	**2,110**

[1] NCI refers to non-controlling interest.

61. The Actual Basic MCT ratio as of March 31, 2022 was favourable to the FY 2021/22 Outlook. This was the result of higher than expected net income, and an actuarial gain on pension and post-retirement benefits liability, partially offset by unfavourable change in unrealized investment values. The higher year-end MCT benefitted from higher net income as a result of higher realized investment income, favourable claims experience, and a higher rate to discount the claims liabilities. Partially offsetting this was a loss to the change in unrealized investments (line D), as more investment return was realized to investment income and unrealized investments were impacted by reduced global market values between December 2021 and March 31, 2022.

62. The Basic MCT Ratio FY 2022/23 Outlook is expected to remain similar to year-end FY 2021/22 as the benefit of the 11.5 percentage point capital build in the Basic rates from policy year 2021, and a higher rate to discount claims is expected to be offset by significant realized and unrealized investment losses, and higher claims costs as a result of inflation.

63. The FY 2022/23 capital available and capital required are expected to be lower than FY 2021/22. The capital required is expected to be lower as deterioration in global investment markets have also reduced the total market value of ICBC's investment portfolio, thereby reducing the risk margin for minimum capital required.

D.2.2.4 BASIC LOSS RATIO

64. The Basic Loss Ratio is a measure for assessing whether Basic insurance premiums are sufficient to cover the insurance product's costs. The Basic Loss Ratio is the ratio of the total Basic insurance claims and related costs, including Road Safety and Loss Management expenses, to Basic insurance premium dollars earned. It focuses on the most important cost driver for Basic insurance rates: Basic insurance claims costs. All other things being equal, a lower percentage is more favourable.

65. In Figure 8A.7, the components of the Basic Loss Ratio for FY 2021/22 and FY 2022/23 are provided.

Figure 8A.7 – Calculation of Basic Loss Ratio

Component ($ Millions)	2021/22 Outlook	2021/22 Actual	2022/23 Outlook
Current Year Claims Incurred[1]	2,276	2,220	2,539
Prior Years' Claims Adjustment[1]	(74)	63	32
Other Claims Costs[2]	256	(590)	(272)
Claims Services and RSLM[3]	353	331	337
A Basic Claims and Related Costs	**2,812**	**2,024**	**2,636**
B Basic Premiums Earned	**3,135**	**2,754**	**3,168**
Basic Loss Ratio (A/B)	**89.7%**	**73.5%**	**83.2%**

[1] Current Year Claims Incurred and Prior Years' Claims Adjustment are shown on an undiscounted basis. Discounting is reflected in Other Claims Costs.
[2] Other Claims Costs include the impact of discounting and provisions for adverse deviations. This also includes changes in the unallocated loss adjustment expense (ULAE) reserve and risk provisions in the event of adverse events.
[3] Road Safety and Loss Management.

66. Prior to FY 2020/21, the Basic Loss Ratio had consistently been in excess of 100%, which means that ICBC was not collecting sufficient Basic insurance premiums to pay for Basic claims costs. The Basic Loss Ratios shown for FY 2021/22 Outlook and Actual are favourable (less than 100%) primarily due to favourable claims costs from the impacts of the pandemic, RAAP product reform, and a lower frequency trend which preceded the onset of the pandemic, in addition to the benefit from the approved 11.5 percentage point capital build component in the Basic rate. FY 2021/22 actual rate to discount claims was also higher (favourable) compared to the

FY 2021/22 Outlook. FY 2021/22 actual premiums earned are comparatively lower primarily due to the $396 million Basic Insurance Relief Rebate.

67. The FY 2022/23 Outlook for the Basic Loss Ratio is expected to continue to be favourable (but higher than FY 2021/22), due to the capital build component in the Basic rate and benefitting from a higher (favourable) rate to discount the unpaid claims liabilities.

- Current year claims incurred are higher in FY 2022/23 Outlook due to inflationary pressures on Enhanced Care coverages indexed to inflation (Medical Rehabilitation and Enhanced Disability) and higher material damage costs related to Basic Vehicle Damage Coverage (BVDC) due to higher inflation on repair costs and vehicle values.[5]
- Prior Years' claims adjustments are also higher due to an increase in legal-based bodily injury large count emergence, partially offset by lower emergence on prior years' EAB claims.
- Other claims costs are favourable primarily due to the higher rate to discount claims.
- The 2022/23 Outlook claims services and road safety are slightly higher than year-end as claims levels and FTE levels increased over FY 2021/22, returning to higher post-COVID-19 pandemic levels.

Figure 8A.8 – Claims Frequencies and Severities

Component	2021/22 Outlook[1 2]	2021/22 Actual [2]	2022/23 Outlook
Basic AB/Enhanced AB Frequency	2.34%	2.09%	2.02%
Basic AB/Enhanced AB Severity	$ 17,474	$ 19,441	$22,090
PD/BVDC Frequency	3.83%	3.67%	3.89%
PD/BVDC Severity	$ 4,842	$ 4,609	$5,792

[1] 2021/22 Outlook frequencies and severities as reported in the 2021/22 Performance Measures Report filed on December 15, 2021 which do not include Manual Basic experience. 2021/22 Actual and 2022/23 Outlook frequencies and severities includes Manual Basic experience.
[2] Since Enhanced Care came into effect beginning May 1, 2021, pre-Enhanced Care coverages were in effect for the month of April 2021 and were included in 2021/22 Outlook and Actual frequencies and severities.

68. The current year claims incurred in Figure 8A.7 are the largest component of the Basic Loss Ratio calculation. The frequencies and severities are for claims associated with accidents occurring in the fiscal year shown under the coverages with the major impact (EAB and BVDC) to the overall loss costs.

[5] See Chapter 7, Appendix 7B Claims Cost Management for more information about BVDC.

D.2.2.5 INVESTMENT RETURN

69. As at November 2022, ICBC manages an investment portfolio with a carrying value of approximately $19 billion. Investment return for FY 2021/22 Target and Actual and FY 2022/23 Target are provided below in Figure 8A.9.

Figure 8A.9 – Investment Return

	2021/22 Target	2021/22 Actual	2022/23 Target
Investment Return (4 year annualized return)	Policy Market Benchmark Return	Benchmark + 0.23%	Policy Market Benchmark Return

70. Available funds are invested to generate an investment return, which is used to reduce premiums for policyholders. ICBC's return on the investment portfolio is a combination of the change in market value and the investment income generated during the period. ICBC measures the performance of each asset class component of its investment portfolio against a chosen and pre-determined market benchmark deemed appropriate for the return profile of the asset class. The total portfolio's performance is measured against the policy market benchmark. Market benchmarks and the target asset mix are explicitly outlined in the Statement of Investment Policy and Procedures that is set by the Board of Directors. ICBC's investment portfolio continues to perform well relative to industry benchmark returns.

71. For the FY 2022/23 Target, ICBC expects, at a minimum, to achieve the policy market benchmark return. ICBC does not forecast the policy market benchmark return, as the policy market benchmark return is the result of market forces, which are beyond ICBC's control.

D.2.3 EFFICIENCY MEASURES

72. Ensuring that ICBC operates efficiently contributes to providing customers with affordable insurance coverage. A variety of techniques such as LEAN methodologies are applied to contribute to the continuous improvement in the processes and operational management within ICBC.[6] ICBC uses these in combination with tools, standards, and technology to operate efficiently and deliver consistent quality service.

73. ICBC operates as an integrated organization across the Basic and Optional insurance lines of business, therefore its efficiency measures are determined on a corporate basis. ICBC

[6] Please see http://www.lean.org/whatslean/.

has been reporting separately to BCUC on the Basic Insurance Expense Ratio and the Basic Non-Insurance Expense Ratio. These performance measures are specific to the Basic insurance business and are derived from the corporate equivalents using the approved financial allocation methodology. These performance measures are also provided as they measure efficiency for Basic insurance.[7]

74. The summary results for the Efficiency Measures are provided in Figure 8A.10 below:

Figure 8A.10 – Efficiency Measures

Efficiency Measure	2019/20 Actual	2020/21 Actual[1]	2021/22 Outlook[2]	2021/22 Actual[3]	2022/23 Outlook[4]
Loss Adjustment Expense Ratio (LAER)	15.4%	15.9%	9.1%	9.0%	11.0%
Insurance Expense Ratio (Corporate)	17.1%	19.9%	18.9%	20.0%	17.7%
Expense Ratio (Corporate)	19.4%	22.5%	22.1%	23.4%	21.1%
Basic Insurance Expense Ratio	10.1%	10.8%	11.0%	12.1%	11.2%
Basic Non-Insurance Expense Ratio	3.9%	4.8%	5.2%	5.8%	5.6%

[1] The 2020/21 Actual Efficiency ratios are impacted by the two COVID-19 rebates processed in FY 2020/21. The COVID-19 rebates lowered corporate premium earned by $950 million and Basic premium earned by $522.5 million. Excluding the COVID-19 rebates, the 2020/21 Actual Efficiency Measures would be more favourable.
[2] The 2021/22 Outlook is measured as of Q2 of FY 2021/22.
[3] ICBC approved the Relief Rebate ($396 million); this resulted in lower earned premiums for 2021/22 and higher Actual Basic Loss Ratio, LAER and all Expense ratios. Excluding the rebate, the 2021/22 Actual Efficiency ratios would be more favourable.
[4] The 2022/23 Outlook is measured as of Q2 of FY 2022/23.

D.2.3.1 LOSS ADJUSTMENT EXPENSE RATIO (LAER)

75. The Loss Adjustment Expense Ratio (LAER) compares the claims management expenses to the premiums that customers pay in the same fiscal year period; therefore, the LAER reflects how efficient ICBC is in controlling how much of the premium dollar is needed to pay for management of claims.

76. Costs associated with the claims loss adjustment process include internal claims services expenses consisting of salaries and benefits for claims staff, information system services related to claims handling and claims office overhead, and external expenses consisting primarily of costs for medical and dental reports, private investigators, independent adjusters, and costs for towing

[7] In previous reports, these performance measures were included as financial measures.

and storing damaged vehicles. Costs for internal and external legal counsel are also included, but these costs are much less significant following the transition to Enhanced Care. Road Safety and Loss Management (RSLM) expenses are also considered part of the claims management expenses (including ICBC's Special Investigation Unit (SIU) that covers auto crime and fraud prevention investigation and detection). In this Appendix, Collectively, all of these expenses are collectively referred to as claims management expenses.

77. The LAER measure considers claims management expenses on an incurred basis, which means that it is based on the costs (current/paid and future/estimated) for claims that arise from losses occurring in the current fiscal year. Because some of these are estimated (reserved), it is also affected when the cost of handling prior year claims is found to be greater or less than the previous estimate (this being a change in the reserve amount). The incurred basis makes this measure more responsive when there are changes in the characteristics of new claims that will make them more or less costly to manage.

Figure 8A.11 – Loss Adjustment Expense Ratio

Component ($Millions)	2021/22[1] Outlook	2021/22 Actual	2022/23[2] Outlook
A Claims services expenses including change in reserve	283	210	373
B External expenses including change in reserve	124	165	152
C RSLM	62	55	53
D Claims Management Expenses (A + B + C)	**469**	**430**	**578**
E Total Premiums Earned	**5,141**	**4,784**[3]	**5,268**
F Loss Adjustment Expense Ratio (D/E)	**9.1%**	**9.0%**[3]	**11.0%**

[1] The 2021/22 Outlook is measured as of Q2 of FY 2021/22.
[2] The 2022/23 Outlook is measured as of Q2 of FY 2022/23.
[3] ICBC approved the Relief Rebate ($396 million); this resulted in lower earned premiums for 2021/22 and higher LAER ratio for 2021/22. Excluding the rebate, the 2021/22 Actual LAER would be more favourable.

78. The change from FY 2021/22 Outlook to Actual was mainly due to the decrease in ULAE reserve in response to the BC Court of Appeal decision related to the CRT. Lower claims services expenses are expected to be incurred in the service of outstanding claims, assuming fewer of them will become represented and litigated.

79. The change from the FY 2021/22 Actual to the FY 2022/23 Outlook is due to the fact that the favourable ULAE adjustment in FY 2021/22 is not expected to repeat in FY 2022/23.

D.2.3.2 INSURANCE EXPENSE AND EXPENSE RATIOS (CORPORATE)

80. The **Insurance Expense Ratio (Corporate)** is calculated as the ratio of insurance operating expenses (excluding claims, claims-related costs, and non-insurance expenses) to insurance premium dollars earned. Insurance services and administrative costs are costs such as human resources, finance, actuarial, information services and insurance services costs such as broker management and support and underwriting.[8] Commissions paid to brokers are dependent upon the number of transactions and premium revenue. The Insurance Expense Ratio is a standard industry measure to assess the operational efficiency of an insurer. All things being equal, a lower Insurance Expense Ratio is better.

81. The **Expense Ratio (Corporate)** is calculated in the same manner as the Insurance Expense Ratio above, but also includes non-insurance operating expenses consisting of expenses for the administration of driver licensing, commercial vehicle services, vehicle registration and licensing and government fine collection.

82. Both the Insurance Ratio and Expense Ratio are expected to be slightly higher compared to historic results for these measures as a result of the significant Basic and Optional rate reductions in the transition to Enhanced Care, which impacted the premium earned that is used as the denominator in the calculations of these ratios.

83. Figure 8A.12 shows the components of the Insurance Expense Ratio (Corporate) and Expense Ratio (Corporate).

[8] See Chapter 6, Operating Expenses and Allocation Information, Figure 6.1.

Figure 8A.12 – Insurance Expense and Expense Ratios (Corporate)

Insurance Expense Ratio (Corporate) Component ($Millions)	2021/22[1] Outlook	2021/22 Actual	2022/23[2] Outlook
A Insurance services and administration	309	302	302
B Insurance commissions and premium taxes	664	654	631
C Insurance expense (A+B)	**973**	**956**	**933**
D Total Premiums Earned	**5,141**	**4,784[1]**	**5,268**
E Insurance Expense Ratio (Corporate) (C/D)	**18.9%**	**20.0%**	**17.7%**

[1] The 2021/22 Actuals total premium earned is lower due to Relief Rebate of $396 million.

Expense Ratio (Corporate) Component ($Millions)	2021/22[1] Outlook	2021/22 Actual	2022/23[2] Outlook
F Insurance expenses (C)	973	956	933
G Non-insurance driver services and administration	126	125	140
H Non-insurance commissions	38	36	38
I Total expenses (F+G+H)	**1,137**	**1,117**	**1,111**
J Expense Ratio (Corporate) (I/D)[3]	**22.1%**	**23.4%**	**21.1%**

[1] The 2021/22 Outlook is measured as of Q2 of FY 2021/22.
[2] The 2022/23 Outlook is measured as of Q2 of FY 2022/23.
[3] Rounding may affect totals.

84. The FY 2021/22 Actual Insurance Expense and Expense ratios are higher than both the FY 2021/22 and FY 2022/23 Outlooks due to lower premiums earned as a result of the $396 million Relief Rebate.

85. Insurance services and administration for FY 2021/22 are lower than FY 2021/22 Outlook primarily due to fewer FTEs mainly as a result of recruitment challenges and savings from continuing COVID-19 pandemic impacts resulting from supply chain issues and resource constraints. FY 2021/22 Actual to 2022/23 Outlook amounts are expected to stay consistent.

86. Insurance commission and premium taxes are primarily a function of premium revenues. Premium taxes are a 4.4% tax on net premium earned, and therefore, vary in relation to the net

premiums earned. FY 2021/22 Actual premium taxes are lower compared to the Outlook periods as a result of lower premiums from the Relief Rebate.

87. Insurance commissions are a function of both the volume of transactions and Optional premium revenue (gross of rebates/refunds). FY 2022/23 insurance commission expense is lower due to lower Optional premium as a result of the Optional rate reductions in the transition to Enhanced Care.

88. There are no significant changes for non-insurance expenses from the FY 2021/22 Outlook to the FY 2021/22 Actual. The increase in non-insurance expenses in FY 2022/23 Outlook is a reflection of recruitment efforts to increase staffing in order to maintain adequate service levels in contact centres and driver licensing offices. Further increases are primarily due to anticipated general wage increases that will be negotiated under the Collective Agreement and reported and approved by the Public Sector Employers' Council (PSEC) Secretariat, as well as individual length of service increase.

D.2.3.3 BASIC INSURANCE AND NON-INSURANCE EXPENSE RATIOS

89. The Basic Insurance Expense Ratio is the ratio of Basic insurance operating expenses (excluding claims, claims-related costs, and non-insurance expenses) to Basic insurance premium dollars earned. It is the equivalent for Basic insurance of the Insurance Expense Ratio (Corporate) reported in Section D.2.3.2 above.

90. The Basic Non-Insurance Expense Ratio is the ratio of non-insurance expenses to Basic insurance premium dollars earned.

91. Details of the calculations for these two measures are provided in Figure 8A.13 below. The explanation for the corporate measures above apply to the Basic measures with some exceptions explained below Figure 8A.13.

Figure 8A.13 – Calculation of Basic Expense Ratios

Component ($ Millions)	2021/22 Outlook[1]	2021/22 Actual	2022/23 Outlook[2]
Insurance services and administration	139	138	142
Commissions and premium taxes	206	194	211
A Basic Insurance Expenses	**345**	**332**	**353**
B Basic Premiums Earned	**3,135**	**2,754**	**3,168**
Basic Insurance Expense Ratio (A/B)	**11.0%**	**12.1%**	**11.2%**
C Basic Non-Insurance Expenses and Commissions	164	161	178
Basic Non-Insurance Expense Ratio (C/B)	**5.2%**	**5.8%**	**5.6%**

[1] The 2021/22 Outlook is measured as of Q2 of FY 2021/22.
[2] The 2022/23 Outlook is measured as of Q2 of FY 2022/23.

92. Basic Insurance and Non-insurance Expense ratios are expected to be higher as compared to historical results for these measures due to reduced Basic premium, which is used as the denominator in the calculation, as a result of the significant Basic rate reduction in the transition to Enhanced Care.

93. Basic premiums earned for FY 2021/22 Actual are impacted by the $396 million Relief Rebate, which resulted in lower premium tax expense for FY 2021/22 Actual, and a lower Basic premium used as a denominator for the calculation of the ratios.

94. Since premium tax is a 4.4% applied to premiums earned, lower premium earned for FY 2021/22 resulted in lower premium tax expense on the commission and premium tax line.

95. FY 2022/23 premium revenues are expected to be slightly higher than FY 2021/22 (unadjusted for rebates), due to policy growth. Higher premium for FY 2022/23 results in higher premium tax. Broker remuneration for most fixed fee commissions are scheduled to increase by approximately 5.5%, effective January 1, 2023. This fee increase will have little impact on the ratios for FY 2022/23 as only three months are within the 2022/23 fiscal year.

E. AFFORDABILITY PERFORMANCE MEASURES IN THE SERVICE PLAN

96. ICBC's operations are driven and guided by the strategic corporate goals set out in the annual Service Plan. In 2021, ICBC introduced a five-year strategic plan to guide the company through a period of transition which concludes at the end of FY 2024/25; this plan is reflected by the performance measures that are in the Service Plan.

97. ICBC has stated previously its intention to align its BCUC reporting more closely with its Service Plan measures (see Order G-307-21). As part of this, ICBC has opted to add this section to discuss two affordability measures which are reported in the Service Plan:

- Percentage of claims costs that goes to customers
- Average cost for a vehicle-related claim

98. The transition to Enhanced Care has been positive for affordability, enabling ICBC to reduce insurance rates for customers and direct a greater share of premium dollars directly toward care, recovery, and income replacement benefits than under the old legal-based product. With regard to vehicle damage, the current high levels of inflation have affected vehicle values and repair costs, and are exacerbated by continuing supply chain issues, putting pressure on claims costs and creating a challenge to affordability.

99. While ICBC is not seeking to have these performance measures approved under the BCUC suite of approved performance measures, ICBC provides additional commentary in this section in response to the discussion on Affordability Measures during the 2021 RRA Proceedings. Summary results for these affordability measures are provided in Figure 8A.14:

Figure 8A.14 – Affordability Measures

	2019/20 Actual	2020/21 Actual	2021/22 Target[1]	2021/22 Actual	2022/23 Target[2]
Percentage of claims costs that goes to customers	82.2%	80.8%	91.4%	95.0%	95.7%
Average cost for a vehicle-related claim	$4,391	$4,718	$4,941	$5,080	$5,300

[1] The 2021/22 Target values were set in the 2021/22 Service Plan.
[2] The 2022/23 Target values were set in the 2022/23 Service Plan.

E.1 PERCENTAGE OF CLAIMS COSTS THAT GOES TO CUSTOMER

100. The percentage of claims costs that goes to customers compares the costs paid to customers versus the total cost to ICBC for claims incurred in a given year. The costs paid to

customers are primarily composed of the amounts spent to support or compensate them for their recovery, and to repair or replace their vehicles. The amounts paid to customers do not include amounts customers pay for legal representation and expert reports, or costs that ICBC pays to manage and settle claims, including the costs associated with litigation.

101. Enhanced Care allowed ICBC to reduce rates and ensure that a greater percentage of claims costs now goes back to customers; this is evidenced by the marked improvement in this affordability measure in 2021/22 to 95.0%, from only 80.8% in 2020/21. The 2021/22 result, which was 3.6 ppt better than the year's target, was also positively influenced by receiving even fewer legal-based injury claims than anticipated.

102. Benefits of the change to Enhanced Care are incorporated into the target for 2022/23 claims as well, with legal related costs being largely eliminated.

E.2 AVERAGE COST FOR A VEHICLE-RELATED CLAIM

103. The average cost for a vehicle-related claim measures the combined average cost for all material damage claims (excluding glass-only claims) incurred in a given year and covered by ICBC's main insurance products (both Basic and Optional). The average cost to repair vehicles is increasing across the industry, which is consistent with higher average repair costs and vehicle values. The biggest increases are being seen in parts prices, labour and material costs for repairs, rental, storage, towing and loss of use costs.

104. In addition to the general increase in complexity of vehicle technology over time, inflationary pressure on parts costs, labour, and vehicle cash values related to supply chain issues have affected the average cost for 2021/22 claims, which has increased from 2020/21 and exceeds the 2021/22 target. These recent trends were expected to subside through 2022/23, resulting in a target for 2022/23 claims set only moderately above the 2021/22 Actual.

105. ICBC is continuing to refine its Material Damage Strategy, as discussed in Chapter 7, Appendix 7B, Claims Cost Management to address the pressures faced by the collision repair industry and to fulfill its commitment to make insurance affordable for British Columbians.

F CONCLUSION

106. In this Appendix, ICBC provides continued reporting to the BCUC of its performance measures, reflecting ICBC's continued focus and commitment to delivering more affordable insurance, and being customer driven, smart and efficient, and future focused.

APPENDIX 8B

INVESTMENT PERFORMANCE INFORMATION FOR 2021/22

Table of Figures

1. This Appendix provides investment performance information for fiscal year 2021/22.

2. Balance sheet information is shown at the year-end date of March 31, 2022, with comparative information as at March 31, 2021 and at March 31, 2020. Information included for one-year and four-year returns, equity portfolio statistics, and management expense ratios are shown for the year ended March 31, 2022 compared with the years ended March 31, 2021 and March 31, 2020.

Figure 8B.1 – Asset Mix

(%)	As at March 31[1]			March 31, 2022[2]		
	2022	2021	2020	Tactical Min	Strategic Mix	Tactical Max
Fixed Income Assets - Liquidity	**46.4**	**57.7**	**56.6**	**46.0**	**50.0**	**58.0**
Money Market	4.5	2.8	2.0	0.0	5.0	10.0
Canadian Bonds	41.9	54.9	54.6	41.0	45.0	53.0
Fixed Income Assets - Credit	**21.9**	**9.2**	**12.2**	**17.0**	**20.0**	**23.0**
Corporate Bonds	12.0	0.0	0.0	7.5	9.5	11.5
Private Debt	1.5	0.4	0.0	0.0	0.5	2.5
Mortgages[3]	8.4	7.3	10.4	6.0	10.0	13.0
Mezzanine Debt	N/A	1.5	1.8	N/A	N/A	N/A
Equity Assets	**30.7**	**24.8**	**21.5**	**22.0**	**30.0**	**33.0**
Canadian Equity	3.0	8.7	6.7	2.0	4.0	6.0
Global Equity	25.0	15.2	14.8	15.5	23.5	27.5
Emerging Markets Equity	1.9	0.9	0.0	0.0	2.0	4.0
Private Equity	0.8	0.0	0.0	0.0	0.5	2.5
Real Assets	**11.6**	**8.3**	**9.7**	**5.0**	**10.0**	**14.0**
Real Estate	9.6	6.7	7.9	4.0	8.0	12.0
Infrastructure	2.0	1.6	1.8	0.0	2.0	5.0
Portfolio Leverage	**-10.6**	-	-	0.0	-10.0	-15.0
Total	**100.0**	**100.0**	**100.0**		**100.0**	

[1] Asset mix calculated based on market values and includes accrued interest.
[2] With the introduction of the Enhanced Care, a new asset mix was approved by the Investment Committee to reflect a longer duration period. The transition to the new asset mix commenced on May 1, 2021 and is expected to take seven years to complete. New asset classes now included in the portfolio mix are Corporate Bonds, Private Debt, Emerging Markets and Private Equity.
[3] Beginning May 1, 2021, Mortgages asset class includes Mezzanine Debt.

Figure 8B.2 – Investment Portfolio Total Asset Values

($000s)	As at March 31, 2022	
	Carrying Value	Estimated Fair Value
Fixed Income Assets		
Money Market	836,302	836,302
Canadian Bonds	7,440,029	7,440,029
Corporate Bond Fund	2,216,886	2,216,886
Mortgages[1]	1,560,694	1,569,312
Private Debt	562,170	562,170
Total Fixed Income Assets	**12,616,081**	**12,624,699**
Equity Assets		
Canadian Equity	564,762	564,762
Global Equity	4,617,403	4,617,403
Emerging Markets Equity	356,192	356,192
Private Equity	161,359	161,359
Total Equity Assets	**5,699,716**	**5,699,716**
Real Assets		
Real Estate[2]	462,601	700,200
Real Estate Funds	1,311,620	1,311,620
Infrastructure	374,327	374,327
Total Real Assets	**2,148,548**	**2,386,147**
Total	**20,464,345**	**20,710,562**

[1] Mortgages includes both Mortgage and Mezzanine investments.
[2] Includes available for sale properties.

($000s)	As at March 31, 2021	
	Carrying Value	Estimated Fair Value
Fixed Income Assets		
Money Market	585,889	585,889
Canadian Bonds	11,314,390	11,314,390
Corporate Bond Fund	-	-
Mortgages	762,833	778,119
Mortgage Fund	775,314	775,314
Mezzanine Debt	318,180	318,180
Private Debt	362,041	362,041
Total Fixed Income Assets	**14,118,647**	**14,133,933**
Equity Assets		
Canadian Equity	1,839,526	1,839,526
Global Equity	3,221,954	3,221,954
Emerging Markets Equity	197,629	197,629
Private Equity	-	-
Total Equity Assets	**5,259,109**	**5,259,109**
Real Assets		
Real Estate[1]	616,591	823,355
Real Estate Funds	806,462	806,462
Infrastructure	336,063	336,063
Total Real Assets	**1,759,116**	**1,965,880**
Total	**21,136,872**	**21,358,922**

[1] Includes available for sale properties.

Figure 8B.3 – Annual Management Expense Ratios

(%)		Year Ended March 31		
		2022[1]	2021[1]	2020
Internal Portfolios	Money Market and Canadian Bonds	N/A	N/A	0.03
	Mortgages	N/A	N/A	0.02
	Real Estate	N/A	N/A	0.13
External Portfolios	Money Market and Canadian Bonds	0.07	0.06	N/A
	Mortgages[2]	0.12	0.03	N/A
	Mortgage Fund[2]	0.51	0.54	0.09
	Mezzanine Debt[2]	2.19	1.89	2.41
	Private Debt	0.14	N/A	N/A
	Canadian Equity	0.21	0.18	0.20
	Global Equity	0.17	0.18	0.17
	Private Equity	4.38	N/A	N/A
	Real Estate	0.40	0.30	N/A
	Real Estate Funds	1.13	0.99	0.85
	Infrastructure	0.44	1.88	2.18
Total		**0.23**	**0.20**	**0.15**

[1] All investments are now managed externally by the British Columbia Investment Management Corporation (BCI) or its subsidiary QuadReal Property Group.
[2] Effective May 1, 2021, Mortgages and Mezzanine Debt investments were combined into the Mortgages asset class. For greater clarity, the management expense ratio for each type of investment is shown.

Figure 8B.4 – Four-Year Annualized Returns

Return (%)	Four-Year Annualized Returns for the Year Ended March 31		
	2022	2021	2020
Total Plan	**5.13**	**4.84**	**3.38**
Total Plan Benchmark[1]	*4.90*	*4.73*	*3.29*
Money Market Portfolio	**1.12**	**1.14**	**1.28**
Money Market Policy Benchmark	*1.10*	*1.09*	*1.15*
Bond Portfolio	**2.00**	**2.71**	**2.42**
Bond Policy Benchmark	*1.82*	*2.53*	*2.23*
Corporate Bonds[2]	**N/A**	**N/A**	**N/A**
Corporate Bond Policy Benchmark	*N/A*	*N/A*	*N/A*
Mortgage Portfolio[3]	**4.13**	**3.86**	**3.35**
Mortgage Policy Benchmark	*2.95*	*3.27*	*2.90*
Private Debt Portfolio[2]	**N/A**	**N/A**	**N/A**
Private Debt Policy Benchmark	*N/A*	*N/A*	*N/A*
Canadian Equity Portfolio	**12.25**	**8.04**	**2.88**
Canadian Equity Policy Benchmark	*12.47*	*8.01*	*2.85*
Global Equity Portfolio	**11.31**	**11.50**	**7.21**
Global Equity Policy Benchmark	*11.05*	*11.51*	*7.72*
Emerging Markets Equity Portfolio[2]	**N/A**	**N/A**	**N/A**
Emerging Markets Policy Benchmark	*N/A*	*N/A*	*N/A*
Private Equity Portfolio[2]	**N/A**	**N/A**	**N/A**
Private Equity Policy Benchmark	*N/A*	*N/A*	*N/A*
Real Estate Portfolio	**8.04**	**6.75**	**6.87**
Real Estate Policy Benchmark	*6.66*	*6.12*	*5.97*
Infrastructure Portfolio	**N/A**	**N/A**	**N/A**
Infrastructure Policy Benchmark	*N/A*	*N/A*	*N/A*

[1] Benchmarks are listed in the Statement of Investment Policy and Procedures (SIPP) for the relevant year.
[2] Four-year returns for Corporate Bonds, Private Debt, Emerging Markets and Private Equity are not available as these asset classes commenced May 1, 2021.
[3] Mezzanine Debt does not have separate four-year annualized information as the asset class had not existed for four years as a separate class. Furthermore, the Mezzanine Debt asset class has now been combined with Mortgages as of May 1, 2021.

Figure 8B.5 – Annualized Returns

Return (%)	One-Year Returns for the Year Ended March 31		
	2022	2021	2020
Total Plan	**2.89**	**11.19**	**1.40**
Total Plan Benchmark[1]	*1.74*	*10.87*	*1.98*
Money Market Portfolio	**0.74**	**0.00**	**2.14**
Money Market Policy Benchmark	*0.79*	*0.23*	*1.91*
Canadian Bond Portfolio	**(2.86)**	**2.64**	**4.00**
Canadian Bond Policy Benchmark	*(3.12)*	*2.44*	*3.89*
Corporate Bonds[2]	**N/A**	**N/A**	**N/A**
Corporate Bond Policy Benchmark	*N/A*	*N/A*	*N/A*
Mortgage Portfolio[3]	**3.47**	**5.42**	**2.84**
Mortgage Policy Benchmark	*(0.62)*	*3.77*	*4.23*
Mezzanine Debt	**N/A**	**8.99**	**(0.37)**
Mezzanine Debt Policy Benchmark	*N/A*	*3.52*	*4.77*
Private Debt Portfolio[2]	**5.49**	**N/A**	**N/A**
Private Debt Policy Benchmark	*1.66*	*N/A*	*N/A*
Canadian Equity Portfolio	**18.43**	**44.28**	**(13.03)**
Canadian Equity Policy Benchmark	*19.61*	*44.25*	*(14.21)*
Global Equity Portfolio	**8.27**	**38.64**	**(5.33)**
Global Equity Policy Benchmark	*8.34*	*35.86*	*(4.16)*
Emerging Markets Equity Portfolio[2]	**N/A**	**N/A**	**N/A**
Emerging Markets Policy Benchmark	*N/A*	*N/A*	*N/A*
Private Equity Portfolio[2]	**N/A**	**N/A**	**N/A**
Private Equity Policy Benchmark	*N/A*	*N/A*	*N/A*
Real Estate	**16.26**	**4.18**	**4.13**
Real Estate Policy Benchmark	*8.85*	*6.45*	*5.17*
Infrastructure	**14.30**	**3.28**	**11.96**
Infrastructure Policy Benchmark	*6.65*	*6.45*	*5.17*

[1] Benchmarks are listed in the SIPP for the relevant year.
[2] One year returns for Corporate Bonds, Private Debt, Emerging Markets and Private Equity are not available as these asset classes commenced May 1, 2021 and therefore there is not a year's worth of returns yet.
[3] Mezzanine Debt asset class was combined with Mortgages as of May 1, 2021.

Figure 8B.6 – Equity Portfolio Performance Statistics[1]

	Return (%)	Rolling Four Years Ended March 31		
		2022	**2021**	**2020**
	Canadian Equities			
(a)	Portfolio Return	12.25	8.04	2.88
(b)	Benchmark Return	12.47	8.01	2.85
(c)	**Portfolio Alpha (a) – (b)**	**(0.22)**	**0.03**	**0.03**
	Global Equities			
(d)	Portfolio Return	11.31	11.50	7.21
(e)	Benchmark Return	11.05	11.51	7.72
(f)	**Portfolio Alpha (d) – (e)**	**0.26**	**(0.01)**	**(0.51)**

[1] Investment performance data such as tracking error and information ratio for the equities portfolios were previously provided in line with the governance structure. However, as a result of the transition to BCI this is no longer applicable.

3. Investment performance data provided as part of revenue requirement applications in prior years included additional details on ICBC's fixed income and real estate holdings. This segmented information was provided in line with reporting requirements in the SIPP. Largely as a result of the move to BCI and its investment platform offerings, these segmented requirements are no longer included in the SIPP.

APPENDIX 8C

DETAILED OPERATING EXPENSE INFORMATION

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A INTRODUCTION

1. As in prior revenue requirements applications (RRAs), this Appendix provides further details regarding historical operating expenses along with the 2022/23 outlook. Historical operating expenses do not feature in determining the rate indication for the 24-month policy year 2023; however, they are included to present historical performance which helps to provide context as the BCUC has requested.[1] Historical information has been restated to conform to the current presentation format of Chapter 6, Operating Expenses and Allocation Information.

2. All of the figures in this Appendix include the actual results[2] for the last three years (i.e., 2019/20, 2020/21 and 2021/22) and the current fiscal year (i.e., 2022/23) outlook. Additionally, Figure 8C.1 (Operating Expenses by Expense Category) and Figure 8C.5 (Average number of FTEs by Division and by Employee Group) include fiscal year 2020/21 outlook of expenses and FTEs. Since there was no RRA filed with the BCUC in 2022, ICBC is providing key variances between the last filed outlook (i.e., 2020/21) and its comparison with 2020/21 actual.

3. Total corporate operating expenses exclude Autoplan Care Enhancements (ACE),[3] Rate Affordability Action Plan (RAAP),[4] the Transformation Program (TP),[5] and cost-recoverable government initiatives as these costs are not borne by Basic insurance premiums.

B OPERATING EXPENSES BY EXPENSE CATEGORY

4. Figure 8C.1 provides a historical view of total corporate operating expenses by expense category for three years to 2021/22 and the 2022/23 outlook. Figure 8C.1 also provides the 2020/21 outlook to compare with the 2020/21 actual. For a detailed discussion of operating expenses by expense category, please see Chapter 6, Section D.

[1] Order G-109-12, pages 37 and 38.
[2] Three years of the most recent actual results are presented. Three years are anticipated to provide sufficient information to indicate trends or anomalies.
[3] In accordance with the Government Directive of January 24, 2020 with respect to Funding Autoplan Care Enhancements from Optional Insurance approved by Order in Council 46, February 6, 2020, ACE is 100% funded by Optional insurance. All ACE costs prior to February 6, 2020 are allocated between Basic insurance and Optional insurance in accordance with the financial allocation methodology approved by the BCUC.
[4] In accordance with the Government Directive of February 13, 2018 with respect to Funding Rate Affordability Action Plan from Optional Insurance approved by Order in Council 84/18, March 5, 2018, RAAP is 100% funded by Optional insurance. All RAAP costs prior to March 5, 2018 are allocated between Basic insurance and Optional insurance in accordance with the BCUC–approved financial allocation methodology.
[5] In accordance with the Government Directive of April 19, 2010 with respect to the Transformation Program approved by Order in Council 222, April 29, 2010, TP was 100% funded from Optional insurance, up to $400 million. TP was completed in 2016 within the $400 million funding envelope. Remaining are depreciation expenses related to capitalized costs.

Figure 8C.1 – Operating Expenses by Expense Category ($ millions)

Expense Category[1]	2019/20 Actual	2020/21 Outlook	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Net Compensation	$451	$ 454	$ 449	$ 490	$ 516
Professional, Administrative, and Others	144	134	127	133	146
Project and Depreciation Expenses [2]	57	59	55	66	86
Merchant Fees	43	45	44	37	40
Road Improvements and Traffic Safety	32	32	31	34	33
Controllable Operating Expenses	**$ 727**	**$ 723**	**$ 706**	**$ 760**	**$ 821**
Pension and Post-Retirement Benefit Expense	92	68	68	101	66
Total Corporate Operating Expenses	**$ 818**	**$ 792**	**$ 774**	**$ 862**	**$ 887**

[1] Rounding may affect totals.
[2] This line item includes project expenses and depreciation on capital spent prior to Order in Councils (OICs) 084/18 and 046/20 issued by the Government Directive to fund RAAP and ACE and expenses from Optional Insurance. In 2020/21, 2021/22 and 2022/23, it represents depreciation expense on capital spent prior to these OICs. In 2019/20 actual $ 7million, 2020/21 outlook/actual $1 million and 2022/23 outlook $1 million.

B.1 2020/21 ACTUAL COMPARISON WITH 2020/21 OUTLOOK

5. In 2020/21, staffing remained relatively consistent in the initial months of the year due to intentionally delayed recruitment of vacancies in response to lower claims volume during the state of emergency declared by the Government over the COVID-19 pandemic. Staffing levels increased in the latter part of the fiscal year in response to a ramp-up in economic activity (i.e., increase in traffic volume and number of crashes) to support a partial recovery in claims volume and transition to Enhanced Care (effective May 1, 2021).

6. Net compensation was $5 million lower than the outlook for 2020/21, mainly due to a year-end adjustment of a $5 million decrease in employee benefit costs reflecting the difference between the standard benefits load and actual spending (please refer to the 2019 RRA, Chapter 7, Section D.1.1.5 Employee Benefits and responses to information requests 2019.1 RR BCUC.69.1 and 2019.1 RR BCUC.69.2 for further details).[6]

[6] For convenience, these information requests are included in Section E of the Participants' Reference Guide provided at the end of the Application.

7. Professional, administrative and other operating expenses were $7 million lower than the 2020/21 outlook, driven by several factors which were embedded within this line item outlook.

- $11 million lower professional, administrative and other operating expenses due to the continued impact of COVID-19 in 2020/21.
  a. Lower professional expenses due to limiting the scope of various planned sustainment activities, redesigning staff training and other initiatives to focus on the implementation of Enhanced Care.
  b. Lower building operating expenses mainly due to the reduction of municipal tax rates in response to the COVID-19 pandemic and lower utility costs due to lower building occupancy during the COVID-19 pandemic.
  c. Lower other operating expenses largely due to the impacts of COVID-19 include various expenses such as bad debt expenses, travel and accommodation, advertising, employment expenses, postage and severance costs.

- These savings were partially offset by higher COVID-19 related costs that were $4 million higher than the outlook. These costs include safety and facility-related expenses such as additional plexiglass, sanitizers, cleaning supplies, face shields and personal protective equipment, as well as technology-related expenses to enable flexible/remote work for employees.

8. Project and depreciation expenses were $4 million lower than the outlook. This was mainly due to lower project expenses. Actual costs commonly vary due to changes such as refinement in project timing, delivery approach, priority and complexity level. Further, a conscious effort was made to limit project expenses to prioritize and ensure the availability of adequate resources to implement Enhanced Care.

B.2 2021/22 ACTUAL COMPARISON WITH 2020/21 ACTUAL

9. Controllable operating expenses increased to $760 million in 2021/22, $54 million higher than 2020/21 actuals. This is mainly due to an increase in average full-time equivalents (FTEs)[7] in claims-related areas to address staffing needs for Enhanced Care while continuing to manage and progressively wind down legal-based claims, and to maintain adequate service levels in contact centres and driver licensing offices as traffic volume returned to levels that existed prior

[7] Average FTEs represents the sum of the number of FTEs measured at each month of the year, divided by the number of months in the fiscal year. It represents an average over a period of time, rather than a point in time.

to the COVID-19 pandemic. An increase in demand for driver licensing services to address the backlog of driver knowledge and road tests and positions in Information Services resulted in higher average FTEs and related costs. Compensation expenses also increased due to general wage increases for unionized employees (per the collective agreement).

10. Professional, administrative and other expenses increased by $6 million in 2021/22 mainly due to inflation and contractual commitments. Other increases include higher building operating expenses, higher hardware, software support and maintenance, and higher staff-related costs including training and employment expenses which were largely driven by an increase in activity as COVID-19 restrictions started to ease.

11. Project and depreciation expenses increased by $11 million, mainly due to the following factors:

- $5 million in expected costs to administer the Relief Rebate of $396 million to eligible customers to help ease some of the financial challenges facing drivers in BC.[8]
- $4 million due to additional planned critical sustainment projects, system enhancement projects to improve and modernize existing systems and other projects to support ICBC's 2025 strategy. Some of this work was delayed or deferred in prior years as resources were focused on delivering the Autoplan Care Enhancement (ACE) project. Key activities/projects in FY 2021/22 included Modernization of Insurance Sales and Services (to offer online insurance purchasing options for the core insurance product), some mandatory/critical sustainment and other annual renewal and maintenance project expenses.
- Other increases include the partial year costs of Microsoft-365 depreciation in 2020/21, compared to full-year depreciation costs in 2021/22.

12. Merchant fee increases/decreases are primarily a function of premium revenue as well as anticipated consumer use of various payment methods. Merchant fees decreased by $7 million in 2021/22 primarily due to a decrease in insurance premiums, resulting from the implementation of Enhanced Care (i.e., changes in the Optional Third Party Liability Extension and Basic coverage through the introduction of Basic Vehicle Damage Coverage). In addition, consumers'

[8] For more information, please see ICBC's March 28, 2022 Application in Support of a Basic Insurance Relief Rebate, approved by BCUC Order G-96-22.

preferences to use payment plans instead of credit cards resulted in lower fees.

13. The increase in Road Improvements and Traffic Safety expenses in 2021/22 is mainly due to lease and fit up costs of new space (which include security enhancements) for Fraser Coast Integrated Road Safety Unit (IRSU).

14. For detailed discussion on explanations for 2021/22 actuals and 2022/23 outlook, please see Chapter 6, Section D.

C OPERATING EXPENSES BY DIVISION

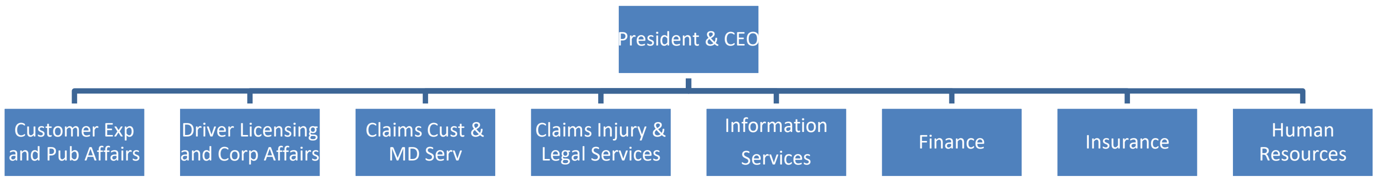
15. Figure 8C.3 presents operating expenses by division and corporate expenses, restated for previous years to conform to ICBC's revised organizational structure.

16. This presentation of total corporate operating expenses is different than the financial reporting presentation of total corporate operating expenses described in Chapter 6, Section B.1. This Section illustrates total corporate operating expenses by division and corporate expenses whereas Chapter 6, Section B.1 illustrates total corporate operating expenses by line of business component.

17. In 2021/22, ICBC realigned its organizational structure by moving the Driver Licensing function from the former Public Affairs and Driver Licensing Division into the Corporate Affairs Division, which was renamed as Driver Licensing and Corporate Affairs. Moving Driver Licensing and Corporate Affairs together, which includes corporate strategy and other critical business support areas like facilities, is a key enabler to the long-term transformation of Driver Licensing. In addition, as part of our 2025 strategy, which places the customer as a key priority, we formed a new division, Customer Experience and Public Affairs. Centralizing customer insights and customer experience with brand, marketing and communications will build strength in this critical enterprise function and cement its alignment with ICBC's purpose.

18. The current organizational structure illustrating the various divisions is shown below in Figure 8C.2.

Figure 8C.2 – Current Organizational Structure



19. Historical costs have been reclassified to reflect the above organizational structure across all years, such that they are comparable from year to year.

Figure 8C.3 – Operating Expenses by Division and Corporate Expenses ($ millions)

Division and Corporate expenses[1]	**2019/20 Actual**	**2020/21 Actual**	**2021/22 Actual**	**2022/23 Outlook**
Claims Injury and Legal Services	$ 145	$ 149	$ 158	$ 163
Claims Customer and Material Damage Services	199	198	210	228
Insurance	58	59	59	65
Customer Experience and Public Affairs	52	51	57	58
Information Services	60	63	67	66
Finance	33	29	30	34
Driver Licensing and Corporate Affairs	79	80	85	91
Human Resources	17	17	19	23
Corporate Costs, including Executives	22	5	18	14
Project Costs	18	11	20	40
Merchant Fees	43	44	37	40
Pension & Post-Retirement Benefit Expense	92	68	101	66
Total Corporate Operating Expenses	**$ 818**	**$ 774**	**$ 862**	**$ 887**

[1] Rounding may affect totals. Restated to conform to current presentation format and aligns with the presentation in Chapter 6, Operating Expenses and Allocation Information.

20. The corporate operating expenses are expected to increase by $25 million to $887 million in the 2022/23 outlook. The increase is due to the $61 million increase in controllable operating expenses over the 2021/22 actuals. For detailed discussion on explanations for 2021/22 actuals and 2022/23 outlook, please see Chapter 6, Section D.1.

21. The increase in controllable operating expenses is partially offset by a $35 million decrease in pension and post-retirement benefit expense. This decrease is mainly driven by the increase in the discount rate from 2021/22 actuals to 2022/23 outlook. Further information is provided in Chapter 6, Section D.5.

22. Merchant fees are expected to increase by $3 million in the 2022/23 outlook. This is primarily a function of premium revenue growth (vehicle and rate growth), as well as anticipated consumers' use of various payment methods.

23. For a detailed discussion of operating expenses by expense category, please see Chapter 6, Section D.

D COMPENSATION DETAILS BY EMPLOYEE GROUP AND AVERAGE SALARIES

24. Figure 8C.4 provides compensation details by employee group in regards to the various components making up total employee and average compensation. It is similar to the table previously requested by BCUC staff in the 2012 Revenue Requirements Proceeding and provided in subsequent RRAs. This Section combines the presentation of compensation details by employee group and average salaries per FTE that were previously presented separately (2021 RRA – Figure 7H.4 and Figure 7H.5) to reduce repetitive information of these Figures.

Figure 8C.4 – Compensation Details by Employee Group

Compensation Details[1] ($millions)	2019/20 Actual			2020/21 Actual			2021/22 Actual			2022/23 Outlook		
	B/U	M&C	Total	B/U	M&C	Total	B/U	M&C	Total	B/U	M&C	Total
Salary	$276	128	$404	$286	134	$420	$305	141	$446	$326	143	$469
Gainsharing[2]	$4	-	$4	-	-	-	-	-	-	-	-	-
A. Total Salaries	$280	$128	$408	$286	$134	$420	$305	$141	$446	$326	143	$469
B. Employee Benefits			$54			$47			$61			$64
C. Charged to Projects			($11)			($18)			($17)			($17)
D. Net Compensation (A + B + C)			**$451**			**$449**			**$490**			**$516**
E. Pension and Post-Retirement Benefits			$92			$68			$101			$66
F. Total Compensation (D + E)			**$543**			**$517**			**$591**			**$582**
G. ICBC Average FTEs[3]	4,287	1,174	**5,461**	4,141	1,210	**5,351**	4,217	1,256	**5,473**	4,281	1,312	**5,593**
H. Average Salaries per ICBC Employee FTE (A/ G)			**$74,687**			**$78,450**			**$81,526**			**$83,859**

[1] Rounding may affect totals.
[2] Performance based pay for Bargaining Unit employees is known as Gainsharing. As part of the Collective Agreement (2019- 2022), MoveUP and ICBC have agreed to eliminate the Gainsharing plan effective April 1, 2020.
[3] Average FTEs represents the sum of the number of FTEs measured at each month of the year, divided by the number of months in the fiscal year. It represents an average over a period of time, rather than a point in time.

25. Row F "Total Compensation" in Figure 8C.4 reconciles to "Total Compensation" shown in Chapter 6, Figure 6.3, which illustrates total compensation for 2021/22 actual and 2022/23 outlook.

26. Row G "ICBC Average FTEs" in Figure 8C.4 reconciles to "Total ICBC FTEs" shown in Chapter 6, Figure 6.4, which illustrates FTEs by employee group for 2021/22 actual and 2022/23 outlook.

27. 2022/23 outlook reflects an increase in average salaries mainly due to general wage increases for Bargaining Unit staff (per the collective agreement). The increase also reflects individual job progression, productivity, seniority, promotion and other factors. For further discussion on salaries and merit increases, please see Chapter 6, Section D.1.1.

E NUMBER OF FTES BY DIVISION AND BY EMPLOYEE GROUP

28. Figure 8C.5 shows the number of FTEs by employee group by division for the years 2019/20 actual, 2020/21 actual, 2021/22 actual and 2022/23 outlook. It is similar to the table requested by BCUC staff in the 2012 Revenue Requirements Proceeding and provided in subsequent RRAs.

29. As noted above, Figure 8C.5 also provides 2020/21 outlook to compare with 2020/21 actual. In 2020/21, staffing remained relatively consistent in the initial months of the year due to delayed recruitment and filling of vacancies in response to lower claims volume during the state of emergency declared by the Government over the COVID-19 pandemic. Staffing levels increased in the latter part of the fiscal year to support the transition to Enhanced Care (effective May 1, 2021) and a partial recovery in claims volume arising from a ramp-up in economic activity (i.e., increase in traffic volume and number of crashes).

30. In 2021/22, average FTEs increased in claims-related areas to address staffing needs for Enhanced Care, while continuing to manage and progressively wind down legal-based claims. FTE increases were also required to maintain adequate service levels in contact centres and driver licensing offices as traffic volume and economic activity returned to levels that existed prior to the COVID-19 pandemic. ICBC saw an increase in demand for driver licensing services to address the backlog of driver knowledge and road tests and additionally required an increase in Information Services positions to support ICBC's 2025 strategy.

Figure 8C.5 – Average Number of FTEs by Division and by Employee Group[1]

Employee Group[1]	2019/20 Actual	2020/21 Outlook	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Bargaining Unit	4,287	4,168	4,141	4,217	4,281
Management and Confidential	1,174	1,180	1,210	1,259	1,312
Contractors	22	9	28	48	44
Total ICBC FTEs (including contractors)	**5,482**	**5,358**	**5,379**	**5,521**	**5,637**

Management and Confidential (M&C) Employee Group FTEs

Division[1]	2019/20 Actual	2020/21 Outlook	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Claims Injury and Legal Services	363	353	366	366	369
Claims Customer and Material Damage Services	253	259	259	268	257
Insurance	66	65	78	80	94
Customer Experience and Public Affairs	56	61	64	69	80
Information Services	137	126	130	137	139
Finance	90	100	94	105	111
Driver Licensing and Corporate Affairs	125	128	130	139	145
Executive	14	13	14	14	14
Human Resources	70	75	76	79	105
Total M&C FTEs	**1,174**	**1,180**	**1,210**	**1,259**	**1,312**

Bargaining Unit (BU) Employee Group FTEs

Division[2]	2019/20 Actual	2020/21 Outlook	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Claims Injury and Legal Services	1,134	1,188	1,148	1,152	1,117
Claims Customer and Material Damage Services	1,504	1,332	1,337	1,364	1,420
Insurance	400	377	386	355	366
Customer Experience and Public Affairs	59	61	61	60	60
Information Services	432	401	422	460	476
Finance	155	141	133	138	139
Driver Licensing and Corporate Affairs	576	646	627	662	675
Executive	-	-	-	-	-
Human Resources	27	23	27	24	27
Total BU FTEs	**4,287**	**4,168**	**4,141**	**4,217**	**4,281**

[1] Rounding may affect totals and percentages. Restated to conform to the current presentation format.
[2] Total FTEs exclude FTEs relating to RAAP, ACE, and government initiatives that are cost recoverable. TP ended in 2016/17; therefore, there are no associated FTEs in subsequent periods. Average FTEs represents the sum of the number of FTEs measured at each month of the year, divided by the number of months in the fiscal year. It represents an average over a period of time, rather than a point in time.

31. For a discussion of the change in FTEs between 2021/22 actual and 2022/23 outlook, please see Chapter 6, Section D.1.2.

32. Figure 8C.6 shows the number of ICBC FTEs at the corporate level, including those FTEs in support of ACE, RAAP and cost-recoverable government initiatives, for the years 2019/20 actual, 2020/21 actual, 2021/22 actual, and 2022/23 outlook. This is similar to the tables provided in the 2013 Revenue Requirements Proceeding and provided in subsequent RRAs.

Figure 8C.6 – Total ICBC FTEs (Corporate View)

Employee Group[1]	2019/20 Actual	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Total ICBC FTEs (Fig. 6.4)				
Bargaining Unit	4,287	4,141	4,217	4,281
Management and Confidential	1,174	1,210	1,256	1,312
Total ICBC FTEs	**5,461**	**5,351**	**5,473**	**5,593**
ACE FTEs				
Bargaining Unit	8	66	28	-
Management and Confidential	4	17	8	-
Total ACE FTEs	13	84	36	-
RAAP FTEs[2]				
Bargaining Unit	42	4	3	6
Management and Confidential	10	2	1	3
Total RAAP FTEs	52	6	4	8
Other FTEs				
Bargaining Unit	72	110	104	104
Management and Confidential	25	16	16	15
Total Other FTEs	96	127	120	119
Corporate ICBC FTEs				
Bargaining Unit	4,408	4,322	4,353	4,391
Management and Confidential	1,213	1,245	1,281	1,330
Corporate ICBC FTEs	**5,622**	**5,568**	**5,633**	**5,721**

[1] Rounding may affect totals.
[2] Enhanced Care was implemented on May 1, 2021, therefore, there are no FTEs in subsequent periods.

33. The "Total ICBC FTEs" line reflects ICBC's FTEs (excluding contractors) as shown in Chapter 6, Figure 6.4. The ACE FTEs and RAAP FTEs lines reflect FTEs that are working on ACE and RAAP respectively. The "Other FTEs" line includes FTEs relating to cost-recoverable government initiatives.

APPENDIX 8D
COST ALLOCATION TABLES

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A ALLOCATION TABLES

1. The purpose of the information presented in this appendix is to show detailed views of how ICBC's 2020/21 and 2021/22 fiscal years corporate operating expenses are allocated to Basic insurance, Non-insurance, and Optional insurance, using the financial allocation methodology approved by the BCUC. The presentation is the same as in prior years. Autoplan Care Enhancements (ACE)[1] expense, Rate Affordability Action Plan (RAAP)[2] expense, costs associated with the Transformation Program (TP)[3] completed in 2016, and cost-recoverable government initiatives are excluded as these costs are not borne by Basic insurance premiums. The information is presented as follows:

- Figure 8D.1 describes the allocators used.
- Figure 8D.2 shows the results of applying the allocators to the 2020/21 actual costs.
- Figure 8D.3 shows the results of applying the allocators to the 2021/22 actual costs.
- Figure 8D.4 provides the year-to-year Basic insurance allocation percentages.

2. In accordance with its commitment made during the 2013 Revenue Requirements Proceeding, ICBC has provided explanatory notes regarding any blending of allocators or additions or removals of functional cost centres from the allocation tables. [4]

3. As discussed in Section B, there has been minimal variance in the overall percentage of operating costs allocated to Basic insurance in the past five years.

[1] In accordance with the Government Directive of January 24, 2020 with respect to Funding Autoplan Care Enhancements from Optional Insurance approved by Order in Council 46, February 6, 2020, ACE is 100% funded by Optional insurance. All ACE costs prior to February 6, 2020 are allocated between Basic insurance and Optional insurance in accordance with BCUC-approved financial allocation methodology.
[2] In accordance with the Government Directive of February 13, 2018 with respect to Funding Rate Affordability Action Plan from Optional Insurance approved by Order in Council 84, March 5, 2018, RAAP is funded from Optional insurance. All RAAP costs prior to March 5, 2018 are allocated between Basic insurance and Optional insurance in accordance with the BCUC-approved financial allocation methodology.
[3] In accordance with the Government Directive of April 19, 2010 with respect to the Transformation Program approved by Order in Council 222, April 29, 2010, TP was 100% funded from Optional insurance, up to $400 million. TP was completed in 2016 within the $400 million funding envelope. Remaining are depreciation expenses related to capitalized costs that were incurred prior to completion.
[4] March 17, 2014 Reply Argument, 2013 Revenue Requirements Proceeding, page 21.

Figure 8D.1 – Allocator Description

Allocator	Description
Directly Attributable	
Directly attributable to Basic	Directly attributable to Basic insurance
Directly attributable to Non-insurance	Directly attributable to Non-insurance
Directly attributable to Optional	Directly attributable to Optional insurance
Work Effort	
Work Effort	Ratio based on analysis of underlying work activities within the cost centre(s)
Work Effort – Provincial Litigation	Based on volume of low-value bodily injury (BI) files
100% Basic with Exceptions	Directly attributable to Basic insurance, except for auto crime expenditures
Averages	
Claims Division Average	Weighted average of Claims Services cost centres in the Claims and Driver Licensing Operations Division, exclusive of Driver Licensing
Insurance Division Average	Weighted average of Insurance Services cost centres in the Insurance Strategy, Product & Pricing Division (Non-insurance charged to Basic insurance)
Road Safety Division Average	Weighted average of Road Safety and Loss Management cost centres
Square Footage	Average of each business area weighted by square footage
Weighted Average – Projects	Weighted average of projects undertaken by the cost centre
Weighted Average – Cost Centres	Weighted average of cost centres supported
Weighted Average – Transactions	Weighted average based on transactions processed
Weighted Average – Special Coverages	Weighted average based on special coverage premiums
Weighted Average – FTEs	Weighted average based on number of FTEs performing a function
Premiums[5]	
Premiums Written	Based on annual Autoplan Premiums Written, adjusted for Non-insurance portion per January 2005 Decision
Premiums Written – with Exceptions	Premiums written ratio except for certain expenses which are 100% Basic insurance or 100% Optional insurance
Claims	
Newly Opened Exposures – TCD	Allocated based on newly opened exposures in Claims Contact Centre (formerly known as Telephone Claims Department, TCD)
Net Claims Costs – MD	Allocated based on corporate-wide net Material Damage (MD) claims costs
Net Claims Costs – HE	Allocated based on net claims costs of Heavy Equipment (HE) department

[5] Commercial Premiums Written does not appear in the Cost Allocation Tables, as any related activities have been operationalized elsewhere.

Allocator	Description
Shared Services	
Finance Shared Services Ratio	Weighted average of Claims and Driver Licensing Operations, and Insurance Strategy, Product and Pricing Divisions, with Non-insurance portion prorated between Basic insurance and Optional insurance
Finance Shared Services Ratio, modified by Commission Decision	Allocated equally between Basic insurance and Optional insurance per January 2005 Decision
Corporate Shared Services Ratio	Weighted average of Claims and Driver Licensing Operations, and Insurance Strategy, Product and Pricing Divisions
Corporate Shared Services Ratio – with Exceptions	Corporate Shared Services Ratio except for certain expenses which are 100% Basic insurance, or 100% Optional insurance, or 100% Non-insurance, or Comprehensive Coverage – Market share
Others	
Investment Income Ratio	Ratio calculated based on sources of funds, i.e., unpaid claims, unearned premiums, and retained earnings
Comprehensive Coverage – Market Share	Percentage of Comprehensive Insurance market share held by ICBC

Figure 8D.2 – BCUC-Approved Allocators Using 2020/21 Actual Cost Detail

Claims Services

Operating Costs - Claims Services	Allocator	($000s) [2]				Allocation % [2]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Customer and Injury Services Operations (CISO)	Work Effort	126,689	-	50,523	177,212	71.5	-	28.5	100.0
Claims Building Support	Square Footage	21,129	-	16,871	37,999	55.6	-	44.4	100.0
Call Centre Department	Newly Opened Exposures - TCD	12,727	-	21,670	34,396	37.0	-	63.0	100.0
Claims System Support	Claims Division Average	22,363	-	10,887	33,250	67.3	-	32.7	100.0
In-House Counsel (Provincial Litigation Services)	Work Effort - Provincial Litigation	28,593	-	1,505	30,097	95.0	-	5.0	100.0
Recovery	Directly attributable to Basic	14,345	-	-	14,345	100.0	-	-	100.0
Centralized Estimating Facilities	Net Claims Cost - MD	5,404	-	6,344	11,749	46.0	-	54.0	100.0
Heavy Equipment	Net Claims Cost - HE	4,306	-	6,459	10,766	40.0	-	60.0	100.0
Claims Litigation Support	Work Effort - Provincial Litigation	7,926	-	417	8,343	95.0	-	5.0	100.0
Material Damage Support	Net Claims Cost - MD	3,752	-	4,405	8,157	46.0	-	54.0	100.0
Claims Administrative Support	Weighted Average - Cost Centres	1,938	-	1,938	3,876	50.0	-	50.0	100.0
BI Support	Work Effort	3,028	-	159	3,187	95.0	-	5.0	100.0
Salvage	Net Claims Cost - MD	1,190	-	1,396	2,586	46.0	-	54.0	100.0
Claims General Support	Claims Division Average	1,139	-	554	1,693	67.3	-	32.7	100.0
Optional Coverage (Claims)	Directly attributable to Optional	-	-	1,106	1,106	-	-	100.0	100.0
Basic Coverage (Claims)	Directly attributable to Basic	429	-	-	429	100.0	-	-	100.0
Rehabilitation	Directly attributable to Basic	237	-	-	237	100.0	-	-	100.0
Total Claims Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**255,193**	**-**	**124,234**	**379,427**	**67.3**	**-**	**32.7**	**100.0**
Claims Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [1]		255,193	-	124,234	379,427	67.3	-	32.7	100.0

[1] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.

[2] Rounding may affect totals and allocation percentages.

Road Safety and Loss Management (RSLM)

Operating Costs - RSLM	Allocator	($000s) [2]				Allocation % [2]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Road Safety Initiatives	Directly attributable to Basic	32,169	-	-	32,169	100.0	-	-	100.0
Fraud Management	Weighted Average - Cost Centres	10,418	-	5,540	15,958	65.3	-	34.7	100.0
Regional Loss Prevention	100% Basic with Exceptions	1,978	-	162	2,141	92.4	-	7.6	100.0
Auto Crime Expenditures	Comprehensive Coverage - Market Share	504	-	1,569	2,073	24.3	-	75.7	100.0
Road Safety General Support [1]	Road Safety Division Average	(1,329)	-	(214)	(1,543)	86.1	-	13.9	100.0
Total RSLM Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**43,741**	**-**	**7,057**	**50,798**	**86.1**	**-**	**13.9**	**100.0**
Road Safety and Loss Management Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View		43,741	-	7,057	50,798	86.1	-	13.9	100.0

[1] Negative amount due to pension adjustment, GWL/Canada net recovery and Y/E true-down adjustment

[2] Rounding may affect totals and allocation percentages.

General Expenses - Administration and Other

Operating Costs - Administrative	Allocator [1]	($000s) [6] Basic insurance	Non-insurance	Optional insurance	Total	Allocation % [6] Basic insurance	Non-insurance	Optional insurance	Total
ISD Shared Services: Insurance, Claims, Non-insurance	Corporate Shared Services Ratio	13,471	6,444	13,471	33,386	40.4	19.3	40.4	100.0
Human Resources	Corporate Shared Services Ratio	7,491	3,583	7,491	18,566	40.4	19.3	40.4	100.0
Finance Shared Services - Insurance Operations	Finance Shared Services Ratio	8,022	-	8,022	16,044	50.0	-	50.0	100.0
Customer Contact Call Centre	Premiums Written	3,116	-	3,116	6,233	50.0	-	50.0	100.0
General Counsel	Work Effort	2,458	1,307	2,458	6,222	39.5	21.0	39.5	100.0
Supply Management Department	Work Effort	2,374	977	2,374	5,725	41.5	17.1	41.5	100.0
Optional Coverage (Admin) [2]	Directly attributable to Optional	-	-	4,918	4,918	-	-	100.0	100.0
Infrastructure Expenditure	Finance Shared Services Ratio	2,367	-	2,367	4,733	50.0	-	50.0	100.0
Executive Office	Finance Shared Services Ratio	2,360	-	2,360	4,720	50.0	-	50.0	100.0
Customer Collections	Weighted Average - Transactions	1,993	649	1,993	4,635	43.0	14.0	43.0	100.0
Business Intelligence	Weighted Average - Cost Centres	1,648	788	1,648	4,084	40.4	19.3	40.4	100.0
Freedom of Information Department	Work Effort	1,972	-	1,972	3,945	50.0	-	50.0	100.0
Finance Division Banking Operations	Work Effort	1,929	-	1,929	3,859	50.0	-	50.0	100.0
Corporate Strategic Services	Corporate Shared Services Ratio	1,504	720	1,504	3,728	40.4	19.3	40.4	100.0
External Corporate Communications	Work Effort	1,216	363	1,216	2,794	43.5	13.0	43.5	100.0
Document Services	Square Footage	1,178	337	1,178	2,692	43.7	12.5	43.7	100.0
Call Centres Support (Admin)	Weighted Average - Cost Centres	805	883	805	2,493	32.3	35.4	32.3	100.0
Regulator Costs	Directly attributable to Basic	1,128	-	1,128	2,257	50.0	-	50.0	100.0
Corporate Training	Insurance Division Average and Claims Division Average	1,116	-	1,116	2,231	50.0	-	50.0	100.0
Facilities Management (Victoria)	Square Footage	55	2,090	55	2,200	2.5	95.0	2.5	100.0
Technology Renewal	Corporate Shared Services Ratio	885	423	885	2,194	40.4	19.3	40.4	100.0
Project Management Service Costs	Finance Shared Services Ratio	535	-	535	1,070	50.0	-	50.0	100.0
Investment Portfolio Management	Investment Income Ratio	444	-	444	889	50.0	-	50.0	100.0
Communication - Government relations	Work Effort	265	177	265	707	37.5	25.0	37.5	100.0
Business Transformation Shared Services	Corporate Shared Services Ratio	217	104	217	538	40.4	19.3	40.4	100.0
Facility Projects (Admin)	Corporate Shared Services Ratio	145	69	145	360	40.4	19.3	40.4	100.0
Fair Practices Review	Work Effort - Provincial Litigation	21	-	21	42	50.0	-	50.0	100.0
Admin Office, Claims and Driver Licensing Customer Service	Weighted Average - Cost Centres					29.6	40.9	29.6	100.0
Facilities Management[3]	Square Footage	(1,488)	(423)	(1,488)	(3,398)	43.8	12.4	43.8	100.0
Corporate Costs (Admin)[4]	Finance Shared Services Ratio	(2,654)	-	(2,654)	(5,307)	50.0	-	50.0	100.0
Total Administrative Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**54,575**	**18,490**	**59,493**	**132,558**	**41.2**	**13.9**	**44.9**	**100.0**
Administrative Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [5]		54,575	-	59,493	114,068	47.8	-	52.2	100.0

[1] Using the allocator indicated, a portion of the costs is allocated to Non-insurance. The remainder of the costs are allocated equally between Basic insurance and Optional insurance (see page 42 of the January 2005 Decision) or for significant corporate projects, directly attributed to Basic insurance or Optional insurance (see page 61 of the July 2006 Decision).
[2] ICBC incurred expenses related to projects that are 100% Optional insurance.
[3] Negative amount due to Allocations and Assessments (Building Occupancy and Economic Rent)
[4] Negative amount due to pension adjustment, GWL/Canada net recovery and Y/E true-down adjustment
[5] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[6] Rounding may affect totals and allocation percentages.

General Expenses - Insurance Services

Operating Costs - Insurance Services	Allocator	($000s) [3]				Allocation % [3]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Merchant Fees	Premiums Written	23,958	-	19,523	43,480	55.1	-	44.9	100.0
Insurance Services Applications Support	Insurance Division Average	6,002	-	3,759	9,761	61.5	-	38.5	100.0
Bad Debts & Allowances	Weighted Average - Transactions	6,489	-	3,054	9,543	68.0	-	32.0	100.0
General Broker Support & Direct Sales	Premiums Written	4,577	-	3,729	8,306	55.1	-	44.9	100.0
Product Development	Premiums Written	4,370	-	3,561	7,930	55.1	-	44.9	100.0
Insurance System Support	Premiums Written	4,191	-	3,415	7,607	55.1	-	44.9	100.0
Field Broker Support	Work Effort	1,165	582	4,076	5,823	20.0	10.0	70.0	100.0
Insurance Business Support	Weighted Average - Cost Centres	3,189	273	2,072	5,533	57.6	4.9	37.4	100.0
Actuarial	Weighted Average - FTE	2,740	520	2,222	5,483	50.0	9.5	40.5	100.0
Insurance Project Expense	Insurance Division Average	2,872	-	1,798	4,670	61.5	-	38.5	100.0
Marketing Communication	Corporate Shared Services Ratio - With Exception	2,118	448	937	3,503	60.5	12.8	26.7	100.0
Market Research	Weighted Average - Projects	1,707	-	1,106	2,813	60.7	-	39.3	100.0
Chief Underwriter	Premiums Written - With Exception	1,397	-	1,381	2,778	50.3	-	49.7	100.0
Corporate Website	Corporate Shared Services Ratio	1,247	476	742	2,464	50.6	19.3	30.1	100.0
Garage & Fleet	Weighted Average - FTE	1,175	38	938	2,152	54.6	1.8	43.6	100.0
Customer Accounting	Weighted Average - Transactions	641	673	289	1,603	40.0	42.0	18.0	100.0
ADP Technical	Premiums Written	672	-	548	1,220	55.1	-	44.9	100.0
Optional Coverage (Autoplan)	Directly attributable to Optional	-	-	1,165	1,165	-	-	100.0	100.0
Internet Services	Premiums Written	590	-	480	1,070	55.1	-	44.9	100.0
Product Research	Premiums Written	484	-	394	878	55.1	-	44.9	100.0
Premium Financing Plan Operations	Premiums Written	402	-	328	729	55.1	-	44.9	100.0
Specialty Lic & Ins	Weighted Average - Special Coverages	-	633	-	633	-	100.0	-	100.0
Insurance Corporate Cost[1]	Finance Shared Services Ratio, modified by Commission Decision	(1,816)	-	(1,816)	(3,633)	50.0	-	50.0	100.0
Total Insurance Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**68,169**	**3,644**	**53,700**	**125,512**	**54.3**	**2.9**	**42.8**	**100.0**
Insurance Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View[2]		68,169	-	53,700	121,869	55.9	-	44.1	100.0

[1] Negative amount due to pension adjustment, GWL/Canada net recovery and Y/E true-down adjustment

[2] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.

[3] Rounding may affect totals and allocation percentages.

Administrative - Non-insurance

Operating Costs Administrative - Non-insurance	Allocator	($000s) [3]				Allocation % [3]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Registration and Licensing	Directly attributable to Non-insurance	-	8,054	-	8,054	-	100.0	-	100.0
ISD Non-insurance Vehicle Application	Directly attributable to Non-insurance	-	1,745	-	1,745	-	100.0	-	100.0
Non-insurance Project Expense	Directly attributable to Non-insurance	-	208	-	208	-	100.0	-	100.0
Non-insurance Corporate Cost[1]	Directly attributable to Non-insurance	-	(2,036)	-	(2,036)	-	100.0	-	100.0
Total Non-insurance Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.		**-**	**7,970**	**-**	**7,970**	**-**	**100.0**	**-**	**100.0**
Administrative - Non-insurance Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [2]		-	-	-	-	-	-	-	-

[1] Negative amount due to pension adjustment, GWL/Canada net recovery and Y/E true-down adjustment
[2] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[3] Rounding may affect totals and allocation percentages.

Summary of Total Corporate Operating Expenses Excluding ACE, RAAP, TP, and Cost Recoverable Government Initiatives

Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives	($000s) [1]				Allocation % [1]			
	Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Claims Services	255,193	-	124,234	379,427	67.3	-	32.7	100.0
Road Safety and Loss Management (RSLM)	43,741	-	7,057	50,798	86.1	-	13.9	100.0
General Expenses - Administraton and Other	54,575	-	59,493	114,068	47.8	-	52.2	100.0
General Expenses - Insurance Services	68,169	-	53,700	121,869	55.9	-	44.1	100.0
General Expenses - Administraton and Other	-	18,490	-	18,490	-	100.0	-	100.0
General Expenses - Insurance Services	-	3,644	-	3,644	-	100.0	-	100.0
Administrative - Non-insurance	-	7,970	-	7,970	-	100.0	-	100.0
Driver Licensing	-	77,109	-	77,109	-	100.0	-	100.0
Total Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives	**421,677**	**107,214**	**244,485**	**773,376**	**54.5**	**13.9**	**31.6**	**100.0**

[1] Rounding may affect totals and allocation percentages.

Figure 8D.3 – BCUC-Approved Allocators Using 2021/22 Actual Cost Detail

Claims Services

Operating Costs - Claims Services	Allocator	($000s) [2]				Allocation % [2]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Customer and Injury Services Operations (CISO)	Work Effort	103,081	-	53,391	156,472	65.9	-	34.1	100.0
Recovery	Directly attributable to Basic	58,467	-	-	58,467	100.0	-	-	100.0
Call Centre Department	Newly Opened Exposures - TCD	13,065	-	27,763	40,828	32.0	-	68.0	100.0
Claims Building Support	Square Footage	20,443	-	19,173	39,616	51.6	-	48.4	100.0
Claims System Support	Claims Division Average	22,713	-	11,584	34,297	66.2	-	33.8	100.0
In-House Counsel (Provincial Litigation Services)	Work Effort - Provincial Litigation	26,874	-	1,414	28,289	95.0	-	5.0	100.0
Claims General Support	Claims Division Average	12,180	-	6,212	18,392	66.2	-	33.8	100.0
Heavy Equipment	Net Claims Cost - HE	3,702	-	7,187	10,889	34.0	-	66.0	100.0
Centralized Estimating Facilities	Net Claims Cost - MD	4,218	-	6,070	10,288	41.0	-	59.0	100.0
Material Damage Support	Net Claims Cost - MD	4,039	-	5,813	9,852	41.0	-	59.0	100.0
Claims Litigation Support	Work Effort - Provincial Litigation	7,601	-	400	8,001	95.0	-	5.0	100.0
Claims Administrative Support	Weighted Average - Cost Centres	2,126	-	2,126	4,253	50.0	-	50.0	100.0
Salvage	Net Claims Cost - MD	1,342	-	1,931	3,273	41.0	-	59.0	100.0
BI Support	Work Effort	2,407	-	127	2,533	95.0	-	5.0	100.0
Optional Coverage (Claims)	Directly attributable to Optional	-	-	1,283	1,283	-	-	100.0	100.0
Basic Coverage (Claims)	Directly attributable to Basic	930	-	-	930	100.0	-	-	100.0
Rehabilitation	Directly attributable to Basic	210	-	-	210	100.0	-	-	100.0
Total Claims Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**283,398**	**-**	**144,473**	**427,872**	**66.2**	**-**	**33.8**	**100.0**
Claims Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [1]		283,398	-	144,473	427,872	66.2	-	33.8	100.0

[1] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[2] Rounding may affect totals and allocation percentages.

Road Safety and Loss Management (RSLM)

Operating Costs - RSLM	Allocator	($000s) [2]				Allocation % [2]			
		Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Road Safety Initiatives	Directly attributable to Basic	35,452	-	-	35,452	100.0	-	-	100.0
Fraud Management	Weighted Average - Cost Centres	10,292	-	5,572	15,864	64.9	-	35.1	100.0
Auto Crime Expenditures	Comprehensive Coverage - Market Share	447	-	1,653	2,101	21.3	-	78.7	100.0
Regional Loss Prevention	100% Basic with Exceptions	2,026	-	173	2,199	92.1	-	7.9	100.0
Road Safety General Support [1]	Road Safety Division Average	(669)	-	(103)	(771)	86.7	-	13.3	100.0
Total RSLM Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**47,549**	**-**	**7,295**	**54,844**	**86.7**	**-**	**13.3**	**100.0**
Road Safety and Loss Management Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View		47,549	-	7,295	54,844	86.7	-	13.3	100.0

[1] Negative amount due to pension adjustment
[2] Rounding may affect totals and allocation percentages.

General Expenses - Administration and Other

Operating Costs - Administrative	Allocator [1]	($000s) [5] Basic insurance	Non-insurance	Optional insurance	Total	Allocation % [5] Basic insurance	Non-insurance	Optional insurance	Total
ISD Shared Services: Insurance, Claims, Non-insurance	Corporate Shared Services Ratio	14,166	7,073	14,166	35,406	40.0	20.0	40.0	100.0
Human Resources	Corporate Shared Services Ratio	7,290	3,640	7,290	18,219	40.0	20.0	40.0	100.0
Finance Shared Services - Insurance Operations	Finance Shared Services Ratio	8,518	-	8,518	17,037	50.0	-	50.0	100.0
Business Intelligence	Weighted Average - Cost Centres	2,874	1,435	2,874	7,182	40.0	20.0	40.0	100.0
General Counsel	Work Effort	2,603	1,221	2,603	6,427	40.5	19.0	40.5	100.0
Supply Management Department	Work Effort	2,611	1,098	2,611	6,320	41.3	17.4	41.3	100.0
Customer Contact Call Centre	Premiums Written	2,994	-	2,994	5,988	50.0	-	50.0	100.0
Technology Renewal	Corporate Shared Services Ratio	2,139	1,068	2,139	5,346	40.0	20.0	40.0	100.0
Optional Coverage (Admin) [2]	Directly attributable to Optional	-	-	4,918	4,918	-	-	100.0	100.0
Customer Collections	Weighted Average - Transactions	1,941	852	1,941	4,735	41.0	18.0	41.0	100.0
Executive Office	Finance Shared Services Ratio	2,340	-	2,340	4,681	50.0	-	50.0	100.0
Infrastructure Expenditure	Finance Shared Services Ratio	2,320	-	2,320	4,641	50.0	-	50.0	100.0
Freedom of Information Department	Work Effort	2,118	-	2,118	4,237	50.0	-	50.0	100.0
Finance Division Banking Operations	Work Effort	2,078	-	2,078	4,155	50.0	-	50.0	100.0
Corporate Strategic Services	Corporate Shared Services Ratio	1,458	728	1,458	3,645	40.0	20.0	40.0	100.0
Document Services	Square Footage	1,248	364	1,248	2,861	43.6	12.7	43.6	100.0
Call Centres Support (Admin)	Weighted Average - Cost Centres	803	1,012	803	2,618	30.7	38.7	30.7	100.0
External Corporate Communications	Work Effort	1,100	329	1,100	2,529	43.5	13.0	43.5	100.0
Regulator Costs	Directly attributable to Basic	1,179	-	1,179	2,357	50.0	-	50.0	100.0
Facilities Management (Victoria)	Square Footage	55	2,093	55	2,203	2.5	95.0	2.5	100.0
Corporate Costs (Admin)	Finance Shared Services Ratio	1,074	-	1,074	2,147	50.0	-	50.0	100.0
Corporate Training	Insurance Division Average and Claims Division Average	925	-	925	1,851	50.0	-	50.0	100.0
Investment Portfolio Management	Investment Income Ratio	554	-	554	1,109	50.0	-	50.0	100.0
Project Management Service Costs	Finance Shared Services Ratio	509	-	509	1,019	50.0	-	50.0	100.0
Facility Projects (Admin)	Corporate Shared Services Ratio	373	186	373	933	40.0	20.0	40.0	100.0
Communication - Government relations	Work Effort	238	159	238	635	37.5	25.0	37.5	100.0
Business Transformation Shared Services	Corporate Shared Services Ratio	216	108	216	541	40.0	20.0	40.0	100.0
Fair Practices Review	Work Effort - Provincial Litigation	51	-	51	102	50.0	-	50.0	100.0
Facilities Management[3]	Square Footage	(1,906)	(548)	(1,906)	(4,360)	43.7	12.6	43.7	100.0
Total Administrative Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**61,872**	**20,819**	**66,791**	**149,482**	**41.4**	**13.9**	**44.7**	**100.0**
Administrative Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [4]		61,872	-	66,791	128,663	48.1	-	51.9	100.0

[1] Using the allocator indicated, a portion of the costs is allocated to Non-insurance. The remainder of the costs are allocated equally between Basic insurance and Optional insurance (see page 42 of the January 2005 Decision) or for significant corporate projects, directly attributed to Basic insurance or Optional insurance (see page 61 of the July 2006 Decision).
[2] ICBC incurred expenses related to projects that are 100% Optional insurance.
[3] Negative amount due to pension adjustment
[4] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[5] Rounding may affect totals and allocation percentages.

General Expenses - Insurance Services

Operating Costs - Insurance Services	Allocator	($000s) [3] Basic insurance	Non-insurance	Optional insurance	Total	Allocation % [3] Basic insurance	Non-insurance	Optional insurance	Total
Merchant Fees	Premiums Written	21,773	-	14,759	36,532	59.6	-	40.4	100.0
Insurance Services Applications Support	Insurance Division Average	8,018	-	4,357	12,376	64.8	-	35.2	100.0
Product Development	Premiums Written	5,063	-	3,432	8,495	59.6	-	40.4	100.0
Bad Debts & Allowances	Weighted Average - Transactions	6,030	-	2,119	8,149	74.0	-	26.0	100.0
Insurance System Support	Premiums Written	4,684	-	3,175	7,858	59.6	-	40.4	100.0
General Broker Support & Direct Sales	Premiums Written	4,506	-	3,054	7,560	59.6	-	40.4	100.0
Actuarial	Weighted Average - FTE	3,285	460	2,359	6,104	53.8	7.5	38.6	100.0
Field Broker Support	Work Effort	1,191	595	4,168	5,955	20.0	10.0	70.0	100.0
Insurance Business Support	Weighted Average - Cost Centres	3,335	270	1,881	5,486	60.8	4.9	34.3	100.0
Marketing Communication	Corporate Shared Services Ratio - With Exception	2,748	765	1,533	5,046	54.5	15.2	30.4	100.0
Insurance Basic Projects	Directly attributable to Basic	4,631	-	-	4,631	100.0	-	-	100.0
Market Research	Weighted Average - Projects	2,071	-	1,129	3,199	64.7	-	35.3	100.0
Corporate Website	Corporate Shared Services Ratio	1,584	632	949	3,165	50.0	20.0	30.0	100.0
Chief Underwriter	Premiums Written - With Exception	1,674	-	1,413	3,087	54.2	-	45.8	100.0
Garage & Fleet	Weighted Average - FTE	1,165	42	1,112	2,320	50.2	1.8	48.0	100.0
Insurance Project Expense	Insurance Division Average	1,403	-	762	2,165	64.8	-	35.2	100.0
Customer Accounting	Weighted Average - Transactions	721	686	309	1,715	42.0	40.0	18.0	100.0
Optional Coverage (Autoplan)	Directly attributable to Optional	-	-	1,584	1,584	-	-	100.0	100.0
ADP Technical	Premiums Written	772	-	523	1,295	59.6	-	40.4	100.0
Internet Services	Premiums Written	670	-	454	1,124	59.6	-	40.4	100.0
Product Research	Premiums Written	569	-	385	954	59.6	-	40.4	100.0
Premium Financing Plan Operations	Premiums Written	451	-	306	756	59.6	-	40.4	100.0
Specialty Lic & Ins	Weighted Average - Special Coverages	-	665	-	665	-	100.0	-	100.0
Insurance Corporate Cost[1]	Finance Shared Services Ratio, modified by Commission Decision	(864)	-	(864)	(1,729)	50.0	-	50.0	100.0
Total Insurance Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives		**75,478**	**4,117**	**48,898**	**128,493**	**58.7**	**3.2**	**38.1**	**100.0**
Insurance Services Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [2]		75,478	-	48,898	124,376	60.7	-	39.3	100.0

[1] Negative amount due to pension adjustment
[2] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[3] Rounding may affect totals and allocation percentages.

Administrative - Non-insurance

Operating Costs Administrative - Non-insurance	Allocator	($000s) [3] Basic insurance	Non-insurance	Optional insurance	Total	Allocation % [3] Basic insurance	Non-insurance	Optional insurance	Total
Registration and Licensing	Directly attributable to Non-insurance	-	10,183	-	10,183	-	100.0	-	100.0
ISD Non-insurance Vehicle Application	Directly attributable to Non-insurance	-	1,817	-	1,817	-	100.0	-	100.0
Non-insurance Project Expense	Directly attributable to Non-insurance	-	55	-	55	-	100.0	-	100.0
Non-insurance Corporate Cost[1]	Directly attributable to Non-insurance	-	(913)	-	(913)	-	100.0	-	100.0
Total Non-insurance Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.		**-**	**11,142**	**-**	**11,142**	**-**	**100.0**	**-**	**100.0**
Administrative - Non-insurance Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives Using Financial Statement View [2]		-	-	-	-	-	-	-	-

[1] Negative amount due to pension adjustment
[2] Used to calculate Basic percentage, see Figure 8D.4 describing Year to Year Basic Insurance Allocation Percentages. For Non-insurance, see Summary of Total Corporate Operating Expenses excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives.
[3] Rounding may affect totals and allocation percentages.

Summary of Total Corporate Operating Expenses Excluding ACE, RAAP, TP, and Cost Recoverable Government Initiatives

Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives	($000s) [1]				Allocation % [1]			
	Basic insurance	Non-insurance	Optional insurance	Total	Basic insurance	Non-insurance	Optional insurance	Total
Claims Services (ULAE)	283,398	-	144,473	427,872	66.2	-	33.8	100.0
Road Safety and Loss Management (RSLM)	47,549	-	7,295	54,844	86.7	-	13.3	100.0
General Expenses - Administraton and Other	61,872	-	66,791	128,663	48.1	-	51.9	100.0
General Expenses - Insurance Services	75,478	-	48,898	124,376	60.7	-	39.3	100.0
General Expenses - Administraton and Other	-	20,819	-	20,819	-	100.0	-	100.0
General Expenses - Insurance Services	-	4,117	-	4,117	-	100.0	-	100.0
Administrative - Non-insurance	-	11,142	-	11,142	-	100.0	-	100.0
Driver Licensing	-	88,422	-	88,422	-	100.0	-	100.0
Total Corporate Operating Expenses Excluding TP, RAAP, ACE, and Cost Recoverable Government Initiatives	**468,297**	**124,500**	**267,458**	**860,256**	**54.4**	**14.5**	**31.1**	**100.0**

[1] Rounding may affect totals and allocation percentages.

B YEAR-TO-YEAR BASIC INSURANCE ALLOCATION PERCENTAGES

4. Figure 8D.4 shows that the percentage of corporate operating expenses allocated to Basic insurance has remained consistent at 68% to 70% of total corporate operating expenses over the last several years.

5. Slight variations in Basic insurance percentages may be caused by spending patterns unique to a particular year, organizational and product changes and also by BCUC-approved changes to the financial allocation methodology, if any (see Chapter 6 Operating Expenses and Allocation Information, Section C).

Figure 8D.4 – Year-to-Year Basic Insurance Allocation Percentages

Basic Insurance Allocation (%)	2019/20 Actual	2020/21 Actual	2021/22 Actual	2022/23 Outlook
Claims Services	67	67	66	67
Road Safety and Loss Management	87	86	87	88
Administration and Other	49	48	48	49
Insurance Services	55	56	61	60
Non-insurance Operations	100	100	100	100
Total Corporate Operating Expenses	**68%**	**68%**	**69%**	**70%**

APPENDIX 8E

FRAUD INVESTIGATION METRICS

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A FRAUD INVESTIGATION REPORTING

1. This Appendix responds to the BCUC's directive to provide information on the ICBC's fraud investigation efforts, such as the number of investigations undertaken.[1] ICBC was also requested to provide information on the range of positive outcomes that may arise from its investigations, and to quantify, to the extent possible, the amount of savings to policyholders and the impact on Basic insurance rates as a result of its efforts to address fraud.[2] This information is discussed below.

2. Figure 8E.1 shows the total number of claim fraud investigations (material damage, injury and cyber) that were opened each fiscal year, beginning in 2018/19. Figure 8E.2 shows the number of claim fraud investigations closed for the same periods. Information for the current fiscal year covers April 1, 2022 to October 31, 2022. In order to compare investigative volume between the different periods, the average number of investigations opened or closed is provided on a monthly average basis.

Figure 8E.1 – Number of Claim Fraud Investigations Opened

Fiscal Year	Material Damage Investigations	Injury Investigations	Cyber Investigations[1]	Total Opened Investigations	Monthly Average	Y/Y % Change[2]
2018/19	1,613	786	3,040	5,439	453	11%
2019/20	1,866	654	2,198	4,718	393	-13%
2020/21	2,124	447	2,030	4,601	383	-2%
2021/22	2,127	187	865	3,179	265	-31%
YTD Oct 2022	1,278	109	403	1,790	256	-3%

[1] The Cyber Unit investigates publicly available information online that may suggest fraudulent activity.
[2] The Y/Y % Change is a comparison of the Monthly Average to the prior year.

3. As shown in Figure 8E.1, the number of new investigations opened in 2021/22 was 31% lower than the previous fiscal year. ICBC believes that this decrease is primarily due to the transition to Enhanced Care, as discussed below. With the introduction of the Rate Affordability Action Plan product reforms in April 2019, and the subsequent transition to Enhanced Care in May 2021, the number of open legal-based injury claims with a risk of fraud continues to decline.

[1] The May 14, 2014 Decision on 2013 Revenue Requirements Application, (Order G-63-14, page 44).
[2] The May 27, 2016 Decision on 2015 Revenue Requirements Application, (Order G-74-16, page 33).

4. Over the next few years, the number of open legal-based claims will reduce substantially as these claims resolve. Accordingly, referrals to the Special Investigation Unit (SIU) to investigate these types of claims will decrease. ICBC anticipated that referrals to SIU to investigate injury claims under the new model would be lower than under the legal-based system due to the lower financial gain that could be realized under the Enhanced Care Model. Referrals for cyber investigations are also lower under Enhanced Care. In addition, the COVID-19 pandemic and ICBC's efforts to comply with provincial health orders impacted the number of SIU investigations conducted in 2020/21 and 2021/22. SIU investigators, for example, were limited in their ability to conduct in-person interviews and SIU staff working from home during the pandemic did not have access to some technologies used for investigations of publicly available social media accounts.

5. As the number of legal-based injury claims have diminished over the last couple of years, SIU has been able to provide additional focus on Material Damage (MD) claims and this accounts for the increase in the number of MD investigations over the last several years.

Figure 8E.2 – Number of Claim Fraud Investigations Closed

Fiscal Year	Material Damage Investigations	Injury Investigations	Cyber Investigations	Total Completed Investigations	Monthly Average	Y/Y % Change[1]
2018/19	1,629	840	2,604	5,073	423	12%
2019/20	1,821	713	2,833	5,367	423	6%
2020/21	2,140	464	1,562	4,166	347	-22%
2021/22	2,123	212	1,442	3,777	315	-9%
YTD Oct 2022	1,270	115	484	1,869	267	-15%

[1] The Y/Y % Change is a comparison of the Monthly Average to the prior year.

6. ICBC has recently implemented new policies, procedures and processes, and added a new fraud investigation screen in GuideWire ClaimCenter®, to enable the collection of more detailed information about fraud investigations. In addition, training was provided to claims staff to help them identify potential fraud under Enhanced Care. As more experience is gained by staff, referrals for SIU investigations are anticipated to increase in future years.

7. Figure 8E.3 shows the fraud charges laid and conviction counts related to SIU claims investigations. ICBC can only recommend a charge where appropriate. Ultimately, Crown Counsel determines which charges are approved and how each charge is treated (which may

involve the consolidation of multiple charges into one conviction). Convictions are one method of penalizing those who commit fraud. Alternative options include the cancellation of a customer's ability to purchase Optional insurance coverage and the Restorative Justice Program. ICBC notes that it is not the primary objective of its counter-fraud efforts to increase criminal convictions. The primary objective is to prevent and measurably reduce the impact of fraud on policyholders and ICBC.

Figure 8E.3 – Number of Charges Laid and Convictions[1]

	2018/19	2019/20	2020/21	2021/22	YTD Oct 2022
Charges laid by Crown	42	38	31	24	13
Number of convictions	22	25	22	32	5

[1] Data may vary over time due to changes in the timing of criminal charge reporting. Estimates are refreshed periodically in order to account for current information.

8. The full extent of fraud is challenging to accurately measure since fraud is, by nature, intended to go undetected. Similarly, the amount of savings to policyholders arising from fraud investigations and the impact on rates is difficult to measure because in most cases, it is not possible to know exactly how much would have been paid on a claim in the absence of fraud. Many variables are involved in the determination of the value of a claim, and the timing of the discovery of fraud is likely to impact how the claim would have otherwise unfolded.

9. ICBC has estimated the corporate fraud savings for non-minor injury and material damage claims for FY 2021/22 to be $15 million. Of these estimated fraud savings $4 million is related to Basic insurance.

10. As discussed in Chapter 7, Appendix 7B, Claims Cost Management, Section D, the counter-fraud program is expected to continue to reduce claims costs under Enhanced Care, although the savings are expected to be lower than before. There is not yet sufficient reliable data with which to forecast injury fraud savings under Enhanced Care and ICBC anticipates that it will require a number of years under the new model before this can be reported.

APPENDIX 8F

INJURY CLAIM TRANSITION TO THE ENHANCED CARE MODEL

AND

LEGAL REPRESENTATION CONVERSION RATE (LRCR)

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A INTRODUCTION

1. This Appendix replaces the Rate Affordability Action Plan (RAAP) product reform metrics that were presented in Chapter 7, Appendix 7E RAAP Product Reform Metrics and Legal Representation Conversion Rate, of the 2021 Revenue Requirements Application, as RAAP product reform changes were superseded by the Enhanced Care Model on May 1, 2021. The focus of this Appendix is the progressive wind-down of the remaining legal-based bodily injury (BI) claims (also referred to as the BI pending), as well as providing information on paid severity of legal-based injury claims and the Legal Representation Conversion Rate (LRCR).

2. Operationally, ICBC continues to serve its customers with injury claims occurring in BC under three separate models. The model that a particular customer's claim will fall under depends on when the motor vehicle crash or loss event occurred.

- Injury claims occurring prior to introduction of RAAP product reform on April 1, 2019 (Pre-RAAP).
- Injury claims occurring from April 1, 2019 to April 30, 2021 under the RAAP product reform (RAAP product reform).
- Injury claims occurring after implementation of Enhanced Care on May 1, 2021. (Enhanced Accident Benefits (EAB) claims).

3. Injury claims under pre-RAAP and RAAP product reform are collectively referred to in this Application as legal-based claims. ICBC will continue to receive and manage legal-based injury claims for many years to come due to the nature of litigation as well as the extension of the Basic limitation period for minors and persons under a disability for these claims.

4. In addition, ICBC will still need to handle a relatively small number of legal-based injury claims that occur on or after May 1, 2021, arising from when BC motorists driving out-of-province are involved in crashes that cause injuries, and in other limited circumstances.[1]

5. Section B of this Appendix provides information on the number of legal-based injury exposures that are remaining (BI pending) and demonstrates the progress that has been made in reducing this number since the introduction of RAAP product reform and the Enhanced Care Model.

[1] Other limited circumstances include scenarios such as an off-highway crash where the driver of a non-standard motor vehicle, such as an ATV, injures a pedestrian.

6. The legal-based BI pending discussed in the Appendix does not have an impact on the Policy Year (PY) 2023 actuarial indicated rate change. The actuarial analysis shown in Chapter 3, Actuarial Indicated Rate Change Analysis is based on the insurance coverages under Enhanced Care and takes into consideration only new claims and associated claims services costs resulting from policies sold within PY 2023. However, BI pending exposures will still develop over time and the associated claims costs will be reflected in ICBC's financial statements through adjustments to prior year claims costs and in the provision for unpaid claims.

7. Section C of this Appendix includes information about the LRCR. The relevance of this metric has diminished as a result of changes to the ICBC's insurance models since April 1, 2019 under RAAP and further since May 1, 2021 under Enhanced Care. In particular, the legislative changes to the *Insurance (Vehicle) Act* (IVA) that enabled Enhanced Care included provisions that limit actions and proceedings for BI claims arising from vehicle related crashes in BC that occur on or after May 1, 2021.[2] Consequently, the number of BI exposures that could become represented has decreased significantly and is no longer a significant driver of injury claims costs. ICBC is therefore proposing to discontinue the provision of this metric in future RRAs.

B INJURY CLAIMS TRANSITION

8. Since the introduction of Enhanced Care on May 1, 2021, significantly fewer BI claims are being opened as ICBC transitions to the Enhanced Care Model.

9. Figure 8F.1 shows the newly opened injury exposure volumes for each fiscal year period since fiscal year (FY) 2018/19. The number of newly opened BI exposures under the legal-based products started to decline since the introduction of RAAP product reform on April 1, 2019 and rapidly diminished after the introduction of Enhanced Care on May 1, 2021. Crashes occurring before May 1, 2021 are handled under the legal-based products and a small number these could result in BI exposures opening in FY 2022/23 as these claims approach their two-year limitation period. In addition, due to COVID-19, the limitation period was suspended for one year between March 26, 2020 and March 25, 2021. This has the potential to increase the number of legal-based BI exposures that could be opened.

10. For comparison purposes, Figure 8F.1 also shows the new BI exposures opened in FY 2021/22 and those that are expected to be opened in the FY 2022/23 outlook, from crashes

[2] *Insurance (Vehicle) Act*, section 115.

occurring on or after May 1, 2021, where BC motorists driving outside of the province are involved in crashes that cause injuries, and other limited circumstances.

Figure 8F.1 – Newly Opened Injury Exposure Volumes

	Legal-based Injury (crashes occurring before May 1, 2021)					Enhanced Care[1]	
	FY2018/19	FY2019/20	FY2020/21	FY2021/22	FY2022/23 Outlook[2]	FY2021/22	FY2022/23 Outlook[2]
Medical Rehabilitation	95,000	93,000	61,000	7,000	300	68,000	78,200
Weekly Benefits Enhanced Disability[3]	4,000	5,000	5,000	2,000	400	7,000	9,800
Permanent Impairment[4]	-	-	-	-	-	200	1,300
Death Benefits[5]	500	500	500	100	0	600	1,000
Bodily Injury[6]	75,000	66,000	47,000	11,000	2,300	500	800
Total Injury[7]	174,500	164,500	113,500	20,100	3,000	76,300	91,000

[1] Enhanced Care was implemented on May 1, 2021. FY 2020/21 newly opened exposures reflect only 11 months.
[2] FY 2022/23 Outlook are based on YTD September. Outlook does not include “No Financial Transactions” (where a claim exposure is opened, but no initial reserve is set); whereas, information for prior fiscal year do.
[3] Weekly Benefits refer to first party claims for injury that compromise a customer’s ability to function.
[4] Permanent Impairment is a new coverage under Enhanced Care. Previously such claims were handled as part of Medical Rehabilitation and under BI claims handling.
[5] Under Enhanced Care, ICBC opens up three Death Benefit exposures (funeral costs, survivor benefits and grief counselling) rather than just one.
[6] BI exposures from crashes occurring on or after May 1, 2021 consist mainly of out-of-province claims.
[7] Rounding may affect totals.

11. Figure 8F.2 below shows the BI pending (number of BI exposures that are still to be resolved) as of the end of each period. BI pending volume is influenced by the relative pace at which claims exposures are opened and resolved (completed). With the introduction of Enhanced Care, fewer BI claims are being opened, which enables ICBC’s claims injury and litigation services staff to focus on winding down the BI pending. As of September 2022, the BI pending has decreased by almost 50% to 62,000 from a high of 122,000 at the end of FY 2019/20.

Figure 8F.2 – Legal-Based BI Pending Exposure Volumes as of the End of the Period

Exposure Counts	FY2018/19	FY 2019/20	FY2020/21	FY2021/22	As of September 2022
Unrepresented	24,000	31,000	21,000	5,000	4,000
Represented	55,000	38,000	22,000	11,000	10,000
Litigated	40,000	53,500	58,000	54,000	48,000
Total[1]	**119,000**	**122,000**	**101,000**	**70,000**	**62,000**

[1] Rounding may affect totals.

12. Figure 8F.3 shows that as of September 2022, approximately 69% of total BI pending exposures are claims opened under the pre-RAAP model (i.e., prior to April 1, 2019) which are typically more complex and more expensive to settle. Approximately 29% of BI exposures were opened under RAAP product reform and approximately 2% are BI exposures resulting from out-of-province (OOP) crashes occurring since May 1, 2021.

Figure 8F.3 – BI Pending Exposure Volumes as of End of Period[1]

Exposure Counts	Pre-RAAP	RAAP Product Reform	OOP BI since May 1, 2021[2]	As of September 2022
Unrepresented	1,000	3,000	0	**4,000**
Represented	5,000	5,000	0	**10,000**
Litigated	37,000	10,000	0	**47,000**
Total	**43,000**	**18,000**	**1,000**	**62,000**

[1] Rounding may affect totals.
[2] OOP BI exposure volumes since May 1, 2021. Segments rounding down to below 1,000 are shown as 0 count.

13. The financial risk in BI pending has mostly been accounted for as claims costs, including the estimated loss adjustment expenses needed to settle these claims, are already incurred, reserved, and recorded as a provision for unpaid claims in ICBC's financial statements. As of September 2022, approximately 5% of the total BI pending remains unrepresented. Most of the BI exposures that remain unrepresented are claims incurred under RAAP product reform and are primarily minor injury claims that are less costly to settle.

14. Figure 8F.4 provides the paid severity for the pre-RAAP and RAAP product reform BI claims completed in each fiscal year since FY 2018/19 by litigation status. BI paid severities for pre-RAAP claims are settling higher than the RAAP claims, which is expected given the former

are older and not subject to the cap on minor injury claims under RAAP product reform.[3] As also expected, severities are increasing due to the higher complexity of the BI pending that is remaining.

Figure 8F.4 – Pre-RAAP and RAAP Product Reform BI Paid Severity[1] by Litigation Status

Fiscal Year	Pre-RAAP ($)			RAAP Product Reform ($)		
	Unrepresented	Represented and Litigated	Overall[2]	Unrepresented	Represented and Litigated	Overall[2]
2018/19	8,300	81,500	44,700	-	-	-
2019/20	9,800	89,900	61,200	3,200	7,500	3,300
2020/21	15,000	91,000	79,200	4,800	20,600	6,100
2021/22	17,900	117,700	112,600	6,200	23,500	9,100
YTD Sept 2022	**25,500**	**142,500**	**139,600**	**12,400**	**35,700**	**24,000**

[1] Completed during the period with an amount.
[2] Overall Paid Severity determined by dividing all paid claim amounts by total number of exposures.

15. Figure 8F.5 provides the Accident Benefits (AB) paid severity by coverage for pre-RAAP and RAAP product reform exposures completed with an amount. Overall AB paid severities under RAAP product reform are below pre-RAAP severity levels which again is expected given the age of the respective claims under each model.

[3] Under RAAP product reform, effective on April 1, 2019, and as set out in section 103(1) of the I(V)A, the cap on minor injury claims refers to the limit on damages for non-pecuniary loss (general damages) to a particular amount for injuries sustained by an individual in a motor vehicle crash and is determine in accordance with the regulations.

Figure 8F.5 – Pre-RAAP and RAAP Product Reform AB Paid Severity[1] by Coverage

Fiscal Year	Pre-RAAP ($)				RAAP Product Reform ($)			
	Medical Rehabilitation	Weekly Benefits	Death Benefits	Overall[2]	Medical Rehabilitation	Weekly Benefits	Death Benefits	Overall[2]
2018/19	2,200	12,000	7,900	2,700	-	-	-	-
2019/20	3,100	11,000	9,200	3,900	900	3,200	13,500	1,100
2020/21	4,800	14,300	10,500	5,400	1,800	6,000	13,400	2,100
2021/22	6,800	20,200	13,900	7,600	3,500	12,200	13,000	4,100
YTD Sept 2022	12,100	25,000	10,200	13,000	9,300	19,800	12,000	10,500

[1] Completed during the period with an amount.
[2] Overall Paid Severity determined by dividing all AB coverage paid amounts by total number of exposures.

C LEGAL REPRESENTATION CONVERSION RATE[4]

16. The increasing rate of legal representation and higher litigation costs that were occurring from 2011 to 2017 were key factors driving the introduction of product changes that were implemented on April 1, 2019, as well as the changeover to the Enhanced Care Model that went into effect on May 1, 2021. However, as noted above, after May 1, 2021, individuals involved in motor vehicle-related crashes in BC can no longer bring an action through the courts for BI claims, except for in limited circumstances.[5] In effect, the only customers who could still have a right of action for injuries sustained in vehicle related crashes in BC will be those who were involved in crashes before May 1, 2021. As a result, there are fewer and fewer newly opened BI exposures although a relatively large proportion of those will still become represented.

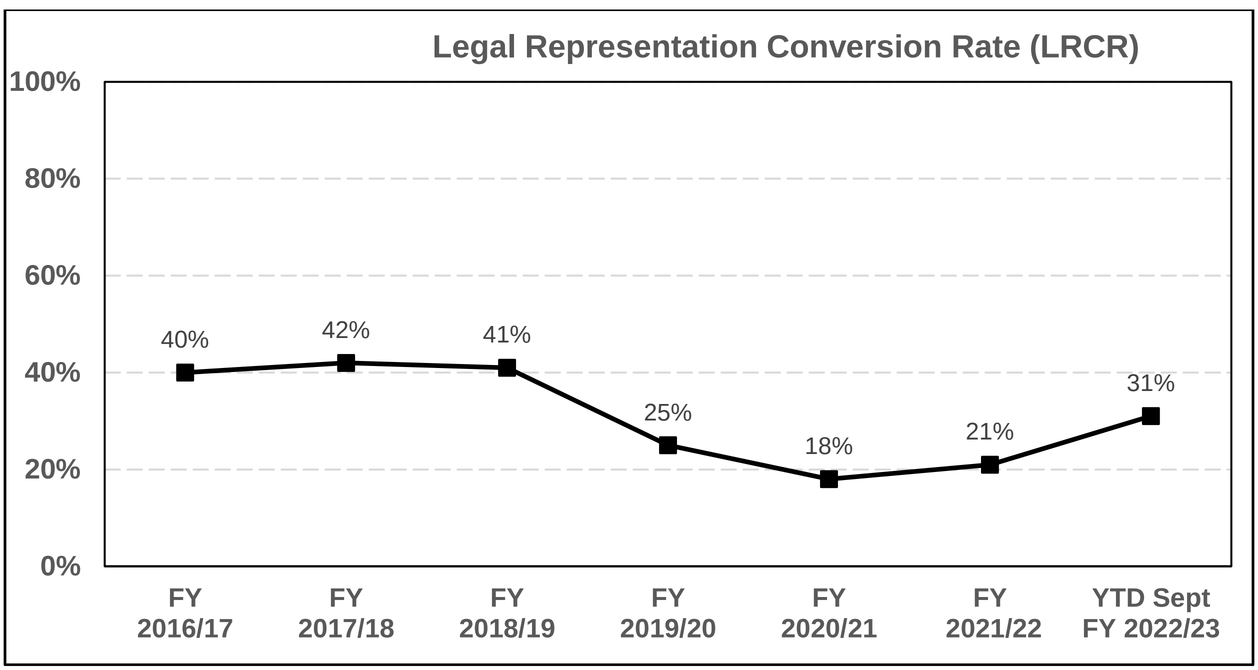
17. As can be seen in Figure 8F.6 below, the LRCR decreased significantly from 40% in FY 2016/17 to 18% in FY 2020/21, the year after the RAAP product reform went into effect. In FY 2021/22 the LRCR increased to 21% and then to 31% as of September 30, 2022. The reason underlying these fluctuations is that the LRCR is now covering three distinct periods with different insurance models in place within each (i.e., Pre-RAAP, RAAP product reform and Enhanced Care). RAAP product reform and Enhanced Care both have their own impact on the number of

[4] The Legal Representation Rate (LRR) was first reported with BCUC as part of ICBC's performance measures in accordance with the 2004 Performance Measures and Basic Insurance Information Sharing Negotiated Settlement Agreement. In the 2019 RRA, ICBC proposed to replace the LRR with the LRCR, which was approved by BCUC in Order G-192-19.
[5] Exceptions to the limit on actions and proceedings for bodily injuries sustained in a motor vehicle crash are described in section 116 (2) of the I(V)A and include but not limited to, a person whose use or operation of a vehicle caused a bodily injury where they are convicted of a prescribed *Criminal Code* offence.

newly opened BI exposures and the proportion of those that might or could become represented. Consequently, the LRCR is not considered to be providing like to like comparisons over the period covered in the Figure. Of particular note is that the number of newly opened BI exposures has decreased by approximately 85% (74,218 to 11,544) from FY 2016/17 to FY 2021/22. Similarly, the number of customers becoming newly represented has decreased by approximately 82% (38,537 to 6,959) for the same period.

18. While the LRCR is increasing for YTD 2022/23 compared to the prior two fiscal years, this represents a smaller number of injury exposures compared to the Pre-RAAP period. The increasing LRCR is primarily due to the very few new BI exposures being added to the denominator of the LRCR calculation, as can be seen in the components of the LCRC (below Figure 8F.6). The largest component of the denominator for the LRCR is injury exposures that were unrepresented at the end of the prior fiscal year end. As most of these BI exposures are approaching their limitation period, a large segment of these customers are likely to become represented if their claims are not resolved prior to that point. With fewer new BI exposures being added, the LRCR will be reflected as increasing at a higher rate than before; however, it does not represent any increase in overall business risk as the number of exposures that are becoming represented has significantly decreased since the implementation of Enhanced Care.

Figure 8F.6 – Legal Representation Conversion Rate



Components of LRCR	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	YTD Sept FY 2022/23
(a) Newly Represented (During the Period)	38,537	42,133	39,473	22,643	13,827	6,959	4,419
(b) Unrepresented (Start of Period)	23,028	22,182	21,433	24,345	30,435	20,832	10,103
(c) Newly Opened (During the Period)	74,218	78,299	74,584	66,288	46,816	11,544	4,241
(d) LRCR = (a) / [(b)+(c)]	40%	42%	41%	25%	18%	21%	31%

C.1 PROPOSAL TO DISCONTINUE REPORTING ON LEGAL REPRESENTATION CONVERSION RATE

19. With the implementation of Enhanced Care, litigation expenses and BI claim payments (pain and suffering and special damages) have largely been removed from ICBC's claims costs and the Basic insurance rate. Consequently there is no longer a business need to continue monitoring the LRCR. In addition, the usefulness of the LRCR is diminishing, given that it is providing comparisons over periods when there are different insurance models in place, each of which have significantly different volumes of newly opened injury claims. Consequently, ICBC is proposing to discontinue reporting on the legal representation conversion rate in future revenue requirements applications.

D CONCLUSION

20. With the implementation of RAAP product reform in April 2019 and Enhanced Care in May 2021, ICBC must serve customers with injury claims under three separate models depending on when the crash giving rise to a customer's injury occurred. While the legal-based injury claims that occurred prior to PY 2023 do not have an impact on the actuarial indicated rate change, ICBC must still ensure that these claims are being resolved in an expeditious and fair and reasonable manner. Since the transition to Enhanced Care, ICBC has made good progress in settling its BI pending which has been reduced by almost 50% since FY 2019/20.

21. The changes that were introduced from RAAP product reform and Enhanced Care have impacted the LRCR by significantly reducing the number of new BI exposures as well as the number of BI exposures that become represented. ICBC proposes to discontinue reporting on the LRCR in future RRA's as the business need to monitor this metric has diminished and the metric does not provide a like for like comparison under the three different injury models.

APPENDIX 8G

ROAD SAFETY

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A INTRODUCTION

1. Road Safety programs are an integral part of ICBC's commitment to both leading and supporting initiatives that contribute to reducing crashes, injuries and deaths on BC roads, and their associated costs. ICBC's Road Safety programs support the globally recognized Safe Systems approach to Road Safety. The Safe Systems approach seeks to prevent or minimize the impact of crashes by influencing driver behaviour, improving the road network, and encouraging safer vehicles. Guided by the Safe Systems approach, Road Safety employs a combination of different strategies as appropriate, including enforcement and prevention programs with police and Government, road safety engineering, and education and awareness programs, which benefits Basic insurance policyholders.

2. For the 2023 Revenue Requirements Application (RRA), this report provides updates on Rate Affordability Action Plan (RAAP) initiatives, new initiatives that have been launched since the 2021 RRA and ICBC's ongoing Road Safety programs. The information included in this report supports ICBC's commitment to continue to provide transparency on the progress and success of programs and initiatives.

3. The structure of this report is as follows:

- Section B provides updates to RAAP initiatives introduced in the 2019 RRA and introduces other new road safety initiatives.
- Section C provides updates to ongoing initiatives: the Traffic and Road Safety Law Enforcement Funding Memorandum of Understanding (Road Safety MOU), the Road Improvement Program, the Intersection Safety Camera (ISC) program and ICBC's Education and Awareness Initiatives.
- Section D provides information on Road Safety statistics that ICBC collects and makes available for this Application.
- Section E provides an update on the Graduated Licensing Program (GLP) Review and the Mandatory Entry-Level Training (MELT) program.
- Section F discusses funding of Road Safety programs.

4. As discussed in the following sections, ICBC remains focused on the factors it believes it can influence through its Road Safety programs, and through partnering with Government and police, to influence better driver behaviour.

B UPDATES TO RAAP INITIATIVES AND NEW INITIATIVES

5. RAAP Road Safety programs are now fully implemented and this section provides updates to three initiatives under the RAAP program: the Inexperienced Drivers Technology Pilot (Techpilot); Intersection Safety Cameras-Speed Activation (ISC-SA), and the Collision Reduction Program (High Friction Surface Treatment Program). Funding for RAAP initiatives is provided from Optional insurance or Government funding and was discussed in the Road Safety Chapter of the 2019 RRA.[1]

6. This section will also provide an overview of a new initiative called Street Sense, which is not part of RAAP. Street Sense is an award-winning hazard perception training application developed as a result of the work done through the Hazard Perception Assessment and Training (HPAT) initiative.[2]

B.1 INEXPERIENCED DRIVERS TECHNOLOGY PILOT - TECHPILOT

7. In January 2020, ICBC launched a telematics pilot called, Techpilot, to determine if the incentivized use of telematics could improve specific driving behaviours, reduce crashes and create a safer driving culture in BC.

8. The Techpilot targeted less-experienced drivers – those with either a Novice licence or full licence with less than five years of unsupervised driving experience. ICBC has found that newer drivers with less than five years of unsupervised driving experience are at a higher risk of being in severe crashes than more experienced drivers. Learner drivers were ineligible to participate.

9. The drivers who consented to using a telematics device in their vehicles, which was paired to the Techpilot app on their smartphones. The device and app then gathered data on their driving behaviours while giving feedback to encourage safer driving through a gamified and incentivized approach.

10. Techpilot ran from January 2020 to October 2021, and involved 2,147 participants with less than five years of driving experience. The participants which were divided into two groups: a control group and treatment group. Both groups installed the device and the app, but only the

[1] Pursuant to the Government Directive of February 13, 2018 with respect to Funding Rate Affordability Action Plan from Optional insurance, approved by Order in Council 84, March 5, 2020.

[2] 2022 Road Safety Award from the Canadian Council of Motor Transport Administrators for implementing educational strategies aimed at reducing deaths and injuries on Canada's roads and the 2022 Gold Award from the Serious Play Conference for outstanding digital, board or tabletop games used for training or education.

treatment group received feedback from the app during the study. The effect of the Techpilot feedback was calculated by comparing the driving behaviour of treatment group to the driving behaviour of the control group.

11. The results of the Techpilot study indicated that those in the treatment group exhibited lower frequencies of rapid acceleration (11%), less harsh braking (14%) and speeding (8%) per 100 kilometres driven relative to the control group. The treatment group participants also reported a 13% lower crash rate per 100 kilometres driven relative to the control group, however the sample size was too small to conclude with confidence that Techpilot was a factor. The small sample size can be partly attributed to the public health emergency measures introduced to address the COVID-19 pandemic that was announced one month into the study; participant numbers declined over the course of the study. There was insufficient data available to draw conclusions on the impact of Telematics on phone distractions.

12. Participants reported overall positive experiences with using the Techpilot app. By being more mindful and understanding their driving behaviour, drivers were able to make immediate and sustained improvements. The results of the Techpilot study demonstrated that well-designed telematics programs can improve driver behaviour and help make roads safer. The Techpilot study report is available on ICBC's website:
https://www.icbc.com/road-safety/Documents/techpilot-final-report.pdf

B.2 INTERSECTION SAFETY CAMERA-SPEED ACTIVATION

13. The Intersection Safety Camera Program is a partnership between ICBC, the Ministry of Public Safety and Solicitor General (MPSSG) and the Royal Canadian Mounted Police (RCMP) with the primary goal of reducing crashes by changing dangerous driving behaviours at high-risk intersections.

14. In March 2020, a phased implementation of automated speed enforcement was completed with 35 of 140 red light cameras equipped with upgraded technology that will also ticket the fastest vehicles passing through these high risk locations. The new cameras use radar technology to detect speeding vehicles on every traffic light phase.

15. To determine the ISC locations best suited for speed enforcement, a selection model was developed to assess each red light camera intersection in terms of the prevalence and extremity of speeding, the severity of crashes and the potential to reduce collisions. Project engineers also

examined technical and physical considerations in detail to confirm the suitability of each location chosen.

16. A map of all ISC locations across BC is provided on icbc.com,[3] and colourful and prominent ISC warning signs were developed by the Ministry of Transportation and Infrastructure (MOTI) and installed on all approaches to every intersection monitored by a red light camera or a speed and red light camera system.

17. The first ISC-SAs began enforcement at the end of July 2019 and by the end of March 2022 the program had issued approximately 129,000 speeding tickets. Quarterly ISC red light and speed violation ticket data is provided on the Government's website: https://www2.gov.bc.ca/gov/content/safety/public-safety/intersection-safety-cameras/statistics.

18. An evaluation of the automated speed enforcement project was scheduled to be conducted in 2021/22. The interpretation of the data collected during 2020 and 2021 was challenging due to the effects of reduced non-essential travel during COVID-19. The impact on traffic activity has lessened considerably since then, with volumes returning to near pre-pandemic levels by spring 2022. As such, ICBC expects to have a full year's worth of meaningful data to evaluate the impact of the automated speed enforcement project by late 2023, with the final report available by the year's end.

B.3 COLLISION REDUCTION PROGRAM: HIGH FRICTION SURFACE TREATMENT PROJECT

19. In the fall of 2018, MOTI and ICBC began a pilot project on provincial roadways in which a high friction surface treatment (HFST) is applied directly onto the surface of the roads at intersections and off-ramps with a history of high occurrence of rear-end collisions. HFST is a pavement surfacing system that improves safety by enhancing the skid resistance quality of the pavement. Between 2018 and 2019, MOTI completed the application of HFST at 14 locations in the Lower Mainland and Vancouver Island.

20. In 2021, MOTI, in partnership with ICBC, commissioned a study to evaluate the HFST installations and determine the effectiveness of the treatment. The study, which was undertaken by the University of British Columbia, used a traffic conflict-based safety assessment using traffic

[3] The link on icbc.com provides this map: https://www.google.com/maps/d/viewer?mid=1bwilWA7jH7IrJWzdQK3TQlzBDdOHOIdV&ll=51.25912446639858%2C-122.13209885&z=7.

video data. Two approaches were used, including a time-series (i.e., before intervention to after intervention) safety analysis and a cross-sectional safety analysis.

21. The results from the two approaches showed similar results, with a statistically significant 38.7% and 36.5% reduction in rear-end collisions for the time-series and cross-sectional analysis respectively. A subsequent evaluation by MOTI using collision data showed a statistically significant improvement at the treatment locations. Specifically, the estimated reductions were 51% in serious collisions, 57% in rear-end collisions and 64% in collisions in wet conditions. The positive results from the two MOTI studies suggest that HSFT has promise for future road improvement project partnerships.

B.4 HAZARD PERCEPTION ASSESSMENT AND TRAINING

22. As part of the Government/Telus Strategic Innovation Fund (SIF), ICBC and Telus collaborated on the research and development of a Hazard Perception Assessment and Training (HPAT) application intended for pre-drivers, young drivers or drivers new to BC. The aim of the application is to assist with enhancing situational awareness of driving hazards by presenting hazardous driving situations using computer-generated simulations and timely feedback.

23. In April 2022, ICBC launched a new HPAT application called Street Sense, which introduced 15 interactive driving scenarios based on conditions and situations specific to British Columbia. Street Sense allows drivers to practice their hazard perception skills in a safe, repeatable way, increasing their awareness of hazards. Street Sense incorporated input from driving instructors, licensing examiners and road safety experts during its development phase.

24. Street Sense is available to the public to download for free on Apple, Android, PC, web and virtual reality. As of October 2022, Street Sense has been downloaded more than 23,000 times across Canada.

25. Since its initial launch, Street Sense has received the 2022 Road Safety Award from the Canadian Council of Motor Transport Administrators for implementing educational strategies aimed at reducing deaths and injuries on Canada’s roads. Street Sense also received a 2022 Gold Award from the Serious Play Conference for outstanding digital, board or tabletop games used for training or education.

26. ICBC continues to build on the success of Street Sense and Phase 2 of the project is currently underway. Phase 2 of Street Sense will include more scenarios, the potential to simulate

a continuous drive and an academic evaluation of its training efficacy. Phase 2 is expected to be completed by July 2023. Street Sense is funded by the SIF and not Basic insurance.

C ONGOING INITIATIVES

27. ICBC is engaged in ongoing initiatives to support the Road Safety Program and continues to fund the Road Safety Memorandum of Understanding (MOU), Road Improvement Program, ISC program, education and awareness initiatives and public data sets, as described in the following sections.

C.1 ROAD SAFETY MOU

28. As in previous years, ICBC continues to fund a series of initiatives under the Road Safety MOU. The Road Safety MOU also highlights ICBC's and the Government's commitment to addressing high-risk driving behaviours such as distracted driving, speeding, and impaired driving. The Enhanced Traffic Enforcement Program (ETEP), under the Road Safety MOU, is a coordinated traffic enforcement partnership between ICBC, the Ministry of Public Safety and Solicitor General (MPSSG), and the Royal Canadian Mounted Police (RCMP).

29. The current Road Safety MOU is set to expire on March 31, 2023. A new Road Safety MOU has been established for a 3-year term beginning April 1, 2023 and ending on March 31, 2026. A copy of the new Road Safety MOU is provided in Attachment 8G.1

30. To provide an understanding of the relationship between ETEP resources, activities and outcomes, a Value Logic Model (VLM) has been developed that monitors enhanced enforcement activities and efforts that address high-risk driving behaviours. The VLM framework is used to advance other work identified in the ETEP Forward-Looking Review.[4]

C.2 ROAD IMPROVEMENT PROGRAM

31. The goal of the Road Improvement Program is to partner with provincial and municipal road authorities to implement road improvements that will help reduce the frequency and/or severity of crashes.

32. A total of 321 Road Improvement Program projects were completed during the 2021/22 fiscal period, with approximately 85 municipal and provincial road authorities participating in the

[4] The ETEP Forward-Looking Review was conducted by KPMG to identify opportunities for efficiencies, evidence based practices to improve future delivery of ETEP practices. The report was filed as Appendix 8 B in the 2017 RRA.

Road Improvement Program. The number of projects completed in 2021/22 is less than the number forecasted as there can be some variability in the type and number of projects (in any given year) and the impacts of the COVID-19 pandemic may have contributed to a slowdown in infrastructure works with our road authority partners. A total of 58% of the Road Improvement Program funding was for projects in the Lower Mainland, Fraser Valley, and Sunshine Coast; and 42% was for projects throughout other parts of the province. Some preliminary project scoping work for the Road Improvement Program evaluation was completed in 2022 and the evaluation is planned to be completed by the end of the 2023 fiscal year.

33. The Road Improvement Program projects completed during the 2021/2022 fiscal period are described in Figure 8G.1 below:

Figure 8G.1 – Road Improvement Program Projects for 2021/2022

Program Type	% Budget
Intersection, roundabout and traffic control improvements	39
Road and highway corridor improvements	11
Infrastructure improvements for pedestrians, cyclists and school zones	26
Signing, pavement marking, delineation and rumble strips	8
Speed control measures, roadside and barrier improvements, traffic calming, safety studies, other	16
Total	**100**

C.3 INTERSECTION SAFETY CAMERA PROGRAM

34. Digital red light enforcement cameras are installed at 140 of the highest-risk intersections in 26 communities across the province, with 35 of these cameras also equipped to capture speed violations as described in Section B.2. All cameras are operating at 100% activation. The ISC program is administered as a partnership by ICBC, MPSSG, and the RCMP and is fully funded from revenue retained from traffic fines.

C.4 EDUCATION AND AWARENESS

35. The majority of ICBC’s road safety education and awareness activities align with the enforcement calendar of the British Columbia Association of Chiefs of Police. ICBC provides

support through media events, community activations, paid and social media, and other outreach tactics. This aligned approach helps the public make strong connections between enforcement and road safety education and awareness priorities.

36. While COVID-19 pandemic restrictions reduced the number of in-person activities, road safety advertising remained throughout this time to remind drivers on travelling safely when travel was necessary. As COVID-19 pandemic restrictions eased, ICBC re-adjusted its typical activities related to education and awareness campaigns. This included: resumption of live media launches with media spokesperson availability format; engaging in activities in communities involving Road Safety Community Coordinators; community outreach to pedestrians through providing reflectors as a reminder about walking safely in inclement weather; public presentations on GLP and safe driving tips; and distracted driving awareness events. The Road Safety Speaker program, which involves in-person presentations primarily to grade 12 students, also resumed throughout the province.

37. ICBC's primary education and awareness focus in 2021/22 was on distracted driving, speeding, and impaired driving as these are the top contributing factors recorded by police in fatal and serious injury crashes.

38. Figure 8G.2 below shows the number of fatal victims for the years 2017 through 2021 by top contributing factors, which are referenced in subsequent subsections. Impaired driving has been further broken down in Figure 8G.3 below to show the numbers for Impaired by Alcohol, by Drugs, and by Alcohol and Drugs.

Figure 8G.2 – Fatal Victims in Crashes by Top Contributing Factors – 2017 to 2021 and Five-Year Average [5]

Top Contributing Factors	2017	2018	2019	2020	2021	Average
Speeding	74	77	88	78	83	80
Distracted Driving	75	77	76	77	80	77
Impaired Driving[1]	72	66	61	55	66	64

[1] To prevent double counting, the number of fatalities due to Impaired Driving is calculated as the sum of fatal drivers Impaired by Alcohol and Impaired by Drugs or Medication minus those Impaired by Both Drugs and Alcohol as shown in Figure 8G.3.

C.4.1 SPEEDING

39. Speed is the top contributing factor in fatal crashes in BC. On average, 80 people are killed in speed-related crashes in BC each year.[6]

40. ICBC partners with the police and Government on an annual province-wide enforcement, education and awareness campaign in May. In 2022, advertising for the speeding campaign reminded drivers that you make mistakes when you go too fast. In addition, ICBC supported police enforcement activities with radio and digital advertising, reminding drivers that police are enforcing speed limits throughout the province.

41. The prevalence of speeding behaviours across BC is evident from the data collected at ISC locations across the province as referenced in Chapter 5, Road Safety, Section B.3 of the 2019 RRA. The ISC-SA project is one way Government, ICBC and police are addressing high-risk speeding behaviours. Information on the ISC-SA project is located in Section B.2.

42. Through the combination of the May education and awareness campaign, and support for enforcement efforts, both traditional and automated, ICBC continues to remind drivers that speed increases the chances of crashing, and the severity of crashes.

[5] https://www.icbc.com/about-icbc/newsroom/Documents/background-data.pdf.
[6] Based on 5-year average (2017-2021) of reports from the Traffic Accident System (TAS). The TAS is a reporting system which compiles reports from police attended motor vehicle collisions.

C.4.2 DISTRACTED DRIVING

43. Distracted and inattentive driving includes any activity that takes a driver's attention away from the driving task and accounts for an average of 77 crash fatalities each year or more than one in four fatal crashes in BC.[7]

44. The results of the most recent BC driver survey on distracted driving indicated an increased prevalence of using handheld devices among BC drivers. In March 2022, 43% of BC drivers surveyed admitted to using their mobile phones to talk or text at least some of the time while driving (up from 41% from the same survey in 2021). In addition, 89% of BC drivers believe it is highly risky to text while driving (down four points from 2021).

45. However, 39% of drivers also believe that it is highly likely they would be caught handling or holding their electronic device while driving (up two points from 2021). These findings indicated an increased prevalence of distracted driving behaviour as well as an increased awareness of being caught using an electronic device while driving. Included as Attachment 8G.2 is the most recent Distracted Driving BC Driver Study.

46. In order to reduce the prevalence of distracted driving in BC, the Government, police and ICBC continue to place a high priority on addressing this issue. ICBC conducts two month-long public education and awareness campaigns in March and September that coincide with province-wide enforcement campaigns that target mobile phone use while driving.

47. These campaigns feature paid multimedia advertising, community activations such as Cell Watch, and earned media, such as television, radio, and print interviews. In March 2022, ICBC launched a new advertising creative platform based on the concept of, "What are you missing when you're distracted?" to highlight the safety-critical signs that are missed when distracted by a mobile phone. ICBC continues to track driver perceptions, attitudes and self-reported behaviours in annual surveys.

C.4.3 IMPAIRED DRIVING

48. While the number of alcohol-related fatalities in BC has decreased over the past few years due to stronger legislative sanctions, an average of 64 people are killed each year in crashes involving impaired driving.[8]

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[7] See Figure 8G.2.
[8] 5-year average (TAS, 2017-2021).

49. ICBC conducts two annual impaired driving education campaigns, one in July from Canada Day through to the B.C. Day long weekend, and another in December during the holiday season. The purpose is threefold: to educate drivers on the risk of drinking and driving and offer strategies to reduce that risk, and also to support enforcement during July and December.

50. ICBC promotes enforcement activities through radio advertising and social and earned media including "Light up the Highways" to remind drivers that CounterAttack road checks are on and to plan ahead for a safe ride home.

51. ICBC's impaired driving educational campaign messaging reminded drivers they still needed a plan to get home safely if they planned on drinking. With the easing of restrictions or no restrictions on establishments serving alcohol, ICBC encouraged drivers with a pre-trip message to plan ahead and use a designated driver, take a taxi or rideshare or transit. A post-event message to drivers also highlighted that drinking and driving is dangerous and not worth the risk. This message was promoted through digital video channels such as YouTube, digital audio and social media including Facebook, Twitter and Instagram.

52. ICBC promotes its impaired driving messaging through partnerships with other organizations. ICBC partnered with the BC Lions to promote the "get home safe" message to fans during the pre-game and on-site during home games. ICBC is a provincial sponsor of Operation Red Nose which ran virtually in 2020 and 2021. In 2022, Operation Red Nose will again provide safe rides to drivers during the holiday period. ICBC offers free Special Event kits for any private or public event where alcohol is served to remind guests to get home safe.

53. ICBC continues to monitor the issue of drug-impaired driving. As shown in Figure 8G.3 below, there were 35 fatal victims in crashes in which drugs were identified as a contributing factor in 2021, above the 5-year average of 23 and below the numbers associated with alcohol. Less than half of the fatalities resulting from crashes where impairment by drugs was a factor, also involved alcohol impairment. ICBC will continue to observe the emerging issue of drug-impaired driving and continue to educate drivers on the effects of cannabis or other drugs and the ability to drive safely through messaging and drug-impaired driving infographics.

Figure 8G.3 – Fatal Victims in Impaired Driving Crashes by Type of Impairment – 2017 to 2021 and Five-Year Average

Type of Impairment	2017	2018	2019	2020	2021	Average
Impaired by Alcohol	64	57	53	40	36	50
Impaired by Drugs or Medication	25	15	17	21	35	23
Impaired by Both Alcohol and Drugs or Medication	17	6	9	6	5	9

C.5 PUBLIC DATASETS

54. In 2020, as part of an ongoing effort to increase transparency and improve access to data, ICBC began publishing large quantities of data on its website beginning with the extensive crash and vehicle population data. In 2021, ICBC expanded the sets by updating the existing datasets and adding data around contraventions. The driver licensing dataset, including active driver licenses and driver exam data, will be added in late 2022. These datasets can be found here: https://www.icbc.com/about-icbc/newsroom/pages/Statistics.aspx

55. Contraventions data is provided to the level of a single traffic violation issued under the Motor Vehicle Act, Motor Vehicle Act Regulation and Criminal Code of Canada. The data is separated by year and contravention category.

56. Crash data and vehicle population data are updated annually. The contravention dataset is updated at least twice a year to allow users access to more current data throughout the year. More information on data availability can be found here:

https://www.icbc.com/about-icbc/newsroom/Documents/background-data.pdf

57. None of the data fields contain personally identifiable information.

58. As more customers are able to serve themselves, the new data tools will help to reduce the impact of routine data requests while at the same time, improve customer experience.

D ROAD SAFETY STATISTICS

59. ICBC continues to collect and monitor crash statistics in order to inform and prioritize Road Safety programs and investments. The following section provides further explanation.

D.1 CRASH STATISTICS

60. ICBC compiles crash data continuously as crashes are reported by customers, through the claims process and by police when they attend crashes. In reporting these statistics, the numbers often change over time as information is updated.[9] ICBC reports crash data publicly through the public datasets discussed in Section B, as well as in ICBC Quick Statistics, both of which are updated annually.[10]

61. In accordance with the August 19, 2019 Decision on the 2019 RRA (Order G-192-19), ICBC was requested to continue reporting on crash frequency metrics and the Learner and Novice crash rate ratios in future RRAs, as presented in Figures 8G.4 and 8G.5 below.

62. In Figure 8G.4, ICBC has provided the most current numbers on crash frequency, which include out-of-province crashes. Crash frequency represents the number of crashes reported to ICBC per vehicle insured with ICBC. Figure 8G.4 shows the number of crashes and Policy Years Earned, and the crash frequency, from 2019 through 2021.

Figure 8G.4 – Crash Frequency Results

	Year		
	2019	**2020**	**2021**
Number of Crashes[(a)]	308,999	230,338	267,265
Policy Years Earned[(b)]	3,388,636	3,385,721	3,529,187
Crash Frequency	9.12%	6.80%	7.57%

[(a)] Crash counts include all crashes reported to ICBC, including out-of-province crashes, evaluated as of April 2, 2022.
[(b)] Policy Years Earned was evaluated as of August 31, 2022. Policy Years Earned excludes trailers and off-road vehicles. The definition of Policy Years Earned includes both Autoplan and manual basic. The 2021 RRA previously included Autoplan coverages only.

D.2 LEARNER AND NOVICE CRASH RATIOS

63. The learner and novice crash ratios are defined as the ratio of the new learner and new novice driver crash rates compared to the experienced driver crash rate (i.e., the new novice or learner driver rate divided by the experienced driver rate). Figure 8G.5 provides the ratios between the crash rates of new drivers compared to experienced drivers broken down by Learner and Novice.

[9] Crash statistics are reported to inform the public and improve accessibility.
[10] https://www.icbc.com/about-icbc/newsroom/Pages/Statistics.aspx

Figure 8G.5 – Learner and Novice Crash Ratios

Crash Ratios	2018	2019	2020	2021
Learner	0.17	0.16	0.21	0.22
Novice	1.50	1.40	1.16	1.72

64. Traffic volumes were lower due to travel restrictions during the COVID-19 pandemic, resulting in lower crash rates for new and experienced drivers in 2020 and 2021. While the learner crash ratio increased slightly, the learner driver crash rate continued to remain well below the experienced driver crash rate.

65. In 2021, the novice driver crash rate returned to pre-pandemic levels and the experienced driver crash rate remained low, thus resulting in an increased crash ratio for novice drivers. ICBC continues to educate new drivers through the Street Sense app, as described in Section B.4.

E DRIVER LICENSING ROAD SAFETY INITIATIVES AND MONITORING

E.1 GRADUATED LICENSING PROGRAM (GLP) REVIEW

66. The GLP enhancement analysis has been on hold since 2019 due to competing priorities, including MELT and addressing impacts related to the COVID-19 pandemic. A review of the six identified areas of potential enhancements is required to confirm or identify more appropriate potential future enhancements. The work resumed in November 2022.

E.2 MANDATORY ENTRY-LEVEL TRAINING (MELT) PROGRAM

67. The MELT program is an initiative led by the MOTI with support from ICBC, the Ministry of Public Safety and Solicitor General. The project to implement a MELT program for new commercial truck drivers was completed in December 2021. Since then, ICBC has been responsible for oversight of those driving schools providing MELT along with managing the operational and administrative system requirements for driver licensing applicants participating in BC’s MELT program.

F INVESTMENT AND FUNDING OF ROAD SAFETY INITIATIVES

68. This Section provides an overview of ICBC’s Road Safety programs and initiatives and their funding sources.

F.1 ONGOING ROAD SAFETY EXPENSES

69. Ongoing Road Safety expenses continue to be funded primarily by Basic insurance.[11] Figure 8G.6 outlines Road Safety actuals for FY 2019/20 to FY 2021/22 and the outlook for FY 2022/23.

Figure 8G.6 – Road Safety Program Expenses

Road Safety Program Expenses ($ Millions)	2019/20 Actuals[1]	2020/21 Actuals[1]	2021/22 Actuals[1]	2022/23 Outlook[1]
Enhanced Road Safety Enforcement	23.5	23.3	25.1	24.5
Road Improvements	8.4	8.0	8.4	8.1
Education and Awareness	1.1	1.7	1.8	2.5
Total Direct Expenses	32.9	33.0	35.4	35.2
Compensation	3.7	4.0	4.1	4.2
General Expenses	2.8	1.0	2.2	2.4
Total Road Safety Program Expenses	**39.4**	**38.0**	**41.7**	**41.8**
Total Road Safety FTEs	**29.0**	**29.1**	**28.6**	**29.7**

[1] Rounding may affect totals.

70. The Enhanced Road Safety Enforcement line item reflects costs under the Road Safety MOU and these costs in FY 2021/22 are $1.8 million higher than FY 2020/21 due to planning and leasing costs towards a Lower Mainland Integrated Road Safety Unit facility, as referenced in Appendix 7B, Road Safety, Section F.1.1 of the 2021 RRA.

71. For general expenses, the FY 2020/21 is $1.8 million lower than the FY 2019/20 as a result of the Government's decision to allow ICBC to retain costs out of the Traffic Fine Revenues remitted to the province for the ISC program, as referenced in Appendix 7B, Road Safety, Section F.1 of the 2021 RRA. This decision was effective from FY 2019/20. Recoveries of $ 2.8 million for 2019/20 and 2020/21 were recorded in FY 2020/21.

[11] The Integrated Municipal Provincial Auto Crime Team (IMPACT) and Bait Car program under the Road Safety MOU, and auto crime expenditures are allocated between Basic and Optional insurance as per the BCUC-approved financial allocation methodology. See Chapter 8, Appendix 8D, Cost Allocation Tables.

F.1.1 THE ROAD SAFETY MOU: ENHANCED ROAD SAFETY ENFORCEMENT

72. The Road Safety MOU represents ICBC's single largest road safety investment. Funding for the Road Safety MOU is provided from Basic insurance in accordance with *Special Direction IC2* as amended by Order in Council 666/22, December 12, 2022 (B.C. Reg. 269/2022).

73. The current Road Safety MOU will expire on March 31, 2023. A new Road Safety MOU has been established for a 3-year term beginning April 1, 2023 and ending on March 31, 2026. The total amount payable by ICBC under the new Road Safety MOU is $25.6 million in FY 2023/24, $26.6 million in FY 2024/25 and $27.4 million in FY 2025/26. The Road Safety MOU provides funding for the continuation of existing program funding. Costs relating to the Integrated Traffic Camera Unit, previously funded under prior MOUs, are funded from the Traffic Fine revenue retained from Traffic Fines.

F.1.2 ROAD IMPROVEMENT PROGRAM

74. ICBC's Road Improvement Program was the second largest road safety investment in FY 2021/22, with $8.4 million contributed to infrastructure projects aimed to reduce the frequency and/or severity of crashes.

F.1.3 EDUCATION AND AWARENESS CAMPAIGNS

75. As discussed in Section C.4, ICBC focused its investments on distracted driving, speeding and impaired driving. The education and awareness outlook for FY 2022/23 is $0.7 million higher than actuals for FY 2021/22 as more community-focused activities such as in-person Road Safety speaker presentations begin again, as well as program expenses to be incurred in the remainder of FY 2022/23.

G CONCLUSION

76. ICBC and government partners have continued their collaboration on several significant road safety initiatives that reaffirm ICBC's and the Government's commitment to reducing crashes, injuries and fatalities, and the toll they have taken on the lives of British Columbians and the auto insurance rates that they pay. ICBC and its partners will continue to put a focus on successfully implementing and evaluating these new initiatives, and also acknowledge the need to sustain its existing Road Safety programs while also planning for the future.

Attachment 8G.1 – Traffic and Road Safety Law Enforcement Funding Memorandum of Understanding

TRAFFIC AND ROAD SAFETY LAW ENFORCEMENT FUNDING MEMORANDUM OF UNDERSTANDING

This AGREEMENT is dated for reference April 1, 2023

BETWEEN:

INSURANCE CORPORATION OF BRITISH COLUMBIA,
151 West Esplanade
North Vancouver, British Columbia,
V7M 3H9

(“ICBC")

AND:

GOVERNMENT OF BRITISH COLUMBIA, AS REPRESENTED BY THE MINISTER OF PUBLIC SAFETY AND SOLICITOR GENERAL
Province of British Columbia
PO Box 9285, Stn Prov Govt
Victoria, BC V8W 9J7

(“MPSSG”)

WHEREAS

A. ICBC and the Government of British Columbia, as represented by the Minister of Public Safety and Solicitor General, entered into Traffic and Road Safety Law Enforcement Funding Memoranda of Understanding dated December 2, 2003, January 1, 2009, January 1, 2010, April 1, 2012, April 1, 2015, April 1, 2017, and April 1, 2020, and

B. ICBC and MPSSG agreed to continue their partnership on road safety by entering into a new memorandum of understanding for enhanced traffic enforcement focussing on the leading contributing factors of crashes that result in injuries or fatalities (e.g., distracted driving, high risk driving behaviours at intersections, impaired driving, speeding, etc.) and in alignment with the BC Road Safety Strategy, 2025, as amended from time to time,

THEREFORE the parties agree as follows:

INTERPRETATION

1. In this Memorandum of Understanding (MOU) each of the following terms shall, unless the context otherwise requires, have the meaning set out beside it.

   "Fiscal Year" means the period beginning on April 1 in any calendar year and ending on March 31 in the next calendar year.

   "Governance Council" means the governance council set up in accordance with previous memoranda of understanding, and which is maintained by MPSSG including representatives from MPSSG, the Police and ICBC.

   "Police" means the Royal Canadian Mounted Police "E" Division and those municipal police departments listed in section 1.1 of the *Police Act*, R.S.B.C. 1996, c. 367.

   "Program" means the MPSSG's Traffic and Road Safety Law Enforcement Program which is comprised of the elements set out in Schedule "C".

   "Provincial Emergency" means a "disaster" or "emergency" as defined in the *Emergency Program Act*, RSBC 1996, c. 111.

   "Term" means the term and any extension of this MOU as set out in paragraph 18.

   "Working Group" means a working group established by the Governance Council and includes representatives from MPSSG, the Police, and ICBC.

2. Nothing in this MOU shall be interpreted as limiting in any way the jurisdiction, authority or responsibilities of MPSSG in respect of policing and law enforcement in the Province of British Columbia, under any applicable federal or provincial statutes, or at common law. Nothing in this MOU is intended, or shall be interpreted, as conferring on ICBC policing or law enforcement authority, or the authority to direct police in operational matters.

3. To the extent that any orders, decisions or directions of the British Columbia Utilities Commission (BCUC) made pursuant to its jurisdiction with respect to ICBC under Part 2 of the *Insurance Corporation Act*, and any obligations that ICBC may have under the foregoing legislation affect ICBC's obligations or performance under this MOU, this MOU is amended to the extent necessary to reflect such orders, decisions or directions.

4. Subject to
   (a) direction being given to the BCUC by regulation effective during any portion of the Term of this MOU, including any extensions, where the BCUC must ensure that ICBC is permitted to collect sufficient revenue to recover, as

part of its basic insurance premiums, the amounts payable by ICBC under this MOU, and

(b) the terms and conditions of this MOU,

ICBC agrees to pay MPSSG for delivering the Program in accordance with the provisions of this MOU.

5. MPSSG agrees to use funds received under this MOU for the sole purpose of delivering the Program.

6. Subject to paragraphs 4 (*BCUC direction*), 7 (*quarterly payments*), 8 *(actual Program costs and reimbursement)*, 10 *(financial report)*, 12 *(public awareness and advertising)*, and 16(b) (*Operational Plan*), ICBC will pay MPSSG for actual Program costs up to the maximum amounts as follows:

   (a) For the Fiscal Year 2023/2024, the sum of **$25,551,800** less
      i. the amount ICBC spends for the Fiscal Year on Publicity for the Program, and
      ii. any other recoveries that become funded by another source;

   (b) For the Fiscal Year 2024/2025, the sum of **$26,588,665** less
      i. the amount ICBC spends for the Fiscal Year on Publicity for the Program, and
      ii. any other recoveries that become funded by another source; and

   (c) For the Fiscal Year 2025/2026, the sum of **$27,447,962** less
      i. the amount ICBC spends for the Fiscal Year on Publicity for the Program, and
      ii. any other recoveries that become funded by another source.

7. In each Fiscal Year of the MOU, ICBC will pay MPSSG

   (a) for the first quarter, by June 30;
   (b) for the second quarter, by September 30;
   (c) for the third quarter, by December 31; and
   (d) for the final quarter, by March 31.

8. If payments made by ICBC exceed the actual Program costs

   (a) for the 2023/24 Fiscal Year, ICBC will deduct the difference from the September 30, 2024 installment.
   (b) for the 2024/2025 Fiscal Year, ICBC will deduct the difference from the September 30, 2025 installment.
   (c) for the 2025/2026 Fiscal Year, MPSSG will reimburse ICBC the difference by September 30, 2026.

9. MPSSG will advise ICBC of the actual Program costs by providing financial management reports:

   (a) for the 2023/24 Fiscal Year by September 15, 2024;
   (b) for the 2024/25 Fiscal Year by September 15, 2025; and

(c) for the 2025/26 Fiscal Year by September 15, 2026.

10. In each Fiscal Year during the Term, MPSSG will provide a report to ICBC containing the information described in Schedule “A” setting out actual amounts spent by MPSSG on the Program as follows:
    (a) first quarter financial report by September 30,
    (b) second quarter financial report by December 31,
    (c) third quarter financial report by April 30,
    (d) final quarter financial report by June 30.

11. In the event of a Provincial Emergency, MPSSG or the Police may, in their absolute discretion, immediately reassign constables/members to other duties. In this event the costs normally attributable to this MOU shall revert to MPSSG or the Police, as the case may be, for the period of the reassignment.

12. ICBC will develop and pay up-front the costs of all public awareness and advertising campaigns (the “Publicity”) to publicize the Program, but will not release any Publicity without the prior approval of MPSSG. MPSSG, with input from ICBC, will determine the Publicity budget for each calendar year.

13. During the Term, ICBC will provide MPSSG with quarterly updates to the Traffic Accident System at no cost and will make reasonable efforts to accommodate additional requests for information in a timely manner. All policy and procedures governing access to this system currently in place between ICBC and Police will continue without change, unless agreed to by the parties in writing. “Traffic Accident System” (TAS) means the compilation and maintenance of information on all traffic collisions in the province that are reported by the Police, using the Traffic Accident Police Investigation Report (MV6020).

14. MPSSG will continue to maintain the Governance Council which will continue to include representatives from MPSSG, the Police and ICBC.

15. Any projected budget line item underspending planned to be transferred to another budget line item will require the approval of the Governance Council if the amount meets or exceeds the following:
    (a) for budget line items within the RoadSafetyBC Road Safety Unit budget - $50,000,
    (b) for all other budget line items within the administrative budget of MPSSG - $200,000.

16. MPSSG will prepare and provide to the Governance Council, with a copy to ICBC:
    (a) within 60 days of the end of the previous quarter, quarterly statistical reports that include the information listed in Schedule “B”, and
    (b) prior to the start of each Fiscal Year, and in consultation with the Governance Council, an Operational Plan.

17. MPSSG will also prepare and provide to the Minister of MPSSG, for distribution to the public and ICBC, an annual report on the Program in the form and manner requested by the Minister, by September 30th of the following calendar year.

18. Despite the date of execution, the Term of this MOU commences April 1, 2023 and ends March 31, 2026 with an option to renew for one year, subject to approval by the Chair of Treasury Board prior to the parties signing such an amendment, extension or renewal.

19. Notwithstanding any extension or renewal in accordance with paragraph 18, the parties agree to establish, by June 30, 2023, an Enhanced Traffic Enforcement Program (ETEP) working group to conduct projects as assigned by the Governance Council, which may include reporting and recommendations within the Term of this MOU.

20. Any notice, invoice or payment that is required by this MOU, will be given in writing and delivered by person, courier or registered mail as follows:

To MPSSG:	To ICBC:
Frances Sasvari	Lindsay Matthews
A/Assistant Deputy Minister and Superintendent of Motor Vehicles	Vice President Public Affairs & Driver Licensing
PO Box 9254 Stn Prov Govt	151 West Esplanade Street
Victoria, BC V8W 9J7	North Vancouver, BC V7M 3H9

21. Despite paragraph 20, payments required by this MOU may be made by electronic transfer of funds.

22. In the event that an issue arises with respect to the interpretation of this MOU, or in the event that an issue arises which is not covered by this MOU, the issue will be referred first to the Assistant Deputy Minister of RoadSafetyBC, Assistant Deputy Minister and Director of Police Services, Policing and Security Programs, MPSSG and the Director, Road Safety ICBC for resolution. Should the issue remain unresolved the issue will be referred to Deputy Solicitor General, MPSSG and the President and CEO, ICBC for resolution.

[The remainder of this page is intentionally blank]

23. This MOU may be executed in counterparts and may be scanned and delivered by electronic transmission to the parties at such email addresses as each party provides to the other, and each counterpart when so executed, delivered and received shall be deemed an original, and all such counterparts shall together constitute one and the same document.

The parties have caused the MOU to be signed by their duly authorized representatives as of the date first set out above.

For ICBC:

November 16, 2022

Nicolas Jimenez
President and CEO
Insurance Corporation of British Columbia

Date

For MPSSG:

November 21,2022

Douglas Scott
Deputy Solicitor General
Ministry of Public Safety and Solicitor General

Date

SCHEDULE A

Content of Quarterly Financial Reports

1. For each of the following:
    - RoadSafetyBC Road Safety Unit (RSBC RSU)
    - RCMP Headquarters Administration
    - Integrated Road Safety Unit (one section for each IRSU)
    - Enhanced Road Safety Enforcement Initiative

    Show the actual expenditures incurred for:
    - Compensation
    - BCACP Traffic Safety Committee Administration (RSBC RSU only)
    - Enhanced Police Training (RSBC RSU only)
    - Purchased equipment
    - Special Projects
    - Travel
    - Professional Services
    - Building Operating Expenses
    - Other General Expenses
    - TOTAL

2. Other Policing Expenses
    - Actual expenses incurred
    - TOTAL

3. Average FTE Count compared to planned amount for each function described above

    Show the quarterly actual expenses versus the planned year to date amount

    Show the forecast for the yearly program expenditures

4. Show the total FTE count and cost for MOU funded resources redeployed due to Provincial Emergency callouts, including the fiscal quarter when the redeployment occurred and when reimbursement, if any, was received.

SCHEDULE B
Quarterly Statistical Reports

Information for each Integrated Road Safety Unit (IRSU), as well as enforcement conducted under the MOU-supported Enhanced Road Safety Enforcement Initiative (ERSEI) relating to the total number of tickets, warnings, actions and charges laid, organized by:

- month in which activity was carried out
- total number of officers and/or hours involved in carrying out related enforcement
- the following offence types rolled up into categories 1 through 24 (***note***: some categories are specific to unit):
    1. Intersection
        - Disobey traffic light
        - Fail to stop
        - Fail to yield
        - Improper right/left turn infractions
        - Other intersection infractions
    2. Speeding – unsafe speed
        - Speeding-construction zone
        - Speeding-playground
        - Speeding-school zone
        - Speeding-relative to conditions
        - Speeding general
    3. Speeding – excessive vehicle impound
    4. Seatbelt
        - Booster seat
        - Child restraints
        - Defective/removed
        - Seatbelt general
    5. Alcohol ADP
        - Alcohol ADP without impaired charge
    6. Alcohol – impaired charge
        - Alcohol – ADP with impaired charge
        - Alcohol – Chg impaired/ over/ refusal
    7. Alcohol – 24 hour prohibition
    8. Commercial vehicle
    9. Criminal interdiction
        - Criminal Code
        - Criminal Code – cash seized
        - Criminal Code – property seized
        - Criminal Code – weapons seized
        - Drug-Chg possession
        - Drug-Chg trafficking
        - Drug-No case seizure
        - Drug-Other
        - Drug investigation-cash seized

- Drug investigation-property seized
- Drug investigation-weapons seized
- Other Fed Act – cash seized
- Other Fed Act – property seized
- Other Fed Act – weapons seized

10. Vehicle defect ***(ERSEI only)***
11. Drugs – impaired charge
    - Drug – ADP with Impaired charge
    - Drug – ADP without impaired charge
    - Drug – Chg impaired/over/refusal
12. Drugs – 24 hour prohibition
13. IRP – 3 day prohibition without vehicle impound
14. IRP – 3 day prohibition with vehicle impound
15. IRP – 7 day prohibition without vehicle impound
16. IRP – 7 day prohibition with vehicle impound
17. IRP – 30 day prohibition
18. IRP – 90 day prohibition fail
19. IRP – 90 day prohibition refuse
20. Use of electronic device
21. Other Criminal Code ***(ERSEI only)***
22. Other moving ***(ERSEI only)***
23. Other non-moving ***(ERSEI only)***
24. Other ***(IRSU only)***

SCHEDULE C
Traffic and Road Safety Law Enforcement Program

This Schedule sets out the elements comprising the enhanced traffic and road safety law enforcement activities in the Program. Setting out the elements does not imply a commitment by ICBC to fund the Program beyond the amounts set out in the MOU or for a duration longer than the Term of the MOU.

The elements are as follows:

1.0 Initiatives

1.1 **Integrated Road Safety Units (IRSU):** the IRSU initiative currently consists of 19 integrated enforcement units (with combined RCMP and independent municipal police membership) based throughout the province dedicated to reducing injuries and fatalities through enhanced traffic enforcement of leading causes of crashes that result in injuries or fatalities (e.g. distracted driving, high risk driving behaviours at intersections, impaired driving, speeding, etc.). They are an enhancement to regular baseline police traffic enforcement. The MOU funds the operations of these units, including personnel, equipment, and related administrative costs.

1.2 **Integrated Municipal Provincial Auto Crime Team (IMPACT) & Bait Car:** IMPACT is an integrated, enhanced enforcement initiative focused on reducing the incidence of auto crime throughout BC. The MOU funds the operations of this unit, including personnel, equipment, and related administrative costs, and will be funded by universal compulsory vehicle insurance monies, except for the portion of the amount payable for the IMPACT part of the Program that, ICBC will pay out of its optional insurance monies based on the Comprehensive Coverage – Market Share cost allocator attributed to auto crime expenditures.

1.3 **RCMP Enhanced Road Safety Enforcement Initiative (ERSEI)/Independent Police Agency Counterattack overtime:** The MOU funds, when the budget permits, overtime costs for both the RCMP and independent police agencies to support special or periodic enhanced traffic enforcement projects. Those projects primarily involve impaired driving campaigns but can also include other types of enforcement (e.g., distracted driving, high risk driving behaviours at intersections, impaired driving, speeding, etc.)

2.0 Support Initiatives

2.1 **Road Safety Unit (RSU):** The RSU manages the Program on behalf of the Ministry of Public Safety and Solicitor General, providing policy direction and financial oversight. It conducts program evaluations, develops operations plans and annual reports, and compiles and delivers all statistical reports related to the MOU. The MOU funds the operations of this unit, including personnel and administrative costs. Through the RSU, the MOU also provides funding to and secretariat support for executive and general meetings of the BC Association of Chiefs of Police Traffic Safety Committee.

2.2 **Enforcement programs publicity:** As provided for in paragraph 12 *(public awareness and advertising)* of this MOU, no more than $600,000 of the annual Program budget is directed towards media initiatives that promote enhanced enforcement campaigns. ICBC manages these initiatives, augmenting this MOU amount with additional funds it provides directly each year.

2.3 **Training:** The MOU provides funding to the Justice Institute of BC for some specialized enhanced traffic-related training for independent municipal police officers assigned to an IRSU. The courses funded primarily include basic traffic accident reconstruction and the use of breathalysers.

Attachment 8G.2 – Distracted Driving BC Driver Study

DISTRACTED DRIVING

Spring 2022 Wave

31 May, 2022

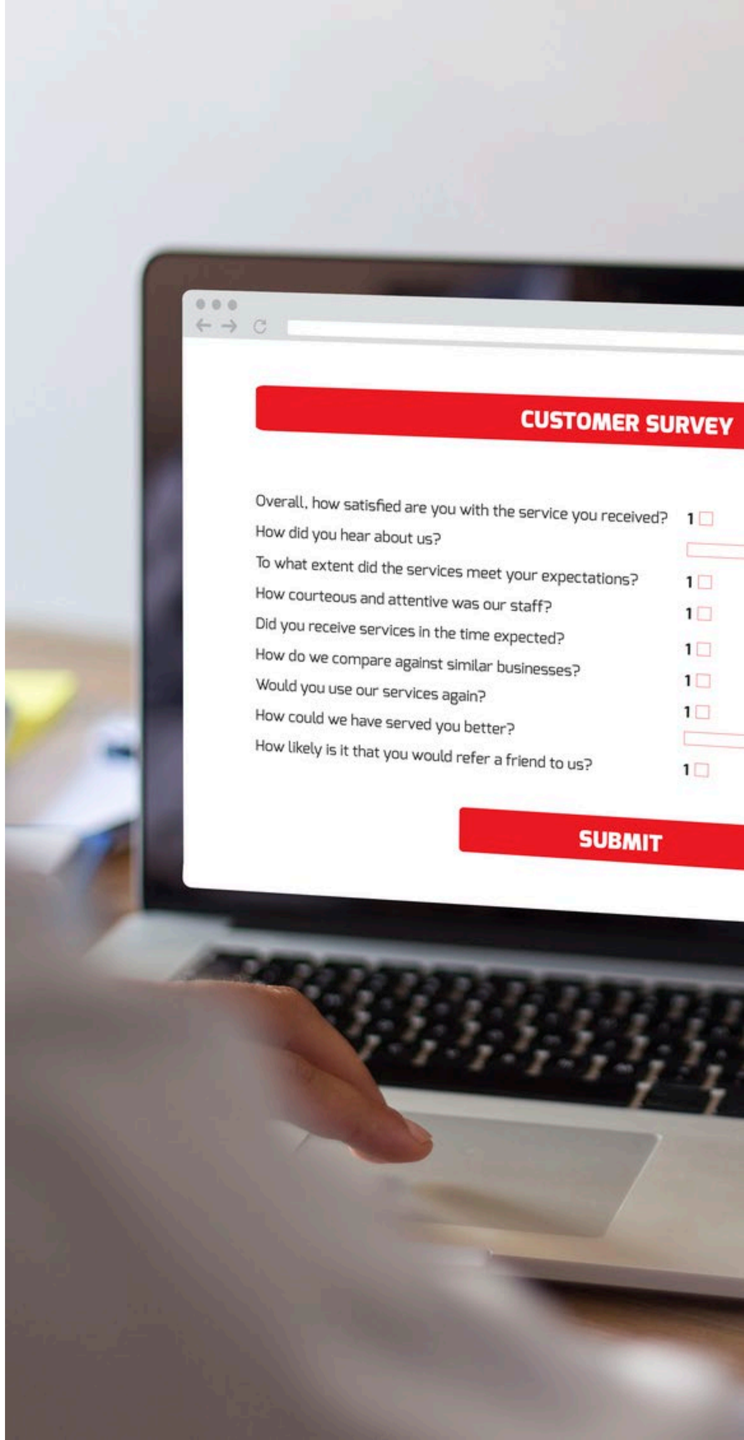
Introduction

METHODOLOGY

- These are the findings from the 2022 Spring wave of the Road Safety Tracking Study (RSTS)/BC Driver Study. For this wave,1001 interviews were conducted online between April 1 and April 25, 2022.
- The precision of Ipsos online surveys is measured using a credibility interval. In this case, the results are accurate to within ±3.5 percentage points, 19 times out of 20, had all British Columbia drivers been interviewed. The credibility interval will be wider among subsets of the population.
- These data have been weighted to reflect the actual age, gender and regional composition of ICBC's customer base age 18+.

INTERPRETING RESULTS

- In the tables presented throughout this report, each column going from left to right across the tables is denoted by a letter in sequential order; A, B, C etc. If one or more of these letters appears beside a percentage figure it means that this percentage is significantly different to the percentage in the designated column(s). For instance, if a particular result (e.g. strongly agree) in column C has letters 'A' and 'B' beside it, this means that in this example 'strongly agree' in column C is statistically higher than those in columns 'A' and 'B'.
- Subgroup differences (age, region and gender) are presented within the text commentary. Results that are higher or lower than average have bold font for example [**Men 49%,** Women 22%]. The bold result indicates that this result among men is statistically higher than among women. Where a result is 15% or less, and it is not a major finding, subgroup differences (even if significant) are not emphasized.
- Please note that some totals in this report may seem off due to rounding. For example, 35% and 24% might be presented in this report as a sum of 60% (not 59%). With decimals, the component percentages might be 35.4% (rounds down to 35%) and 24.2% (rounds down to 24%), making the total 59.6%, which rounds up to 60%. All percentages shown are correct.




SUMMARY

Summary

BC DRIVERS MAINTAIN GENERALLY POSITIVE ATTITUDES AND BEHAVIOURS TOWARD DISTRACTED DRIVING.

Below we list some of the higher scoring positive measures:

- 89% of BC drivers believe it is highly risky to text while driving, including 70% categorizing this behavior as 'extremely risky'. 81% believe it is highly risky to talk while holding a cell phone and driving, including 49% categorizing this behavior as 'extremely risky'. Further, 73% consider looking at a display screen to be highly risky.
- 87% would feel ashamed if people knew they texted when driving and 86% would feel ashamed to some extent if people knew that they talked on the phone when driving (100% minus those who say "not at all agree" = agree to some extent).
- 74% believe that employers should have policies around electronic device use when employees are driving for work.
- 74% are highly uncomfortable as a passenger if the driver is texting while driving and 70% are uncomfortable if a driver is talking on the phone without a hand-free system while driving.
- 65% are highly uncomfortable if a driver is talking on the phone while the vehicle is stopped and 64% are highly uncomfortable if the driver is texting while stopped.
- Correspondingly, 62% consider talking on the phone while stopped to be highly risky. Likewise, 62% consider texting to be highly risky even when stopped at a red light or at a stop sign.
- 56% are highly comfortable speaking up against a driver who is texting when driving and 51% are highly comfortable speaking up against a driver who is talking on the phone while driving.
- 62% of drivers believe the penalties for distracted driving are about right and an additional 29% say they can be even tougher.
- 59% believe that they have heard a distracted driving related slogan in the past month. The most recalled message is "Leave your phone alone" which was recognized by 39%.
- 45% believe it is highly likely they would be caught if talking on their phone while driving and 45% believe it is highly likely they would be caught if texting on their phone while driving. Meanwhile 39% believe it is highly likely they would be caught if handling or holding their electronic device while driving.

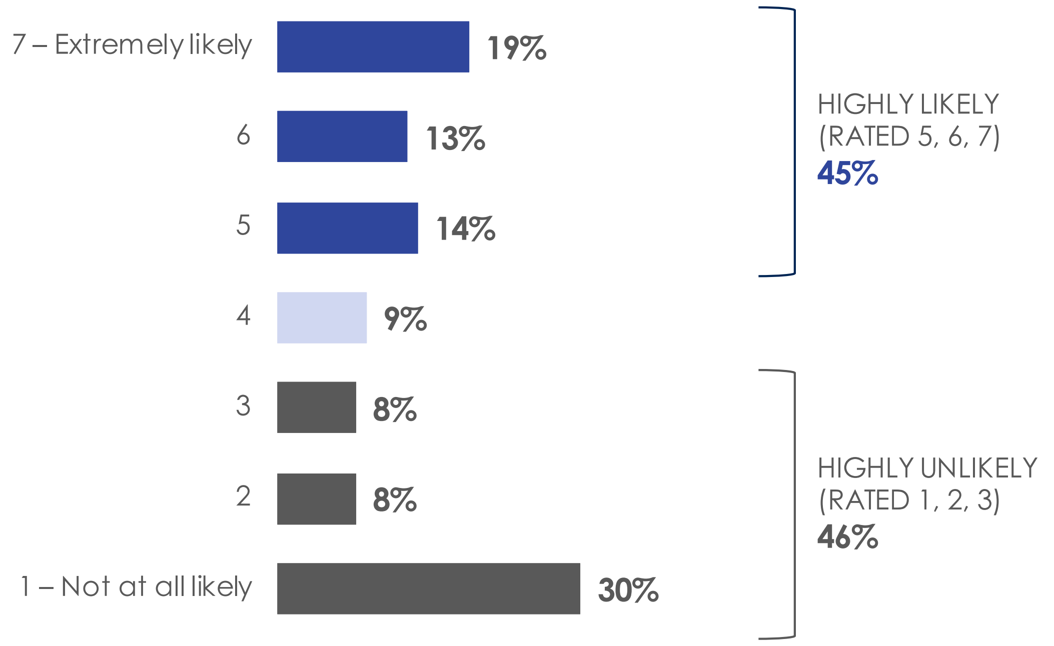
Summary (cont.)

And some of the relatively negative results are listed below:

- 76% of BC drivers are not fully aware of the penalties of distracted driving. Awareness of the penalties is low, with only 24% who know the fine and penalty points cost of being caught using a hand-held device while driving.
- 73% of BC drivers acknowledge that recently they have had occurrences of taking their eyes off the road even if for a second. The most common distraction (mentioned by 51%) is making adjustments on the console (heat/air, vents, radio etc.).
- 69% agree to some extent that people they care about talk on their phone while driving, and 60% agree to some extent that people they care about text while driving. [100% minus those who say "not at all agree" = agree to some extent]
- 59% agree to some extent that it is sometimes perfectly safe to talk on the phone while driving. 42% agree to some extent that it sometimes perfectly safe to text while driving. [100% minus those who say "not at all agree" = agree to some extent]
- 41% anticipate using their phone to talk or text if they are stopped at an intersection in the next week. 36% anticipate using their phone to talk or text if they are in slow, congested traffic. While lower than the first scenarios, some drivers also anticipate using their phone while driving at night (25%), with passengers (25%) and/or if in fast-moving traffic (20%). [Anticipate using the phone is defined by choosing any answer choice other than "not at all likely" to use the phone]
- 43% of drivers say they use their phone at least 1 out of every 10 trips.
- 21% of BC drivers admit to texting while driving within the past month.
- 19% of BC drivers admit to talking on their cell phone without the use of a hands-free device within the past month.


ATTITUDES

Likelihood of Being Caught Using Phone (for Talking)



- Overall, 70% of BC drivers think there is <u>some</u> likelihood of being caught if talking on a hand-held phone while driving. In contrast, 30% say it is <u>not at all likely</u> to be caught if talking on a hand-held cell phone while driving.
- Under half (45%) believe it is highly likely (5, 6 or 7 out of 7) that they would be caught if talking on a hand-held cell phone while driving.

  Highly likely [**Men 49%**, Women 42%] [Age: 18-25 37%, **26-50 50%**, 51-65 40%, 66+ 45%]

TRENDED RESULTS

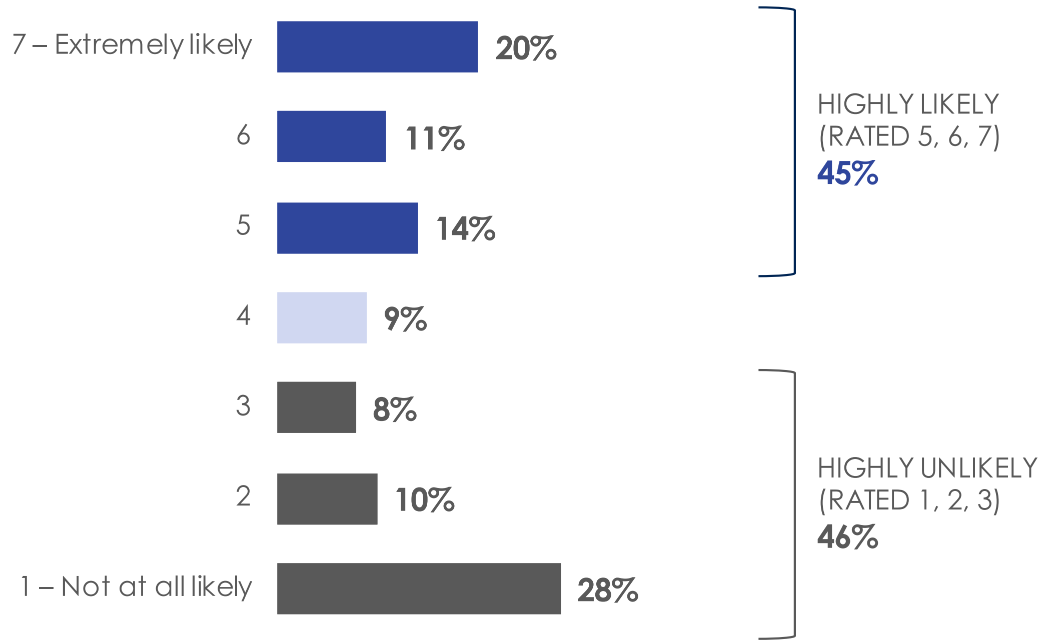
- Perceptions of the likelihood of being caught tend to vary. Over the course of this study, we have seen a range of 19 pts from a low of 30% saying highly likely to a high of 49% saying highly likely. This wave falls within that range as well and is higher than some waves and lower than others.
- Reasons for the range can include 1) respondents don't engage in the behaviour and consequently say it is not likely to be caught 2) respondents feel they know how to get around being caught and/or 3) poor perceptions of enforcement.

	OCT 2012	DEC 2012	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1005 B	1192 C	1066 D	1047 E	1002 F	1129 G	1001 H	1004 I	1000 J	1003 K	1000 L	1125 M	1000 N	1000 O	1000 P	1001 Q	1000 R
% Highly likely (5, 6, 7)	**43%** DEFG	**44%** DEFG	**40%** DEFG	**34%**	**33%**	**30%**	**32%**	**40%** DEFG	**41%** DEFG	**44%** DEFG	**44%** DEFG	**46%** CDEFG HI	**46%** CDEFG HI	**43%** DEFG	**47%** CDEFG HI	**44%** DEFG	**49%** ABCDE FGHIJK NP	**45%** CDEFG H
% Unlikely (1, 2, 3)	**55%** BCHIJKL MNOP QR	**39%** PR	**48%** BOQ	**52%** BJKLNO PQR	**60%** ABCDHI JKLMN OPQR	**61%** ABCDHI JKLMN OPQR	**61%** ABCDHI JKLMN OPQR	**50%** BLOQ	**50%** BLOQ	**47%** BQ	**47%** Q	**44%** B	**48%** BOQ	**47%** BQ	**43%**	**46%** B	**43%** B	**46%** B

Base: All respondents (n=1000)
Q7a. How likely do you think it is that you would get caught if you were talking on a hand-held cell phone while driving? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P/Q/R denotes a significant difference at the 95% confidence interval.

Likelihood of Being Caught Using Phone (for Texting)



- In total, 72% of BC Drivers think there is some likelihood of being caught for texting while driving. In contrast, 28% say it is not at all likely that they would be caught if texting while driving.
- Just like with talking on the phone while driving, under half (45%) believe it is highly likely (5, 6, or 7 out of 7) that they would be caught if *texting* while driving.

  Highly likely [**Men 50%**, Women 41%] [Age: 18-25 36%, **26-50 50%**, 51-65 41%, 66+ 44%]

TRENDED RESULTS

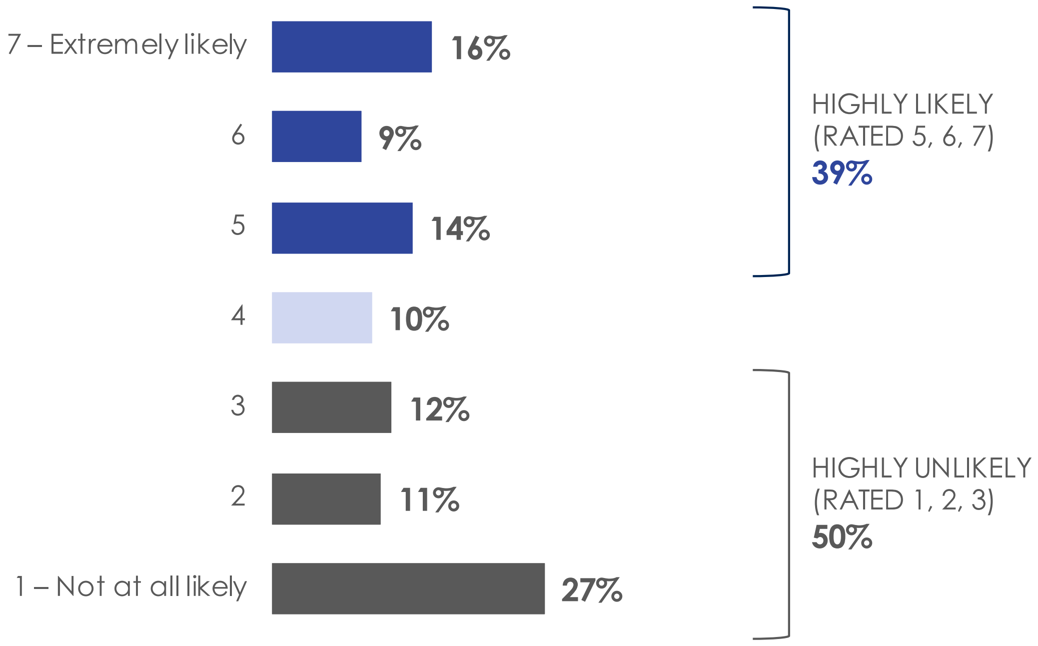
- Over the past few years there has been incremental increases in the proportion who believe it is highly likely that they would be caught if texting while driving. While there is modest improvement wave to wave, when stepping back we can see that there has been marked improvement overall since the early years of this measure.
- Today's rating of 45% is a notable improvement over 2015 to 2017 results.

	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1047 A	1002 B	1129 C	1001 D	1004 E	1000 F	1003 G	1000 H	1125 I	1000 J	1000 K	1000 L	1001 M	1000 N
% Highly likely (rated 5, 6, 7)	**31%**	**29%**	**31%**	**38%** ABC	**39%** ABC	**42%** ABC	**43%** ABCD	**45%** ABCDE	**46%** ABCDE	**42%** ABC	**47%** ABCDEFJL	**42%** ABC	**45%** ABCDE	**45%** ABCDE
% Unlikely (rated 1, 2, 3)	**60%** DEFGHIJO LMN	**63%** DEFGHIJO LMN	**61%** DEFGHIJO LMN	**52%** GHIOLMN	**52%** GHIOLMN	**48%** O	**47%**	**45%**	**46%**	**48%** O	**43%**	**46%**	**45%**	**46%**

Base: All respondents (n=1000)
Q7b. How likely do you think it is that you would get caught if you were texting while driving? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D/E/F/G/H/I/J/K/L/M/N denotes a significant difference at the 95% confidence interval.

Likelihood of Being Caught Holding or Handling Device While Driving



	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1001 C	1000 D
% Highly likely (rated 5, 6, 7)	**41%**	**37%**	**43%** B	**39%**
% Unlikely (rated 1, 2, 3)	**36%**	**50%** A	**46%** A	**50%** A

- Overall, 73% of BC drivers think there is some likelihood of being caught if holding or handling an electronic device while driving. In contrast, 27% say it is not at all likely that they would be caught if handling a device while driving.
- Just over one-third (39%) of BC drivers believe it is highly likely (5, 6 or 7 out of 7) that they would be caught if holding or handling an electronic device while driving.

  Highly likely [Age: 18-25 27%, **26-50 45%**, 51-65 34%, **66+ 39%**]

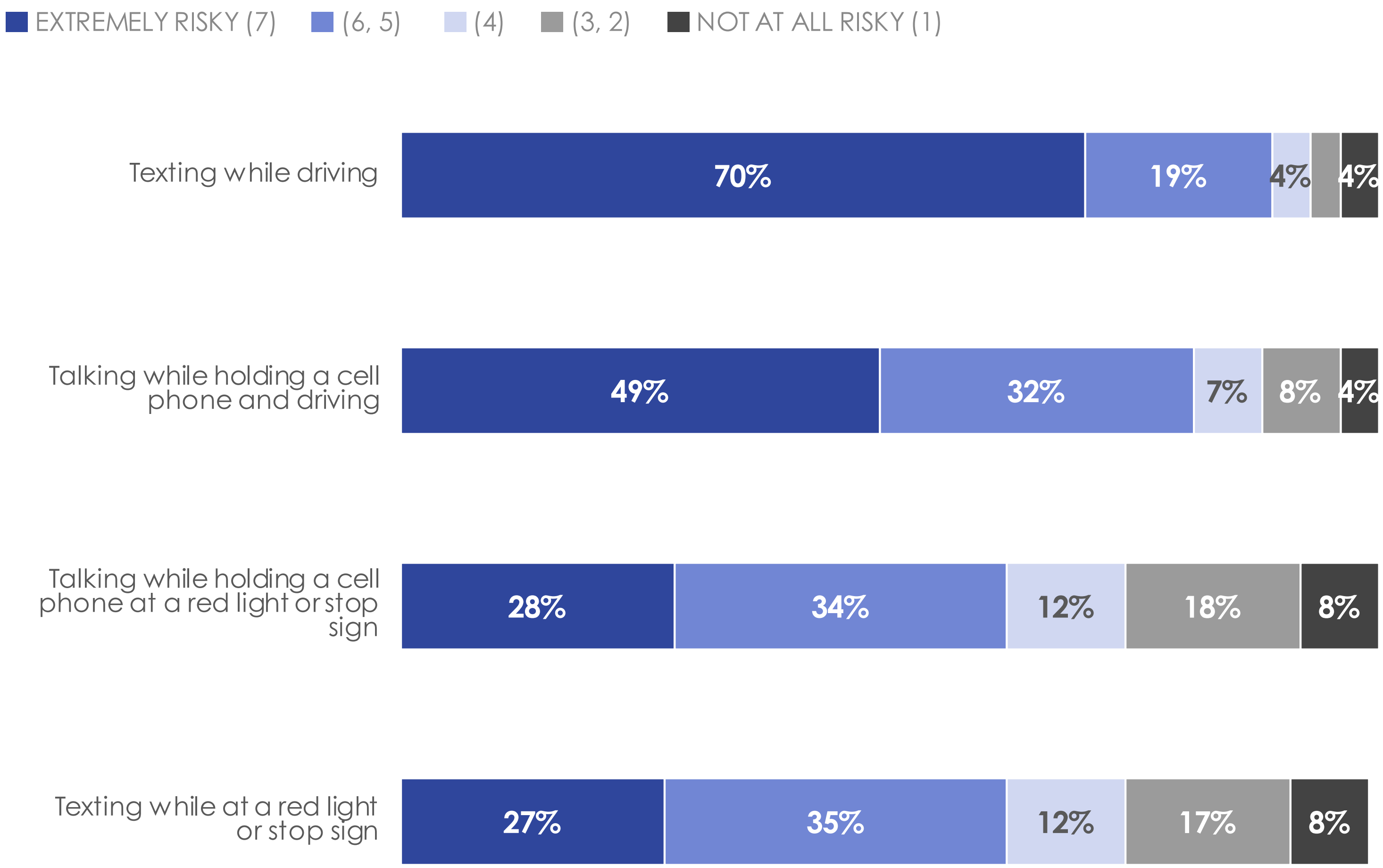
TRENDED RESULTS

- Following a slight uptick during the Nov. 2021 wave, there has been a significant 4 ppt dip in highly likely ratings (rating 5, 6 or 7 out of 7). Today's result however is still consistent with Fall 2020 and Spring 2021.
- Since the spring of 2021, the proportion who feel it is highly unlikely to be caught has remained consistent.

Base: All respondents (n=1000)
Q7c. How likely do you think it is that you would get caught if you were handling or holding an electronic device while driving? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D denotes a significant difference at the 95% confidence interval.

Perceived Risk of Talking or Texting While Driving



As seen in past waves, fewer BC Drivers consider it to be risky to use an electronic device while ***stopped*** at a red light or stop sign than to use a device while ***driving***.

For all behaviours measured, there is a notable difference between younger drivers (age 18 to 25) and all other drivers. This group is less likely to consider each of these behaviours to be highly risky.

- Nearly all (89%) BC Drivers consider ***texting*** while driving to be highly risky (rated 5, 6 or 7 out of 7), this includes 70% who consider it 'extremely risky'.

  Highly Risky [**18-25 77%,** 26-50 86%, 51-65 97%, 66+ 97%] [Lower Mainland 87%, **Outside Lower Mainland 92%**]

- Following closely, 81% consider ***talking*** while holding a cell phone and driving to be highly risky, this includes 49% who consider it 'extremely risky'.

  Highly Risky [Men 78%, **Women 84%**] [**18-25 62%,** 26-50 79%, 51-65 87%, 66+ 93%]

- Notably fewer (62%) consider ***talking and holding a phone while stopped*** to be highly risky (28% consider it 'extremely risky').

  Highly Risky [Men 59%, **Women 66%**] [**18-25 39%,** 26-50 62%, 51-65 66%, 66+ 77%]

- And 62% consider ***texting while stopped*** at a red light or stop sign to be highly risky (27% consider it 'extremely risky').

  Highly Risky [Men 59%, **Women 65%**] [**18-25 40%**, 26-50 62%, 51-65 67%, 66+ 75%]

Base: All respondents (n=1000) Note: Data <4% not labelled.
Q8. In your personal opinion, how RISKY (in terms of being in an accident or near miss) do you consider the following behaviours to be? Please use a scale from 1 to 7 where 7 means extremely risky and 1 means not at all risky.

Perceived Risk of Talking or Texting While Driving (cont.)

% HIGHLY RISKY (5, 6, 7)	MAR 2012	OCT 2012	OCT 2013	JUL 2014	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1023 A	1000 B	1197 C	1005 D	1192 E	1066 F	1047 G	1002 H	1129 I	1001 J	1004 K	1000 L	1003 M	1000 N	1125 O	1000 P	1000 Q	1000 R	1001 S	1000 T
Texting while driving	**96%** CDEFG IJNRST	**97%** CDEFG IJLNQR ST	**88%** D	**84%**	**88%** D	**90%** D	**94%** CDEFT	**95%** CDEFST	**94%** CDEFT	**94%** CDEFT	**96%** CDEFG INRST	**95%** CDEFST	**96%** CDEFN RST	**93%** CDEFT	**96%** CDEFG IJNRST	**94%** CDEFT	**95%** CDEFST	**93%** CDEFT	**93%** CDEFT	**89%** D
Talking while holding a cell phone and driving	**86%** CDEFRT	**84%** CDEF	**76%** DF	**67%**	**74%** D	**72%** D	**83%** CDEF	**83%** CDEF	**84%** CDEF	**86%** CDEFRT	**89%** ABCDE FGHIN ORST	**87%** CDEFR ST	**90%** CDEFN ORST	**85%** CDEF	**86%** CDEFRT	**84%** CDEF	**88%** BCDEF GHIPRS T	**82%** CDEF	**84%** CDEF	**81%** CDEF
Talking while holding a cell phone at a red light or stop sign	-	-	-	-	-	-	-	-	-	**69%** RST	**70%** OPRST	**70%** OPRST	**70%** OPRST	**66%** S	**65%** S	**64%**	**69%** PRS	**62%**	**61%**	**62%**
Texting while at a red light or stop sign	**73%** CDEFG HINOQ RST	**71%** CDEFG HINRST	**63%** D	**57%**	**62%** D	**61%**	**63%** D	**65%** DS	**66%** DEFS	**71%** CDEFG HINRST	**72%** CDEFG HINOQ RST	**71%** CDEFG HINRST	**74%** CDEFG HINOQ RST	**66%** DS	**68%** CDEFG RST	**65%** DS	**67%** DEFRST	**62%** D	**60%**	**62%** D

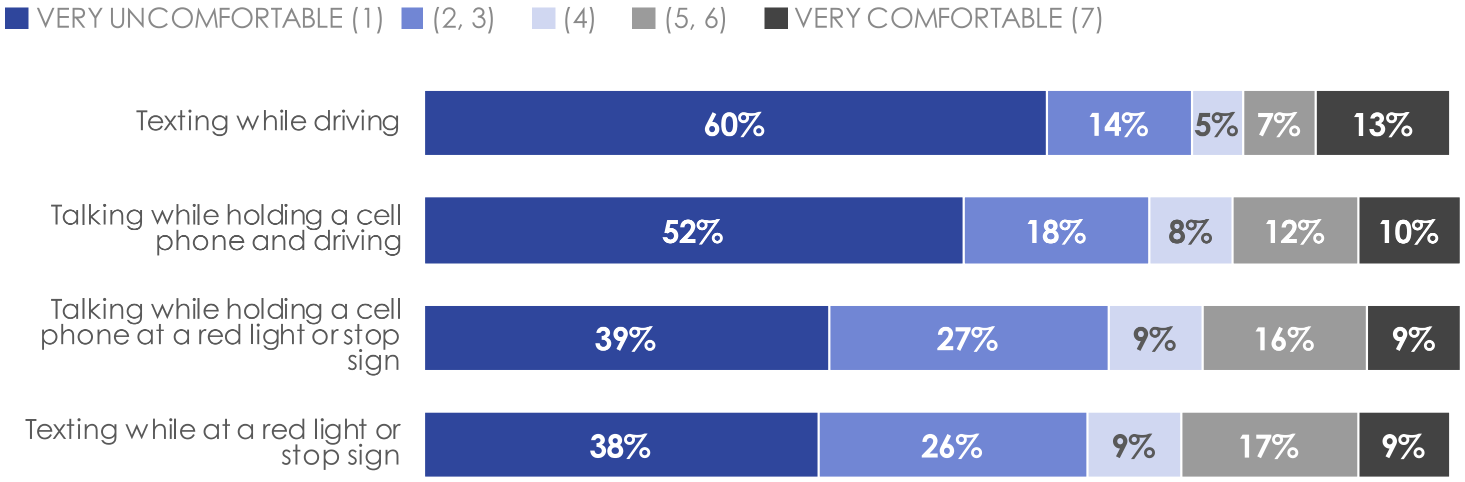
TRENDED RESULTS

- Wave over wave we continue to see the same pattern that texting while driving is more risky than talking on the phone while driving.
- Wave over wave we continue to see that texting or talking while stopped at a red light or stop sign is perceived to be less risky than doing so when driving.
- Over the years we see fluctuations in each measure, and today's results are lower for all four measures compared with many earlier waves including lower than last wave for 'texting while driving'. In 2017 we saw highs for each measure and compared to that year, we are seeing some lows for each measure.

Base: All respondents (n=1000)
Q8. In your personal opinion, how RISKY (in terms of being in an accident or near miss) do you consider the following behaviours to be? Please use a scale from 1 to 7 where 7 means extremely risky and 1 means not at all risky.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P/Q/R/S/T denotes a significant difference at the 95% confidence interval.

Comfort Levels of Being a Passenger if Driver is Phone Distracted



% UNCOMFORTABLE (1, 2, 3)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Texting while driving	81% CE	80% E	77%	80% E	74%
Talking while holding a cell phone and driving	75% E	76% E	74%	75% E	70%
Talking while holding a cell phone at red light or stop sign	65%	69% D	66%	64%	65%
Texting while at a red light or stop sign	64%	68%	66%	67%	64%

Thinking about times when they are a passenger in a vehicle, BC Drivers would be rather uncomfortable if a driver was engaging in any of the talking or texting behaviours evaluated.

- Specifically, 74% would be highly uncomfortable (1, 2 or 3 out of 7) being a passenger if a driver is ***texting when driving***, including 60% who would be 'very uncomfortable'.
  Highly uncomfortable [Age: 18-25 71%, 26-50 71%, **51-65 80%**, **66+ 82%**] [Lower Mainland 71%, **Outside Lower Mainland 79%**]
- Likewise, 70% would be highly uncomfortable (1, 2, or 3) being a passenger if a driver was ***talking and holding a phone when driving***, including 52% 'very uncomfortable'.
  Highly uncomfortable [Age: 18-25 60%, 26-50 65%, **51-65 77%**, **66+ 81%**] [Lower Mainland 65%, **Outside Lower Mainland 76%**]

Discomfort eases to a certain extent when a driver is texting or talking while ***stopped*** rather than while ***driving***.

- Specifically, 65% are uncomfortable with a driver ***talking and holding a phone when stopped*** at an intersection, including 39% 'very uncomfortable'.
  Highly uncomfortable [Age: **18-25 50%,** 26-50 61%, 51-65 73%, 66+ 80%]
- Likewise, 64% are uncomfortable with a driver ***texting when stopped*** including 38% 'very uncomfortable'.
  Highly uncomfortable [Age: 18-25 57%, 26-50 58%, **51-65 72%**, **66+ 78%**]

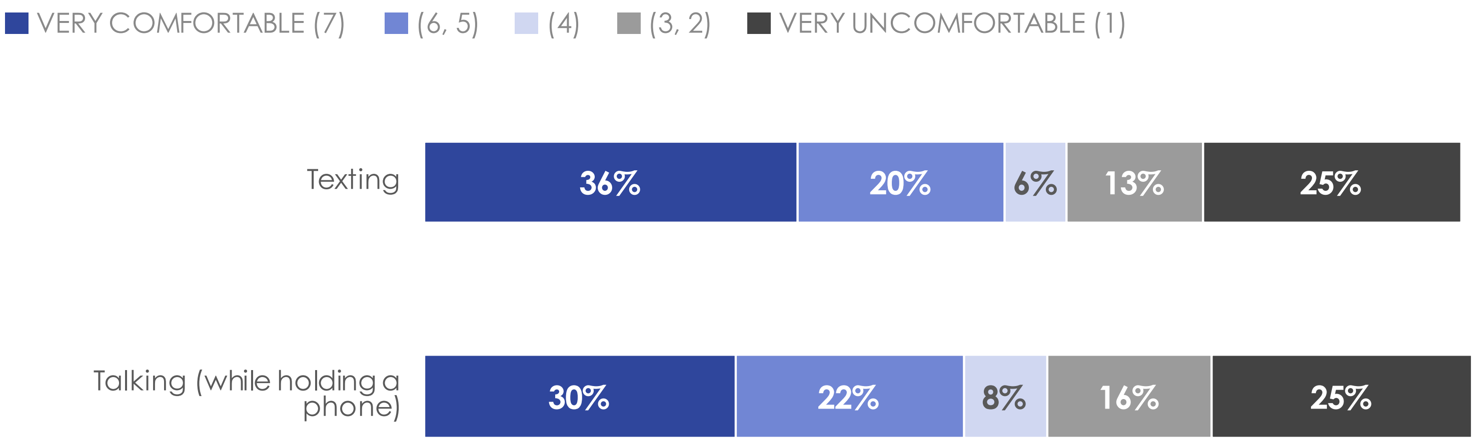
TRENDED RESULTS

- Levels of discomfort with talking and texting while driving have declined compared with three out of four past waves – this is a negative trend that could be a watch item.

Base: All respondents (n=1000) Note: Data <4% not labelled.
Q32. Now, thinking about times when you are a passenger in a car, how comfortable would you feel if the driver was doing the following? Please use a scale from 1 to 7 where 7 means very comfortable and 1 means very uncomfortable.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

Comfort of Asking Driver to Stop Using their Phone while Driving



% COMFORTABLE (5, 6, 7)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Texting	65% E	61% E	62% E	62% E	56%
Talking (while holding a phone)	58% E	56%	58% E	57% E	51%

Slightly more than half think they would be comfortable asking a driver to stop using their phone if the driver was talking or texting while driving. Comfort levels increase as age increases.

- Nearly two-thirds (56%) indicate they would be highly comfortable (5, 6 or 7 out of 7) asking a driver to stop ***texting while driving***. This includes 36% that would be 'very comfortable'.

  Highly Comfortable [Age: 18-25 47%, 26-50 51%, **51-65 63%**, **66+ 67%**] [Lower Mainland 50%, **Outside Lower Mainland 63%**]

- Likewise, 51% say they would be highly comfortable asking a driver to stop ***talking while holding a phone and driving*** (including 30% 'very comfortable').

  Highly Comfortable [Age: 18-25 38%, **26-50 48%**, **51-65 57%**, **66+ 65%**] [Lower Mainland 48%, **Outside Lower Mainland 56%**]

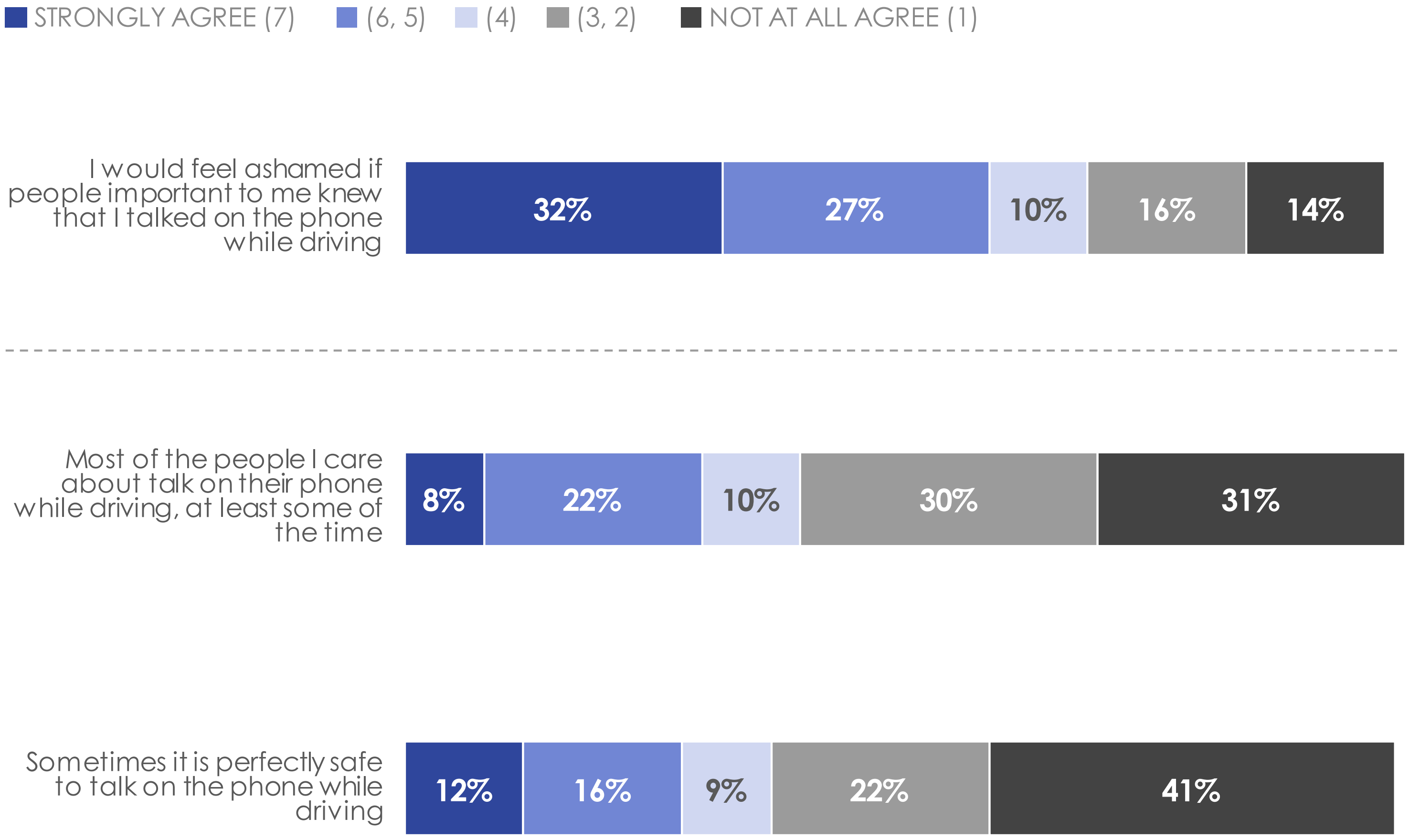
TRENDED RESULTS

- On the whole ratings have declined significantly since past waves, fewer drivers say that they would be comfortable asking a driver to stop talking on the phone while driving or texting on the phone while driving. This too is a negative trend that could be a watch item.

Base: All respondents (n=1000)
Q33. If you were a passenger in a vehicle and the driver was using their phone to talk or text (not using hands-free), how comfortable would you be asking the driver to stop using their phone? Please use a scale from 1 to 7 where 7 means very comfortable and 1 means very uncomfortable.

A/B/C/D/E *denotes a significant difference at the 95% confidence interval.*

Agreement with Statements: Talking on Phone While Driving



- Six-in-ten (59%) BC Drivers highly agree (5, 6 or 7 out of 7) with the statement "*I would feel ashamed if people important to me knew that I talked on the phone while driving*". This includes 32% who 'strongly agree'.

  Highly agree [18-25 41%, **26-50 57%**, **51-65 65%**, **66+ 72%**]

- A sizable minority (30%) of BC Drivers highly agree with the negative statement "*Most of the people I care about talk on their phone while driving, at least some of the time*". Most drivers (60%) highly disagree (1, 2 or 3 out of 7).

  Highly agree [**18-25 40%, 26-50 34%**, 51-65 20%, 66+ 24%]

- A similar proportion (28%) of BC Drivers highly agree with the second negative statement "*Sometimes it is perfectly safe to talk on the phone while driving*". Most drivers (63%) highly disagree with this statement.

  Highly agree [Age **18-25 36%**, 26-50 30%, 51-65 23%, 66+ 23%]

Base: All respondents (n=1000)
Q10. To what extent do you agree or disagree with the following statements? Please use a scale from 1 to 7 where 7 means strongly agree and 1 means not at all agree.

Agreement with Statements: Talking on Phone While Driving (cont.)

% AGREE (5, 6, 7)	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1117 A	1066 B	1047 C	1002 D	1129 E	1001 F	1004 G	1000 H	1003 I	1000 J	1125 K	1000 L	1000 M	1000 N	1001 O	1000 P
I would feel ashamed if people important to me knew I talked on the phone while driving	**49%**	**50%**	**66%** ABNOP	**62%** AB	**67%** ABDNOP	**66%** ABNOP	**65%** ABOP	**68%** ABDKNOP	**68%** ABDKOP	**64%** AB	**63%** AB	**66%** ABNOP	**65%** ABOP	**61%** AB	**61%** AB	**59%** AB
Most of the people I care about talk on their phone while driving, at least some of the time	**28%** C	**29%** CE	**23%**	**26%**	**25%**	**27%** C	**28%** C	**30%** CEK	**26%**	**30%** CE	**26%**	**28%** C	**31%** CDEIK	**30%** EI	**31%** CDEFIK	**30%** EI
Sometimes it is perfectly safe to talk on the phone while driving	**22%**	**22%**	**20%**	**20%**	**23%**	**21%**	**22%**	**22%**	**22%**	**25%** CDF	**25%** CDF	**25%** CDF	**26%** ABCDFGHI	**27%** ABCDEFGHI	**29%** ABCDEFGHIJKL	**28%** ABCDEFGHI

TRENDED RESULTS

- Agreement with each of these statements is consistent with last wave and has remained generally consistent over the past few waves.
- Over the years, however, we see a couple of negative trends.

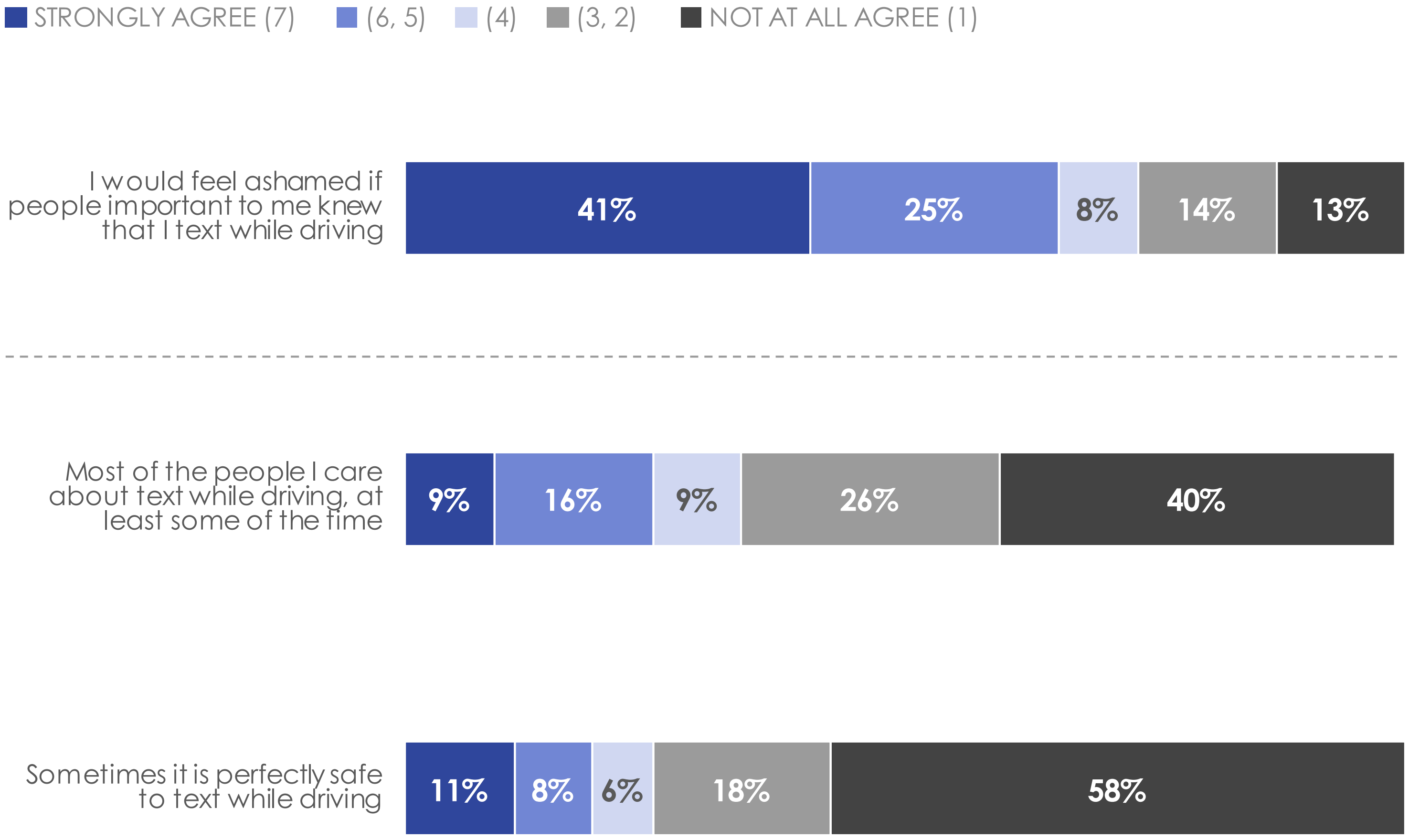
  Fewer are feeling ashamed of using their phone while driving than they did during earlier years (especially compared to 2018).

  Agreement with the statement "sometimes it is perfectly safe to talk on the phone while driving" has been on the rise since 2018 as well.

Base: All respondents (n=1000)
Q10. To what extent do you agree or disagree with the following statements? Please use a scale from 1 to 7 where 7 means strongly agree and 1 means not at all agree.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P denotes a significant difference at the 95% confidence interval.

Agreement with Statements: Texting While Driving



- Two-thirds (66%) of BC Drivers highly agree (5, 6 or 7 out of 7) with the statement "*I would feel ashamed if people important to me knew that I text while driving*". Nearly half (41%) agree strongly.

  Highly agree [Age: 18-25 56%, 26-50 62%, **51-65 75%**, **66+ 73%**]

- One-quarter (25%) highly agree with the negative statement "*Most of the people I care about text while driving, at least some of the time*". Meanwhile, 40% highly disagree with this statement.

  Highly agree [Age: **18-25 30%**, **26-50 30%**, 51-65 18%, 66+ 17%] [**Lower Mainland 28%,** Outside Lower Mainland 21%]

- Under one-in-five (19%) agree with the second negative statement "*sometimes it is perfectly safe to text while driving*". Meanwhile, 75% highly disagree with this statement.

Base: All respondents (n=1000)
Q10. To what extent do you agree or disagree with the following statements? Please use a scale from 1 to 7 where 7 means strongly agree and 1 means not at all agree.

Agreement with Statements: Texting While Driving (cont.)

% AGREE (5, 6, 7)	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1117 A	1066 B	1047 C	1002 D	1129 E	1001 F	1004 G	1000 H	1003 I	1000 J	1125 K	1000 L	1000 M	1000 N	1001 O	1000 P
I would feel ashamed if people important to me knew I text while driving	**84%** BCDEFGI JKMNO	**55%**	**69%** B	**67%** B	**71%** BP	**69%** B	**70%** B	**72%** BDKP	**71%** BP	**71%** BP	**68%** B	**72%** BDKP	**71%** BP	**69%** B	**67%** B	**66%** B
Most of the people I care about text while driving, at least some of the time	**21%**	**21%**	**20%**	**20%**	**22%**	**20%**	**21%**	**23%** IK	**19%**	**23%** IK	**19%**	**22%**	**23%** IK	**21%**	**25%** ABCDFGI KN	**25%** ABCDFGI KN
Sometimes it is perfectly safe to text while driving	**15%** CK	**15%** K	**12%**	**13%**	**15%** CK	**12%**	**12%**	**13%**	**14%**	**16%** CFGK	**12%**	**15%** K	**15%** K	**16%** CFGK	**16%** CFGK	**19%** ABCDEF GHIKLM

TRENDED RESULTS

- Just like the results for talking on the phone while driving, we are seeing some negative trends for texting while driving statements.

  Since May 2020 we have been seeing fewer who mention feeling ashamed of using their phone while driving than they did during earlier years (especially compared to 2018 and even 2020).

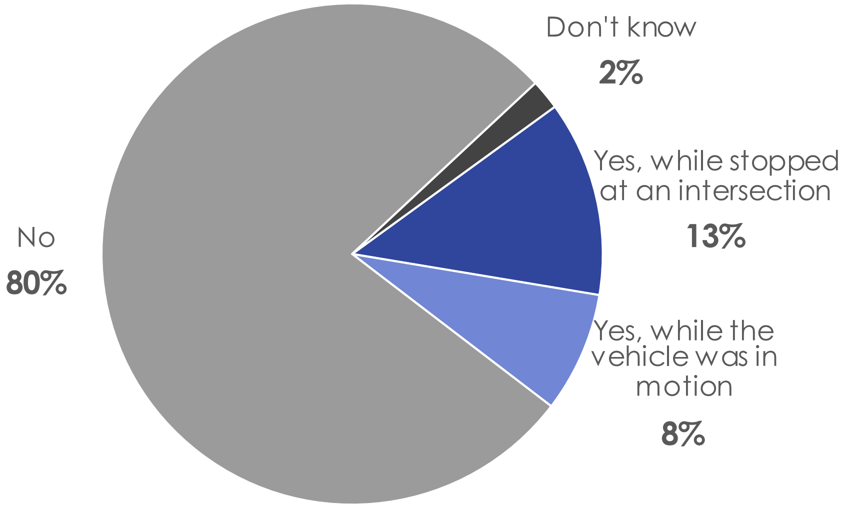
  Agreement with the statement "*Sometimes it is perfectly safe to text while driving*" has been on the rise as will with this wave's 19% being its highest recorded level to date.

Base: All respondents (n=1000)
Q10. To what extent do you agree or disagree with the following statements? Please use a scale from 1 to 7 where 7 means strongly agree and 1 means not at all agree.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P *denotes a significant difference at the 95% confidence interval.*


RECENT
BEHAVIOUR

Use of Hand-Held Cell Phone for a Phone Call While Driving



Yes to both:
2%

Yes to either:
19%

- Two-in-ten (19%) BC drivers with cell phones admit to talking on their phone (either while stopped or while driving) without using a hands-free device.

  [Age: 1**8-25 40%, 26-50 22%, 51-65 9%**, 66+ 3%]

- More specifically, 13% of cell phone owners indicate have talked on their phone **while stopped** at an intersection and 8% talked on their phone while their vehicle was in motion.

  Stopped at intersection: [Age: 1**8-25 31%, 26-50 15%,** 51-65 5%, 66+ 2%] [**Lower Mainland 16%,** Outside Lower Mainland 9%]

  Vehicle was in motion [Age **18-25 14%, 26-50 10%,** 51-65 4%, 66+ 1%]

TRENDED RESULTS

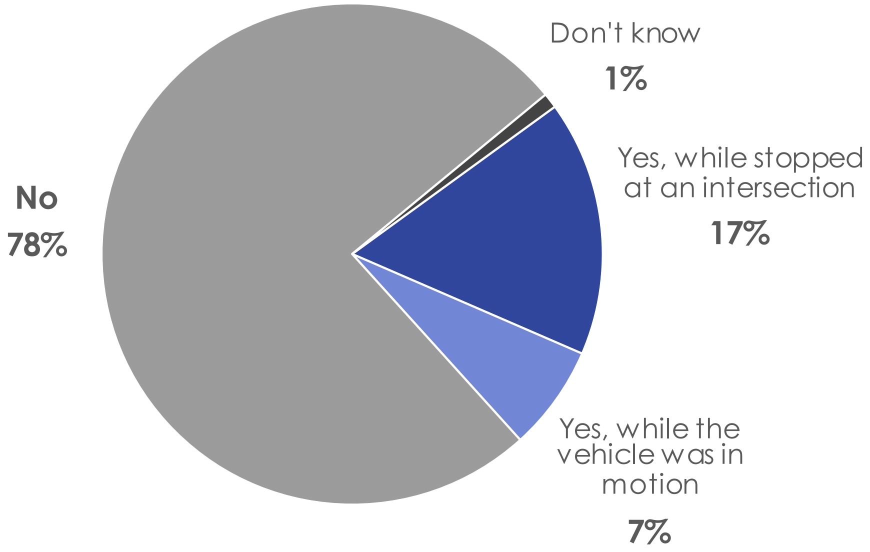
- This wave we see an increase again among those who say they have talked on the phone while stopped at an intersection.
- The proportion of drivers admitting to talking on the phone while their vehicle was in motion is consistent with past waves going back to Spring 2017.

	OCT 2012	OCT 2013	JUL 2014	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	863 A	1014 B	890 C	1117 D	959 E	950 F	905 G	1024 H	878 I	926 J	905 K	928 L	916 M	1055 N	938 O	953 P	928 Q	955 R	949 S
Yes, while stopped at an intersection	**22%** BEFGHJ KLMNO PQRS	**18%** FGHNO PQR	**22%** BEFGHIJ KLMJOP QRS	**22%** BEFGHIJ KLMNO PQRS	**15%** GHIJKN OPQ	**12%** HJKLNP Q	**11%** NP	**9%**	**10%**	**9%**	**9%**	**9%**	**13%** HJKLNP Q	**8%**	**11%** NP	**8%**	**9%**	**15%** FGHIJKL NOPQ	**13%** HJKLNP Q
Yes, while the vehicle was in motion	**18%** CDEFG HIJKLM NOPQR S	**20%** CDEFG HIJKLM NOPQR S	**13%** FIJKLNO PQRS	**11%** NOPQS	**11%** NOPQS	**10%**	**13%** NOPQR S	**11%** LNOPQ S	**10%**	**9%**	**9%**	**8%**	**10%**	**8%**	**8%**	**8%**	**7%**	**9%**	**8%**

Reduced Base: Respondent who own/use a cell phone (n=949)
Q13. In the past month, were there any occasions where you used your cell phone for a phone call while you were driving [IF OWN HANDS-FREE DEVICE: but weren't able to use your hands-free device for that call]? Please select all that apply.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P/Q/R/S denotes a significant difference at the 95% confidence interval.

Use of Hand-Held Cell Phone for Texting While Driving



Yes to both:
3%

Yes to either:
21%

- Two-in-ten (21%) BC Drivers with cell phones admit to texting (either while stopped or while driving) during the past month.

  [Age: 1**8-25 45%, 26-50 26%,** 51-65 9%, 66+ *]

- More specifically, 17% say they have texted while stopped at an intersection and 7% say they have texted while their vehicle was in motion.

  Stopped at intersection [**18-25 37%, 26-50 22%,** 51-65 8%, 66+ --]

  Vehicle in motion [Age: 1**8-25 15%, 26-50 8%,** 51-65 2%, 66+ *] [**Lower Mainland 8%,** Outside Lower Mainland 4%]

TRENDED RESULTS

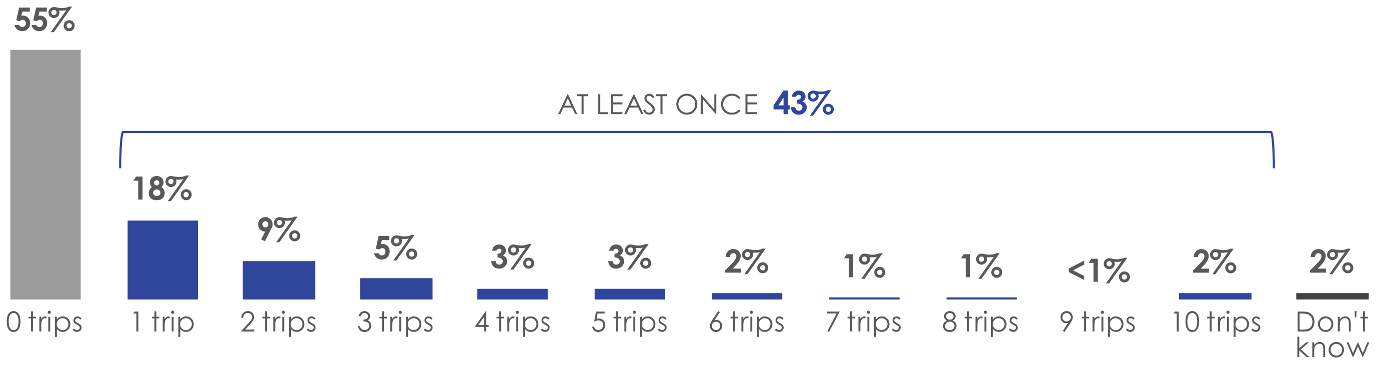
- This wave we see a slight decrease among those who say they have texted while stopped at an intersection. This wave this measure is down 5 ppts over last wave.
- The proportion of drivers admitting to talking on the phone while their vehicle was in motion has been relatively consistent for many waves.

	OCT 2012	OCT 2013	JUL 2014	OCT 2014	MAY 2015	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	863 A	1014 B	890 C	1117 D	959 E	950 F	905 G	1024 H	878 I	926 J	905 K	928 L	916 M	1055 N	938 O	953 P	928 Q	955 R	949 S
Yes, while stopped at an intersection	24% EFHIJKL NOPQS	25% CEFHIJK LNOPQ S	21% KLNOP QS	23% EKLNOP QS	18% KLP	20% KLNPQ	22% KLNOP QS	20% KLNPQ	19% KLNP	19% KLNP	14%	14%	19% KLNP	15%	17%	14%	16%	22% KLNOP Q	17%
Yes, while the vehicle was in motion	6%	8% EFKLNO PR	7% KLP	6% KLP	5%	5%	6% KL	6% KL	5%	5%	4%	4%	7% KLP	5%	5%	4%	6%	6% KL	7% KLP

Reduced Base: Respondent who own/use a cell phone (n=949)
Q14. In the past month, were there any occasions where you used your cell phone for texting while you were driving? Please select all that apply.

A/B/C/D/E/F/G/H/I/J/K/L/M/N/O/P/Q/R/S denotes a significant difference at the 95% confidence interval.

Estimate of Cell Phone Use While Driving



- When asked to approximate how frequently they text or talk on their mobile phone while driving (including while stopped), many (55%) cell phone owners state they **never** (0 out of 10 trips) use their phone.

  [Age: 18-25 32%, **26-50 47%**, **51-65 69%, 66+ 83%**]

- Four-in-ten (43%) admit to using their phone during at least one trip out of a given 10 trips.

TRENDED RESULTS

- Cell phone use appears to be inching upwards. After a more positive trend during 2018 and 2019 we see now that the proportion of those saying they use their phone 0 trips out of 10 is on the decline (lowest since first measured) and coincidingly, the proportion using their phone 1 or more times out of 10 is on the rise.

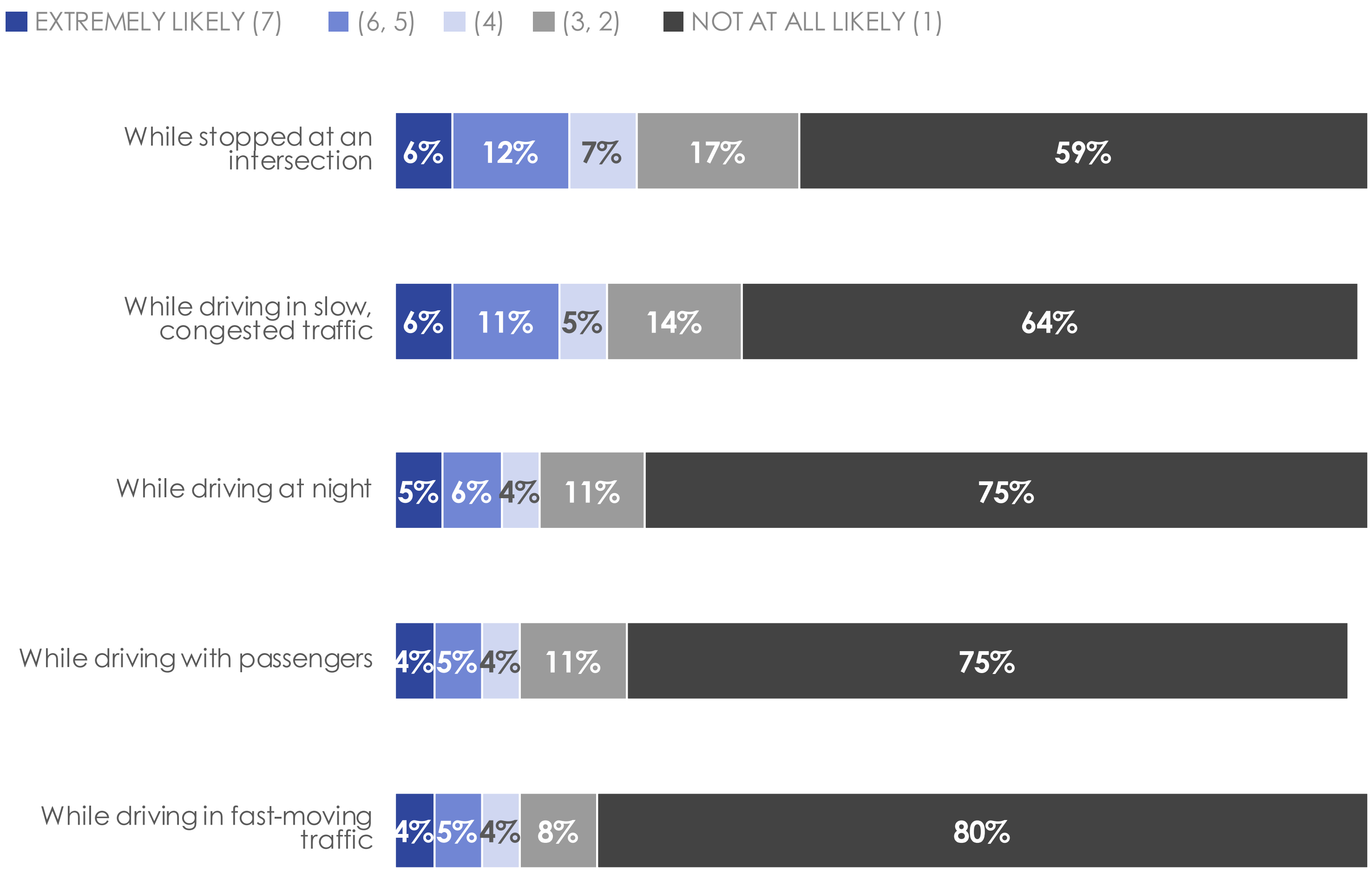
	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	950 A	905 B	1024 C	878 D	926 E	905 F	928 G	916 H	1055 I	938 J	953 K	928 L	955 M	949 N
0 trips	**60%** MN	**57%**	**61%** MN	**60%** MN	**60%** MN	**66%** ABCDEJKLMN	**66%** ABCDEJKLMN	**65%** ABDEJKLMN	**63%** BLMN	**59%** N	**60%** MN	**58%**	**56%**	**55%**
1 to 5 trips	**34%** F	**35%** FH	**34%** F	**35%** FH	**35%** FH	**29%**	**31%**	**30%**	**31%**	**37%** FGHI	**35%** FH	**36%** FGHI	**37%** FGHI	**38%** FGHI
6 to 10 trips	**4%** G	**5%** DGIJK	**4%** G	**3%**	**4%** G	**4%** G	**3%**	**4%**	**3%**	**4%**	**3%**	**5%** DGIK	**6%** ACDEFGHIJK	**6%** ACDEFGHIJK

Reduced Base: Respondent who own/use a cell phone (n=949)
Q15. Out of every 10 driving trips you make, what is your best estimate of how many trips your text or talk on your mobile phone (including while stopped)? (e.g. driving to work and back is 2 trips). Please select one.

A/B/C/D/E/F/G/H/I/J/K/L/M/N denotes a significant difference at the 95% confidence interval.


ESTIMATED
NEAR FUTURE
BEHAVIOUR

Likelihood of Using Phone While Driving in Next Week



Between two-in-ten and four-in-ten BC drivers think that there is some possibility (rating 2 to 7 out of 7) that they may use their phone to talk or text while driving over the next week.

In all settings a higher proportion of 18-25 year olds think they might use their phone.

- 18% are highly likely to use their phone when stopped at an intersection. On the flipside, 59% are not at all likely.
  Not at all likely [**18-25 37%,** 26-50 51%, 51-65 71%, 66+ 87%] [Lower Mainland 55%, **Outside Lower Mainland 65%**]
- 17% are highly likely to use their phone while driving in slow, congested traffic. Most drivers (64%) are not at all likely.
  Not at all likely [**18-25 41%,** 26-50 57%, 51-65 79%, 66+ 87%] [Lower Mainland 61%, **Outside Lower Mainland 69%**]
- 11% are highly likely to use their phone while driving at night. Most are not at all likely (75%).
  Not at all likely [**18-25 59%,** 26-50 67%, 51-65 88%, 66+ 96%] [Lower Mainland 71%, **Outside Lower Mainland 79%**]
- 10% are also highly likely to use their phone while driving with passengers in their vehicle. Most are not at all likely (75%).
  Not at all likely [**Age: 18-25 57%,** 26-50 68%, 51-65 88%, 66+ 94%] [Lower Mainland 72%, **Outside Lower Mainland 80%**]
- 9% are highly likely to use their phone while driving in fast-moving traffic. Most are not at all likely (80%).
  Not at all likely [Age: **18-25 72%**, 26-50 73%, 51-65 90%, 66+ 97%] [Lower Mainland 77%**, Outside Lower Mainland 84%**]

Reduced Base: Respondents who own/use a cell phone (n=949)
Q16. Within the next 7 days, how likely do you think it is that would either text or talk on your mobile phone while ...? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

Likelihood of Using Phone While Driving in Next Week (cont.)

% HIGHLY LIKELY (5, 6, 7)	OCT 2015	APR 2016	OCT 2016	MAY 2017	OCT 2017	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	950 A	905 B	1024 C	878 D	926 E	905 F	928 G	916 H	1055 I	938 J	953 K	928 L	955 M	949 N
While stopped at an intersection	11%	13%	12%	15% A	12%	12%	12%	16% ACEFG	13%	15% A	14%	16% ACEFG	19% ABCDE FGHIJK L	18% ABCEF GIK
While driving in slow, congested traffic	9%	9%	9%	11%	9%	10%	10%	13% ABCEI	9%	12% ABCEI	12% ABCEI	13% ABCEI	16% ABCDE FGIJK	17% ABCDE FGHIJK L
While driving at night	5%	5%	6%	6%	6%	7%	7%	9% ABCDE I	6%	8% AB	8% AB	9% ABCDEI	9% ABCDEI	11% ABCDE FGIJK
While driving with passengers	5%	4%	6%	6%	6%	7% B	7% B	8% AB	8% AB	8% AB	8% AB	9% ABCDE	8% ABC	10% ABCDE
While driving in fast-moving traffic	5%	5%	5%	5%	6%	6%	7%	9% ABCDE F	7%	7%	8% ABCD	9% ABCDE F	8% ABCD	9% ABCDE F

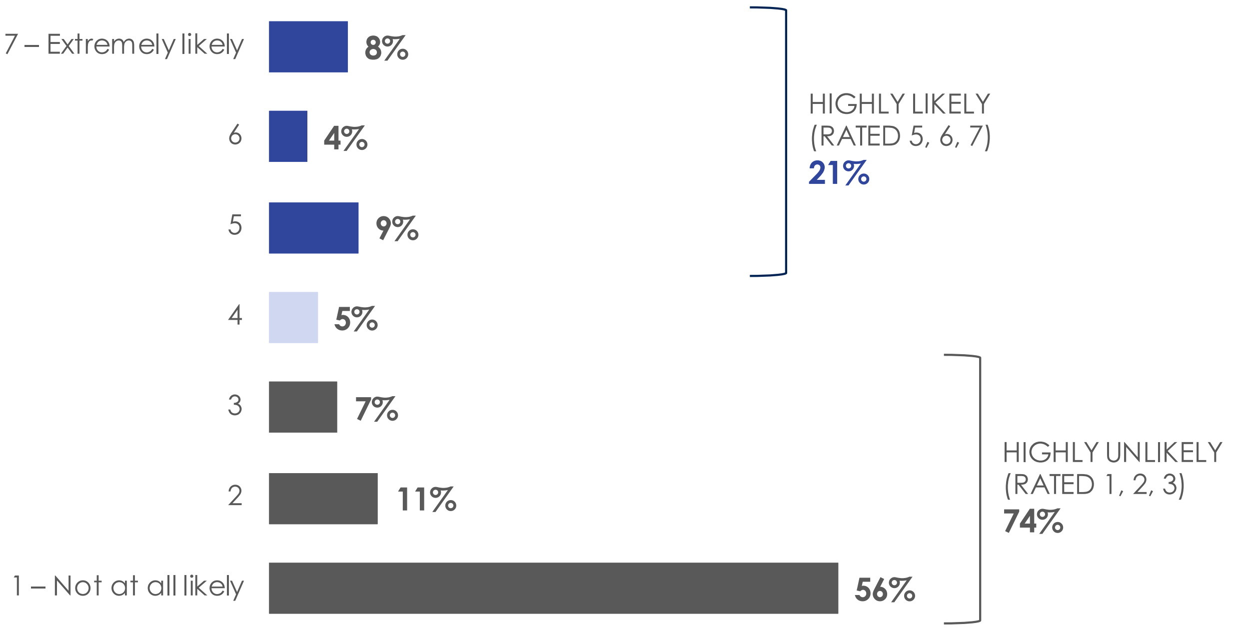
TRENDED RESULTS

- This wave's results are consistent with last wave and remain higher than what we have seen during some earlier waves.
- Since Fall 2019 these measures have been on a slow and increasing trend that continues to be a watch item. When compared to when first measured in 2015, these numbers have changed substantially.

Reduced Base: Respondents who own/use a cell phone (n=949)
Q16. Within the next 7 days, how likely do you think it is that would either text or talk on your mobile phone while ...? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D/E/F/G/H/I/J/K/L/M/N denotes a significant difference at the 95% confidence interval.

Likelihood of Accessing Any Device Function in Next Week



	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1001 C	1000 D
% Highly likely (rated 5, 6, 7)	**16%**	**18%**	**21%** A	**21%** A
% Unlikely (rated 1, 2, 3)	**80%** BCD	**75%**	**73%**	**74%**

- In total, 44% think there is <u>some</u> likelihood (rating 2 to 7 out of 7) that they would be accessing any function of their hand-held deice while driving. In contrast, 56% say it is <u>not at all likely</u> they would access their device while driving.

  Not at all likely [Age 18-25 25%, **26-50 46%**, **51-65 73%, 66+ 88%**] [Lower Mainland 52%, **Outside Lower Mainland 62%]**

- Two-in-ten (21%) think it is highly likely (5, 6 or 7 out of 7) that they would access their device while driving.

  Highly likely [Age: 1**8-25 46%, 26-50 25%**, 51-65 9%, 66+ 5%] [**Lower Mainland 24%**, Outside Lower Mainland 15%]

TRENDED RESULTS

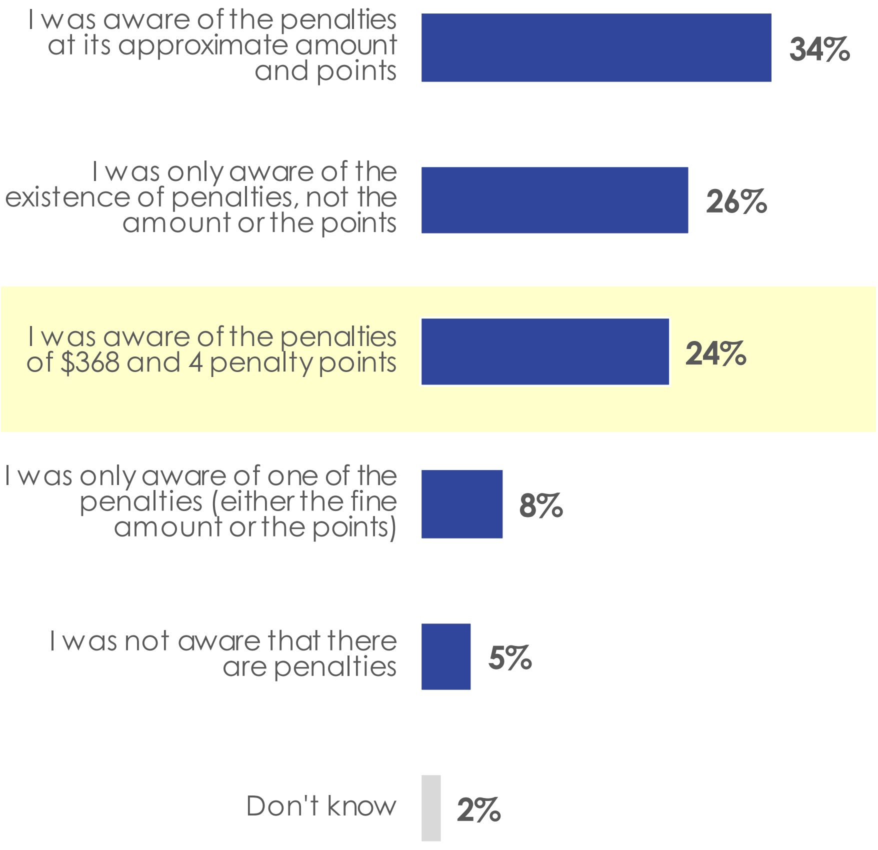
- While consistent with last wave, we still see that this measure is higher than earlier waves.
- Like last wave, the proportion of drivers who suppose that they will use their device for any reason is up a significant 5 ppts since this time 2020.

Base: All respondents (n=1000)
Q16b. Within the next 7 days, how likely do you think it is that you would access any function of your hand-held device while operating a vehicle? This includes anytime you are behind the wheel such as in slow moving traffic or stopped at an intersection, etc. Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D denotes a significant difference at the 95% confidence interval.

PENALITIES AND ENFORCEMENT

Awareness of Distracted Driving Penalties



Most (76%) BC drivers are *not* fully aware of the current penalties for distracted driving.

- One-in-five (24%) drivers are aware that the penalty for using a hand-held device while driving in British Columbia is $368 and 4 penalty points.

  [**Men 27%,** Women 21%]
  [Age: 18-25 16%, **26-50 29**%, 51-65 19**%,** 66+ 22**%**]

- 34% are generally aware of the penalties and their approximate amounts.
  [Age: 1**8-25 49**%**,** 26-50 31%, 51-65 34**%,** 66+ 35**%**]

- 26% are only loosely aware of penalties, but not the particulars about the penalties.

  [Men 21%, **Women 31%**]
  [Age: 18-25 22%, 26-50 22%, **51-65 34%,** 66+ 28%]
  [Lower Mainland 23%, **Outside Lower Mainland 30%**]

- 8% are only aware of one component of the current penalties (either the fine or the point demerits).

  [**Lower Mainland 10%**, Outside Lower Mainland 6%]

- 5% were not previously aware of any penalties at all.

Base: All respondents (n=1000)
Q19a. Prior to today, were you aware that the penalty for using a hand-held device while driving in BC is $368 and 4 penalty points? Please select one.

Awareness of Distracted Driving Penalties (cont.)

% HIGHLY LIKELY (5, 6, 7)	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1003 B	1000 C	1125 D	1000 E	1000 F	1000 G	1001 H	1000 I
I was aware of the penalties at its approximate amount and points	32%	29%	32%	35% BH	36% BH	33%	32%	30%	34% B
I was only aware of the existence of penalties, not the amount or the points	23%	28% AC	24%	25%	28% AC	27% A	26%	29% ACD	26%
I was aware of the penalties of $368 and 4 penalty points	24%	22%	26% BEFH	24%	21%	22%	23%	21%	24%
I was only aware of one of the penalties (either the fine amount or the points)	10%	10%	10%	8%	10%	10%	11% DI	11% DI	8%
I was not aware that there are penalties	7% E	8% CEFGI	5%	6% E	4%	5%	5%	6%	5%
Don't know	3%	3%	3%	2%	2%	3%	2%	2%	2%

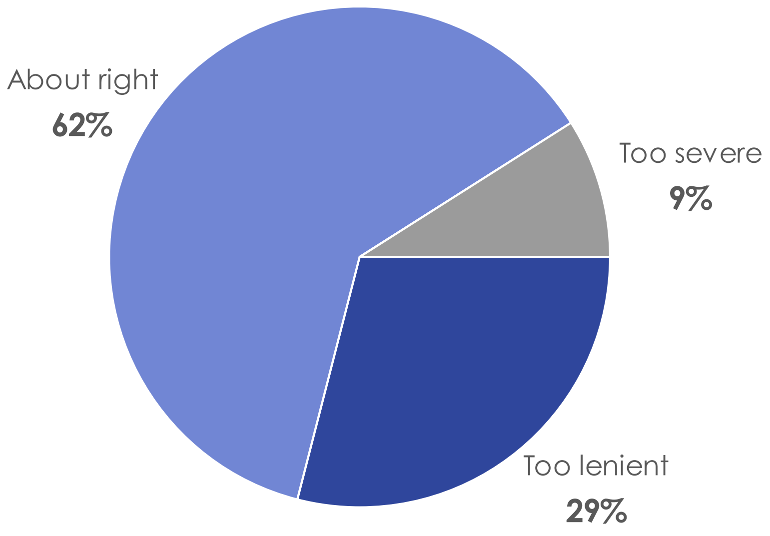
TRENDED RESULTS

- These results are generally consistent with previous waves.

Base: All respondents (n=1000)
Q19a. Prior to today, were you aware that the penalty for using a hand-held device while driving in BC is $368 and 4 penalty points? Please select one.

A/B/C/D/E/F/G/H/I denotes a significant difference at the 95% confidence interval.

Perceptions of Distracted Driving Penalties



	APR 2018	NOV 2018	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1003 B	1000 C	1125 D	1000 E	1000 F	1000 G	1001 H	1001 I
Too lenient	37% DEFHI	36% EFHI	33%	32%	30%	30%	34% I	30%	29%
About right	54%	57%	57%	58%	62% ABC	63% ABCDG	58%	64% ABCDG	62% ABC
Too severe	9% H	8%	10% FH	10% FH	8%	7%	8%	6%	9% H

Base: All respondents (n=1000)
Q19b. In your opinion, do you think the penalties for talking or texting on a cell phones are ...? Please select one.

- Nearly two-thirds (62%) of BC drivers consider the penalties for distracted driving to be suitable.

  [**18-25 76%, 26-50 67%,** 51-65 52%, 66+ 52%]
  [**LM 66**%, OLM 57%]

- However, a sizable minority (29%) think that the penalties are too lenient.

  [18-25 13%, **26-50 21%, 51-65 42%, 66+ 45%**]
  [Lower Mainland 24%, **Outside Lower Mainland 34%**]

- Only 9% think that the penalties for distracted driving are too punitive.

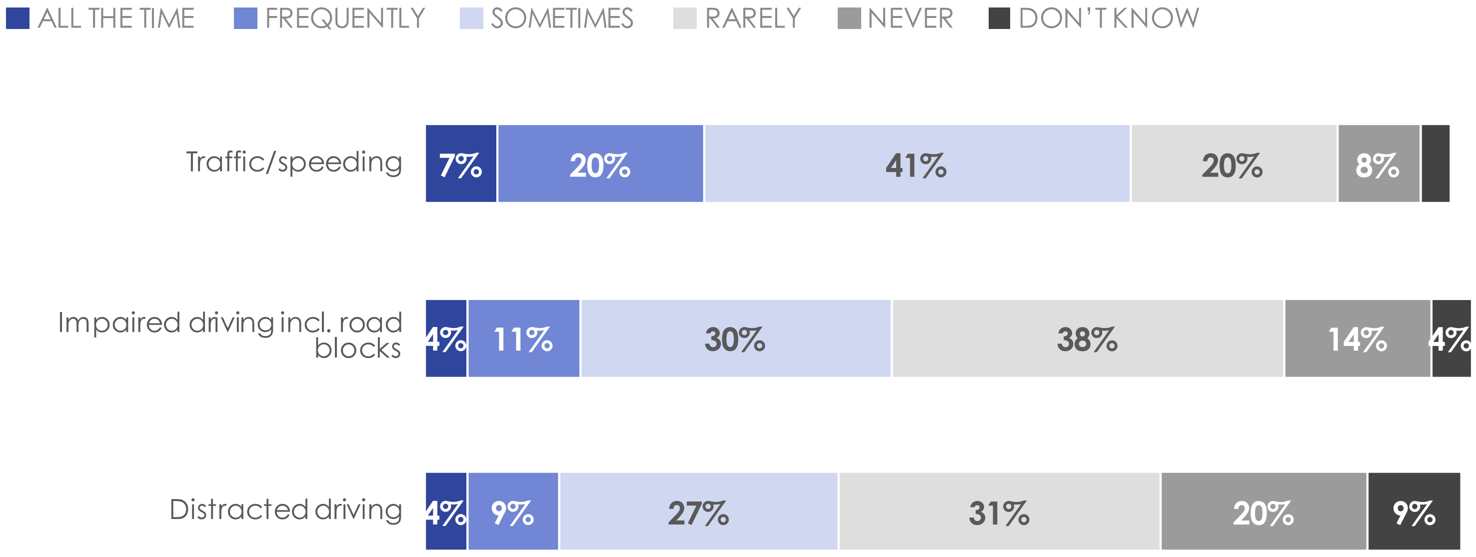
  [**18-25 11%, 26-50 12**%, 51-65 6%, 66+ 3%]

TRENDED RESULTS

- Last wave wave we saw a significant increase in the proportion who say that the current penalties are 'about right'. This wave, this measure remains at a relatively higher level that is also consistent with last wave.

A/B/C/D/E/F/G/H/I *denotes a significant difference at the 95% confidence interval.*

Witness Police Enforcement of Dangerous Driving Behaviours



% ALL THE TIME/FREQENTLY	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	10001 D	1000 E
Traffic/speeding	29%	32% DE	29%	26%	27%
Impaired driving incl. road blocks	14% C	14% C	11%	15% C	15% C
Distracted driving	15% D	12%	12%	11%	13%

Base: All respondents (n=1000) Note: Data <4% not labelled.
Q30. On average, how often do you see police officers enforcing the following ...?

- A majority of BC Drivers (89%) report that they have witnessed police enforcement of ***speeding*** (excludes 'never' and 'don't know' responses). However, the frequency of witnessing police enforcement of speeding is low, with 27% saying this is something they see such enforcement 'all the time' or 'frequently'.

  All the time/frequently [**18-25 43%, 26-50 32%, 51-65 21%**, 66+ 11%]
  [Lower Mainland 25%, **Outside Lower Mainland 31%**]

- Similarly, a majority (82%) report seeing police enforcement of ***impaired driving***, but BC drivers do not witness this often (15% 'all the time/frequently').

  All the time/frequently [**18-25 22%, 26-50 18%,** 51-65 8%, 66+ 3%]

- Following next, 71% report seeing police enforcement of ***distracted driving***, but this type of enforcement is also not seen often (13% 'all time time/frequently').

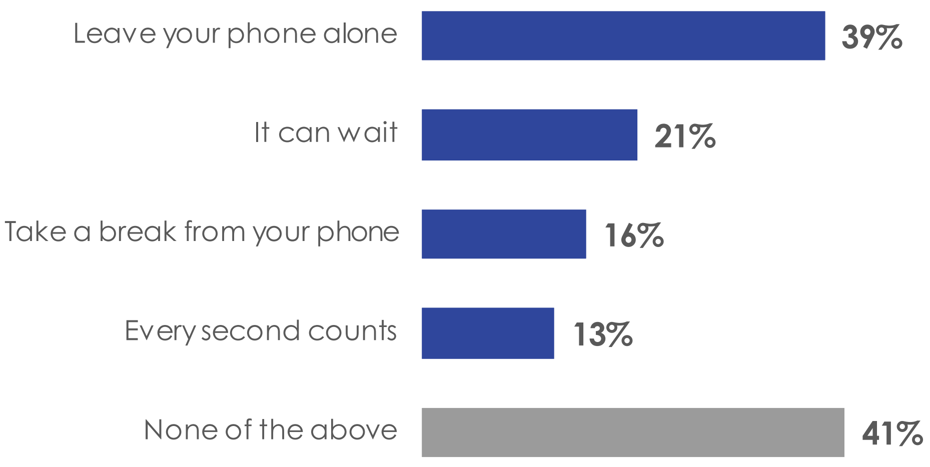
  All the time/frequently [**18-25 21%, 26-50 17%,** 51-65 6%, 66+ 4%]

TRENDED RESULTS

- These results are consistent with last wave.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

Recall of Distracted Driving Slogans



	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Leave your phone alone	**46%** DE	**45%** DE	**42%**	**40%**	**39%**
It can wait	**19%**	**19%**	**18%**	**22%** C	**21%**
Take a break from your phone	**13%**	**15%**	**12%**	**14%**	**16%** C
Every second counts	-	-	-	-	**13%**
None of the above	**38%**	**39%**	**42%**	**43%** A	**41%**

Within the past month, 59% of BC Drivers have heard, seen, or read at least one of the four distracted driving messages tested.

Recall of this type of messaging is higher among those age 18 to 25 than any other age groups.

[Age: **18-25 81%,** 26-50 64%, 51-65 45%, 66+ 48%]

- The most frequently recalled message is "***Leave your phone alone"*** (39%).
- Relatively fewer respondents recall "***It can wait"*** (21%).
  [Age: 1**8-25 36%, 26-50 24**%, 51-65 13%, 66+ 10%]
- Even fewer (16%) recall "***Take a break from your phone*"**.
  [Age: 18-25 18**%,** 26-50 16%, 51-65 12%, **66+ 20**%]
- Lastly, 13% recall "***Every Second counts*"**.
  [Age: **18-25 22%,** 26-50 14%, 51-65 7%, 66+ 9%]

TRENDED RESULTS

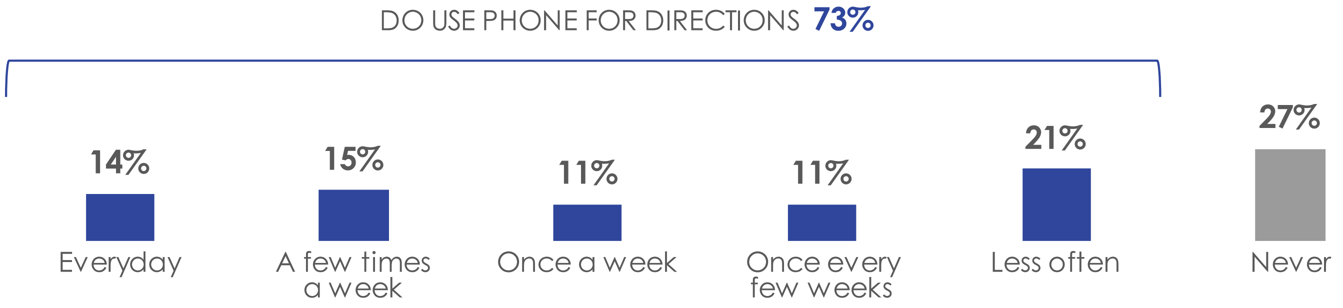
- Recall of "Leave your phone alone" continues on its downward trend and is at its lowest recorded level.
- Recall of "It can wait" and "take a break from your phone" are consistent with past waves.

Base: All respondents (n=1000)
Q29. Which of the following distracted driving slogans, if any, do you recall hearing, seeing or reading in the past month? Select all that apply.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

USING PHONE FOR GPS/ DIRECTIONS

Using Phone for GPS/Directions While Driving



	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1125 B	1000 C	912 D	895 E	913 F	891 G
Everyday	8%	7%	7%	7%	8%	11% ABCDE	14% ABCDE
A few times a week	15%	16%	16%	18%	15%	17%	15%
Once a week	12% F	11%	11%	12% F	10%	9%	11%
Once every few weeks	13%	14%	13%	12%	13%	12%	11%
Less often	21%	21%	24%	22%	27% ABDG	24%	21%
Never	31%	31%	29%	30%	27%	27%	27%

Reduced Base: Respondent who own/use a smartphone (n=891)
Q25. How often, if ever, do you use your phone for the following activities while driving?

Many BC Drivers (73%) use their phone for directions or as a GPS while they drive. Use for directions declines with age.

[Age: **18-25 95%,** 26-50 81%, 51-65 62%, 66+ 32%]

The frequency of using a phone for directions varies:

- One-in-ten (14%) use their phone as a GPS every day.
  [Age: **18-25 24%, 26-50 19%,** 51-65 5%, 66+ 0%]
- 26% use their phone as a GPS one to a few times per week.
- Meanwhile 32% use their phone as a GPS every few weeks or even less frequently.
- The remaining 27% do not use their phone for directions or as a GPS while driving.
  [Age: 18-25 5**%, 26-50 19**%, **51-65 38**%, **66+ 68**%]

TRENDED RESULTS

- Last fall it appeared that the proportion of drivers who use their phone as a GPS and/or for directions every day may be on the rise. This wave confirms that we are seeing an increasing trend in this regard with 14% now saying they use their phone for this purpose every day. This is almost double compared to 2019 and 2020.
- Other measures are generally consistent with previous waves.

A/B/C/D/E/F/G denotes a significant difference at the 95% confidence interval.

Timing of Setting GPS/Directions

	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	584 A	670 B	621 C	636 D	629 E	634 F	630 G
Before you start driving	**84%**	**91%** AG	**90%** AG	**88%**	**90%** AG	**89%** AG	**85%**
Pulled over to the side	**5%** F	**3%**	**4%**	**6%** BF	**4%**	**2%**	**4%**
While you are driving	**6%** BDE	**3%**	**4%**	**3%**	**3%**	**6%** BDE	**5%** BEF
While you are stopped in traffic/at a red light	**4%**	**2%**	**3%**	**3%**	**2%**	**2%**	**5%**

For the most part, the majority of drivers who use their phone for GPS/directions are using their phones safely.

- A strong 85% say that they input the location/address before they begin driving.
- Another 4% take the time to pull over to the side of the road.
- Only 5% admit to inputting the location while they are driving.
- And a similar proportion (5%) say they input the location when stopped in traffic/at a red light.

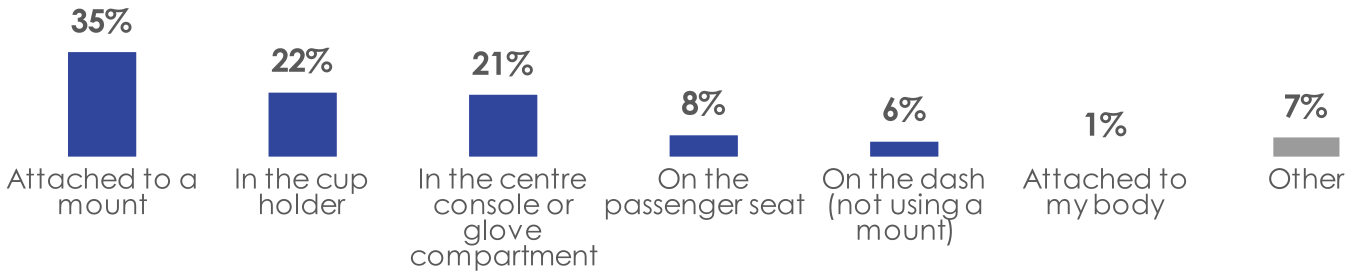
TRENDED RESULTS

- This wave we see a decline in the proportion of drivers who are setting their directions before they begin driving. This is down considerably compared with 4 out of 6 other waves and consistent with 2 out of 6 waves.
- There continues to be some minor fluctuations in how drivers are using their phones unsafely, but nothing that is noteworthy or yet pointing to a trend.

Reduced Base: Respondents who use their smartphone for GPS/directions (n=630)
Q26a. Thinking about when you use your phone for GPS/directions, when do you typically input the location/address? Please select one.

A/B/C/D/E/F/G denotes a significant difference at the 95% confidence interval.

Location of Phone for GPS/Directions While Driving



	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	584 A	670 B	621 C	636 D	629 E	634 F	630 G
Attached to a mount	33%	30%	33%	35%	38% B	35%	35%
In the cup holder	23% G	27% G	29% AG	26% G	28% G	25% G	22%
In the centre console or glove compartment	21% DEF	22% CDEF	17%	15%	15%	15%	21% DEF
On the passenger seat	10%	9%	7%	8%	7%	10%	8%
On the dash (not using a mount)	5% B	2%	8% ABE	7% B	5% B	6% B	6% B
Attached to my body	5% CG	3% G	2%	5% CG	3% G	3% G	1%

Reduced Base: Respondent who use their phone for GPS/directions (n=630)
Q27a. And where do you typically put your phone when you are using it for GPS/directions? Please select one.

Those who use their phone for GPS/directions while driving keep their phone at various locations.

- Over one-third (35%) keep their phone attached to a mount [**Men 39%**, Women 31%] [**Lower Mainland 39%**, Outside Lower Mainland 28%]
- 22% leave their phone in the cup holder and 21% keep it in the centre console. [Men 18%, **Women 25**%] [Age: **18-25 30%**, 26-50 19%, **51-65 26%**, 66+ 8%] [Lower Mainland 18%, **Outside Lower Mainland 28%**]
- 8% set their phone on the passenger seat 6% set their phone on the dash (in this case, without a mount).
  Passenger seat [Men 6%, **Women 11%]**
- Lastly, 1% keep their phone on them or somewhere else (7% other).

TRENDED RESULTS

- This wave we see some differences in where people are keeping their phone while driving.

  This wave fewer mention that they keep their phone in the cup holder – lowest measure recorded.

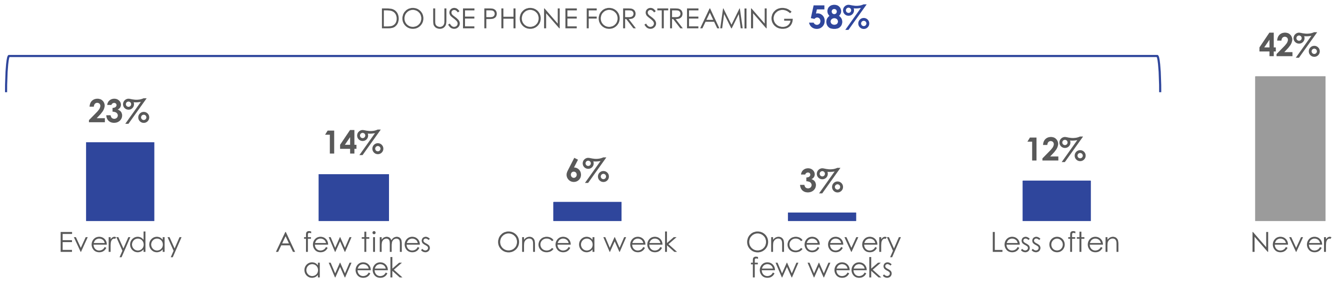
  We also see fewer who mention that they keep their phone on them while driving – lowest measure recorded.

  On the positive, we see more who are leaving their phone in the centre console or the glove compartment – higher than 2020 and 2021 levels.

A/B/C/D/E/F/G denotes a significant difference at the 95% confidence interval.

USING PHONE FOR STREAMING MUSIC

Using Phone for Streaming Music While Driving



	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1125 B	1000 C	912 D	911 E	913 F	891 G
Everyday	16%	17%	17%	17%	19%	22% ABCD	23% ABCDE
A few times a week	14%	14%	14%	14%	13%	14%	14%
Once a week	7%	5%	7%	8% B	6%	6%	6%
Once every few weeks	3%	4%	4%	4%	4%	5% AG	3%
Less often	8%	11% A	9%	11% A	13% AC	10%	12% AC
Never	52% DEFG	49% FG	50% EFG	46%	45%	43%	42%

Reduced Base: Respondent who own/use a smartphone (n=891)
Q25. How often, if ever, do you use your phone for the following activities while driving?

Over half (58%) of BC Drivers use their phone for streaming music as they drive. Using a phone to stream declines significantly with age.

[Age: **18-25 93%,** 26-50 70%, 51-65 36%, 66+ 14%]

The frequency of using a phone for streaming varies:

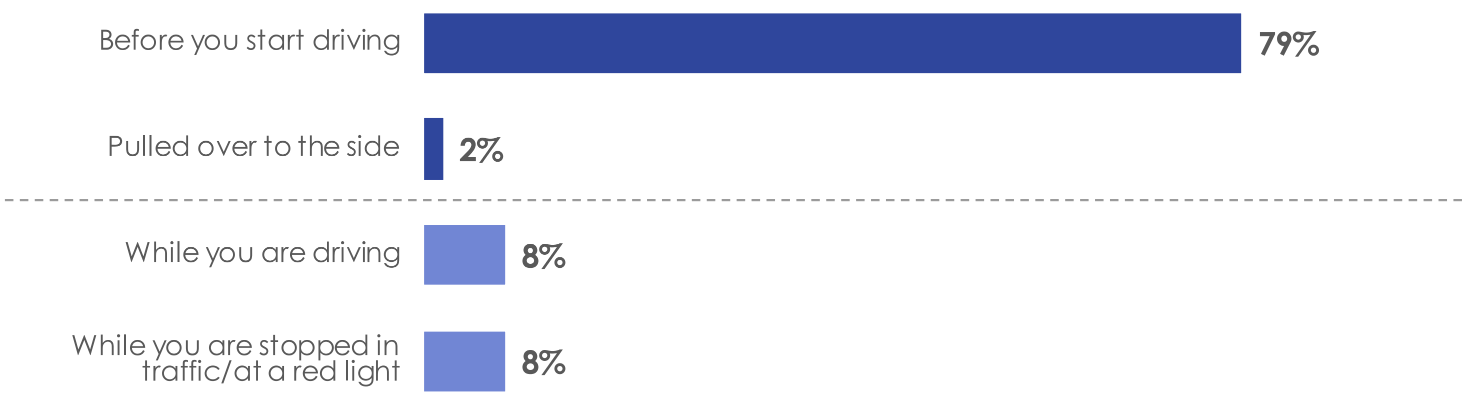
- 23% use their phone for streaming music while driving every day.
  [Age: 1**8-25 58%, 26-50 28%, 51-65 7**%, 66+ 1%]
- A similar proportion (20%) use their phone for streaming music one to a few times per week.
- 15% use their phone for streaming music every few weeks or less frequently.
- The remaining 42% do not use their phone for streaming music at all while driving.
  [Men 38**%, Women 46**%]
  [Age: 18-25 7%, **26-50 30%**, **51-65 64%**, **66+ 86%**]

TRENDED RESULTS

- The proportion of drivers who use their phone for streaming every day may be on the rise. This wave we see the highest proportion on record saying they use their phone daily for this purpose.
- Other measures are generally consistent with previous waves.

A/B/C/D/E/F/G *denotes a significant difference at the 95% confidence interval.*

Timing of Setting Streaming Music



	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	407 A	476 B	444 C	487 D	471 E	487 F	502 G
Before you start driving	75%	82% A	81% A	81% A	84% A	81% A	79%
Pulled over to the side	6% BCDEFG	3% F	2%	2%	2%	1%	2%
While you are driving	9%	6%	9%	10% B	9%	10% B	8%
While you are stopped in traffic/at a red light	6% B	3%	5%	5%	4%	4%	8% BEF

- For the most part, the majority of drivers who use their phone for streaming music are using their phones safely.
- Most (79%) of those who use their phone for streaming music while driving take the time to set the music/playlist before they begin driving. Another 2% take the time to pull over to the side of the road.
  Before driving [Lower Mainland 75%, **Outside Lower Mainland 86%**]
- Fewer say they are setting the music/playlist while they are driving (8%) or when stopped in traffic/at a red light (8%).
  While driving [**Men 11%,** Women 5%] [Age: **18-25 10%, 26-50 9%,** 51-65 1%, 66+ 8%] [**Lower Mainland 11%**, Outside Lower Mainland 4%]

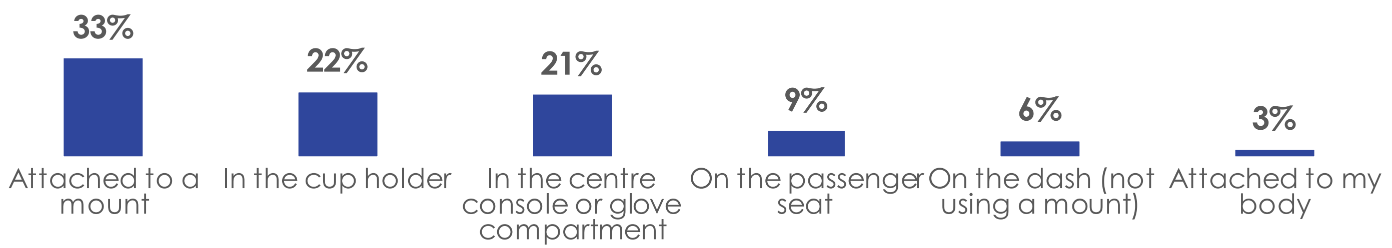
TRENDED RESULTS

- This wave we see a decline in the proportion of drivers who are setting their playlist before they begin driving. This is down considerably compared with all but one previous wave.
- Compared to the last two waves we also see an increase in the proportion who are setting their music when they are stopped in traffic or at a red light. This is the highest level recorded since first measured in 2019.

Reduced Base: Respondents who use their phone for streaming music(n=502)
Q26b. Thinking about when you use your phone for streaming music, when do you typically set the music/playlist? Please select one.

A/B/C/D/E/F/G denotes a significant difference at the 95% confidence interval.

Location of Phone for Streaming Music While Driving



	APR 2019	OCT 2019	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2021
Base size:	407 A	476 B	444 C	487 D	471 E	487 F	502 G
Attached to a mount	**23%**	**26%**	**34%** AB	**29%** A	**34%** AB	**28%**	**33%** AB
In the cup holder	**27%**	**25%**	**26%**	**26%**	**26%**	**26%**	**22%**
In the centre console or glove compartment	**26%** CF	**24%**	**19%**	**21%**	**21%**	**20%**	**21%**
On the passenger seat	**9%**	**9%**	**9%**	**9%**	**9%**	**10%**	**9%**
On the dash (not using a mount)	**4%**	**3%**	**7%** BE	**7%** BE	**3%**	**6%** BE	**6%** BE
Attached to my body	**5%** BC	**2%**	**2%**	**5%** BC	**3%**	**5%** BC	**3%**

Reduced Base: Respondent who use their phone for streaming music (n=502)
Q27b. And where do you typically put your phone when you are using it for streaming music? Please select one.

- A third (33%) of those who use their phone for streaming music while driving keep their phone attached to a mount when streaming.
- A similar proportion (22%) keep their phone in the cup holder and another 21% keep their phone in the centre console when streaming.

  Cup holder [Age: **18-25 33%,** 26-50 19%, 51-65 23%, 66+ 18%] [Lower Mainland 18%, **Outside Lower Mainland 29%**]
- Centre console [**Men 25%,** Women 17%]
- Meanwhile, 9% keep their phone on the passenger seat and 6% keep it on the dash without a mount.
- Lastly, 3% keep their phone on them.

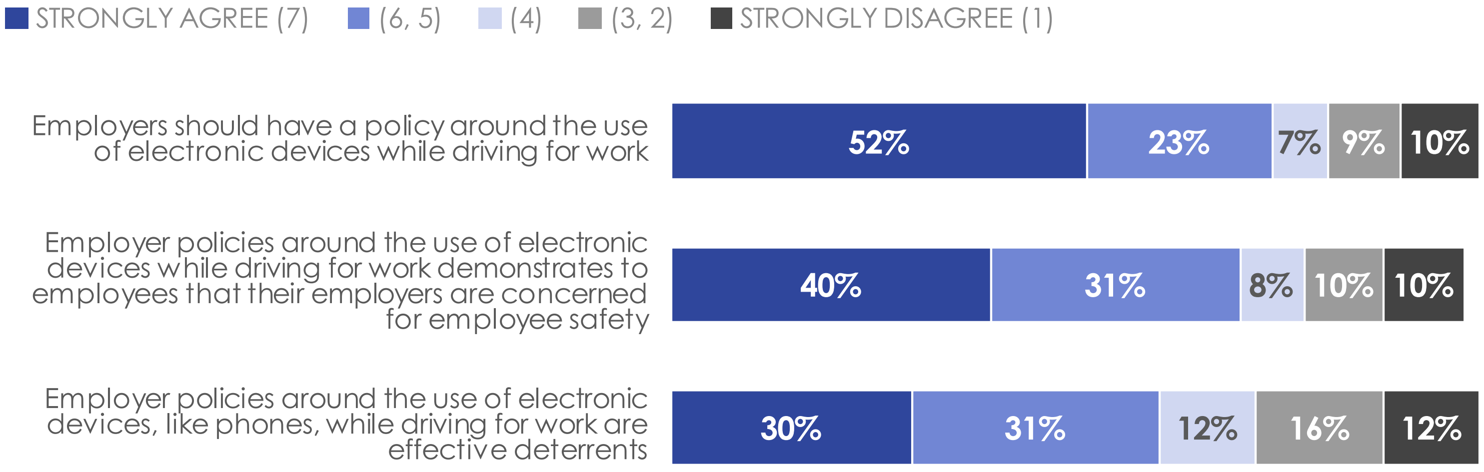
TRENDED RESULTS

- The proportion who use a mount has fluctuated since 2019 and is currently in an upward position that is significantly higher than in 2019. This measure however is still consistent with last wave and may not be pointing to a trend.
- Other measures are generally consistent with all previous waves with only minor variances.

A/B/C/D/E/F/G denotes a significant difference at the 95% confidence interval.

ELECTRONIC DEVICE POLICIES AT WORK

Agreements about Employer Electronic Device Policies



% AGREE (5, 6, 7)	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1001 C	1000 D
Employers should have a policy around the use of electronic devices while driving for work	79% D	79% D	78%	74%
Employer policies around the use of electronic devices while driving for work demonstrates to employees that their employers are concerned for employee safety	73%	72%	75% D	71%
Employer policies around the use of electronic devices, like phones, while driving for work are effective deterrents	63%	61%	64%	61%

- Most (74%) BC drivers highly agree (5, 6 or 7 out of 7) that *Employers should have a policy around the use of electronic devices for employees who drive for work*.
  [Age: 18-25 64%, 26-50 68%, **51-65 85%**, **66+ 87%**]
  [Lower Mainland 70%, **Outside Lower Mainland 80%**]
- Further, 71% agree that *Employer policies around the use of electronic devices while driving for work demonstrates to employees that their employers are concerned for employee safety*.
  [Age: 18-25 58%, 26-50 67%, **51-65 79%**, **66+ 80%**]
  [Lower Mainland 68%, **Outside Lower Mainland 75%**]
- Relatively fewer (61%) agree that *Employer policies around the use of electronic devices, like phones, while driving for work are effective deterrents*.
  [Age: 18-25 46**%, 26-50 60%**, **51-65 65%**, **66+ 67%**]

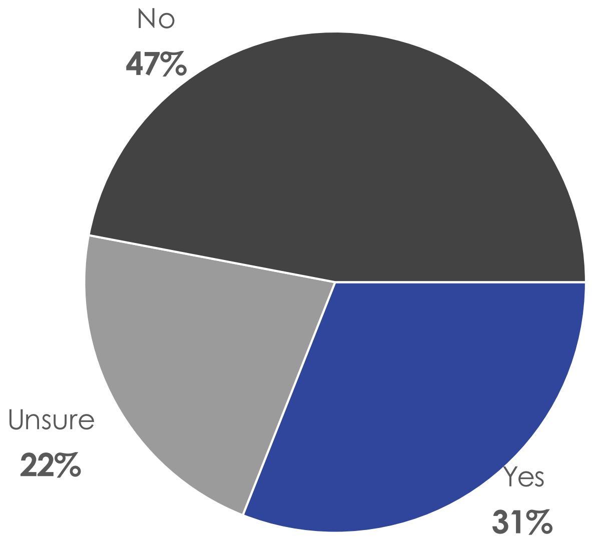
TRENDED RESULTS

- This wave we see fewer who agree that "Employers should have a policy around the use of electronic devices while driving for work".
- Likewise, we see fewer were agree that "Employer policies around the use of electronic devices while driving for work demonstrates to employees that their employers are concerned for employee safety".
- Agreement with "Employer policies around the use of electronic devices, like phones, while driving for work are effective deterrents" has remained consistent across all waves measured.

Base: All respondents (n=1000)
Q34. To what extent do you agree or disagree with the following statements? Please use a scale from 1 to 7 where 7 means strongly agree and 1 means not at all agree.

A/B/C/D denotes a significant difference at the 95% confidence interval.

Policy in Place Regarding Electronic Devices



	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	625 A	554 B	606 C	597 D
Yes	**25%**	**27%**	**26%**	**31%** A
No	**46%**	**48%**	**50%**	**47%**
Unsure	**29%** D	**25%**	**24%**	**22%**

Reduced Base: Total base excluding those who indicated 'not applicable' to this questions (n=597)
Q35. Does your employer have a policy regarding use of electronic devices, like phones, while driving for work?

- Nearly a third (31%) of BC drivers say that their place of employment has a policy regarding the use of electronic devices while driving for work.
- Almost half (47%)of BC drivers say that their employers do not have a policy regarding the use of electronic devices while driving for work.
- A sizable proportion (22%) do not know if such a policy exists for their place of employment.
  [Men 16%,**Women 28%**]

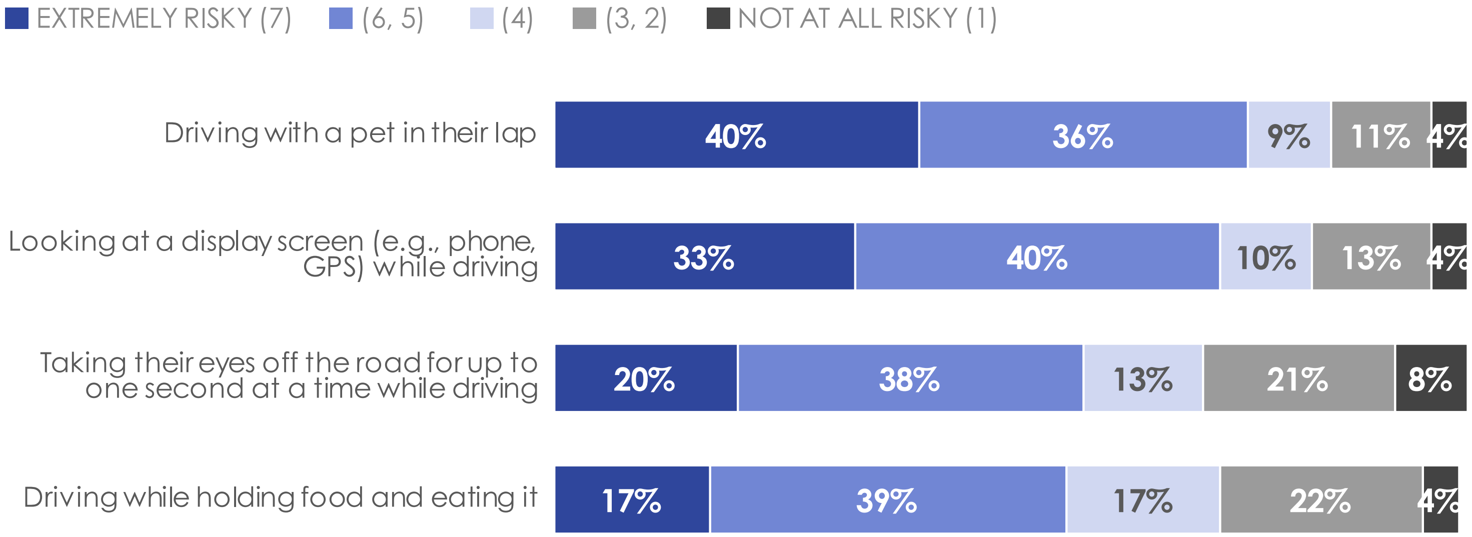
TRENDED RESULTS

- This wave's results are generally consistent with past waves.

A/B/C/D *denotes a significant difference at the 95% confidence interval.*


NON-PHONE
DISTRACTIONS

Perceived Risk of Other Distractions



% HIGHLY RISKY (5, 6, 7)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Driving with a pet in their lap	89% BCDE	83% DE	80% E	79%	76%
Looking at a display screen (e.g., phone, GPS) while driving	77% E	77% E	74%	74%	73%
Taking their eyes off the road for up to one second at a time while driving	63% E	63% E	60%	61%	58%
Driving while holding food and eating it	58%	59%	56%	60%	56%

- Most (76%) BC drivers consider it highly risky (5, 6 or 7 out of 7) to drive with a pet in their lap. This includes 40% who say it is 'extremely risky'.

  Highly risky [Men 73%, **Women 78%**] [Age: 18-25 56%, **26-50 75%**, **51-65 80%**, **66+ 89%**]

- Following closely, 73% consider it highly risky to drive while looking at a display screen (includes 33% who say 'extremely risky').

  Highly risky [Age: 18-25 49%, **26-50 70%**, **51-65 83%**, **66+ 85%**]

- Relatively fewer (58%) consider it highly risky to take their eyes off the road for up to 1 second at a time while driving (20% consider this 'extremely risky').
  Highly risky [Age: 18-25 40%, **26-50 58%**, **51-65 62%**, **66+ 64%**]

- And 56% consider it highly risky to drive while holding/eating food (including 17% who say this is 'extremely risky').

  Highly risky [Men 52%, **Women 60%**] [Age: 18-25 34%, **26-50 57%**, **51-65 60%**, **66+ 67%**] [**Lower Mainland 59%**, Outside Lower Mainland 52%]

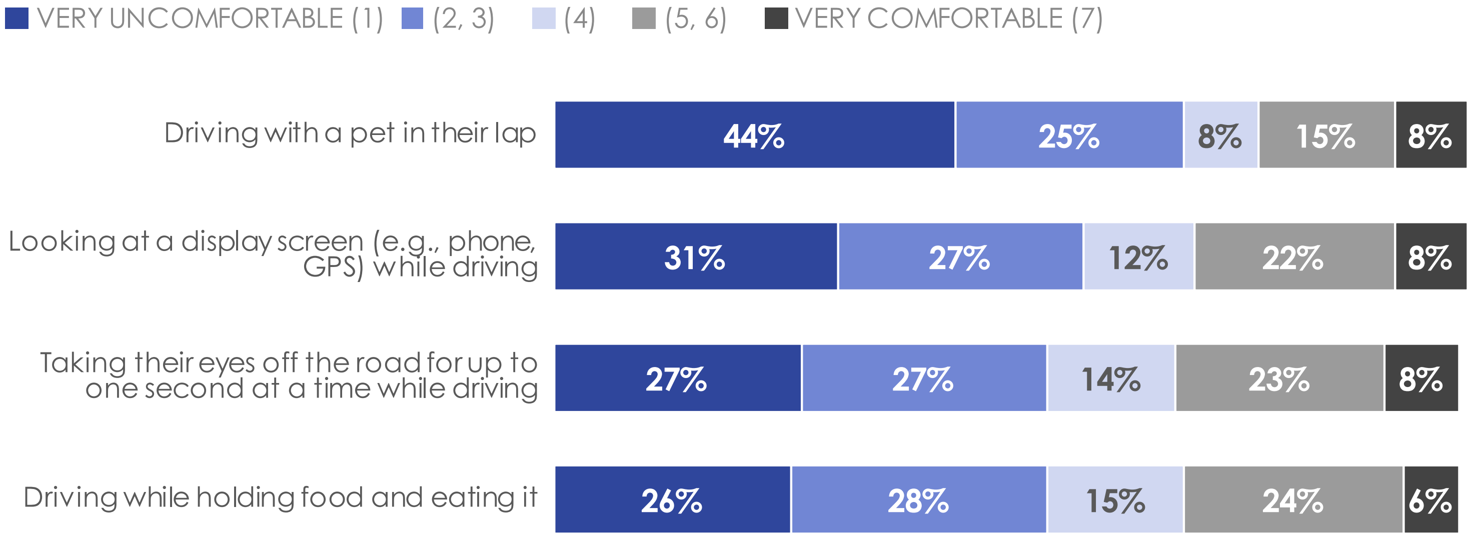
TRENDED RESULTS

- Each wave since first recorded we have been seeing a lower proportion who feel that driving with a pet in your lap is a highly risky behavior. This is a negative trend.
- Likewise, we are noticing some negative downward trends also for the proportion of drivers who feel that looking at a display screen is risky and those who feel that taking their eyes off the road for a second is risky especially when compared to 2020.

Base: All respondents (n=1000)
Q8. In your personal opinion, how RISKY (in terms of being in an accident or near miss) do you consider the following behaviours to be? Please use a scale from 1 to 7 where 7 means extremely risky and 1 means not at all risky.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

Comfort Level of Passenger when Driver is Non-Phone Distracted



% HIGHLY UNCOMFORTABLE (1, 2, 3)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Driving with a pet in their lap	73%	73%	71%	72%	69%
Looking at a display screen (e.g., phone, GPS) while driving	63% E	60%	59%	59%	58%
Taking their eyes off the road for up to one second at a time while driving	54%	57%	54%	55%	54%
Driving while holding food and eating it	55%	56%	54%	55%	54%

Base: All respondents (n=1000)
Q32. Now, thinking about times when you are a passenger in a car, how comfortable would you feel if the driver was doing the following? Please use a scale from 1 to 7 where 7 means very comfortable and 1 means very uncomfortable.

Many BC drivers imagine they would be uncomfortable being a passenger with a driver exhibiting any of the evaluated distractions. Typically, it is older passengers who are more uncomfortable with driver distractions.

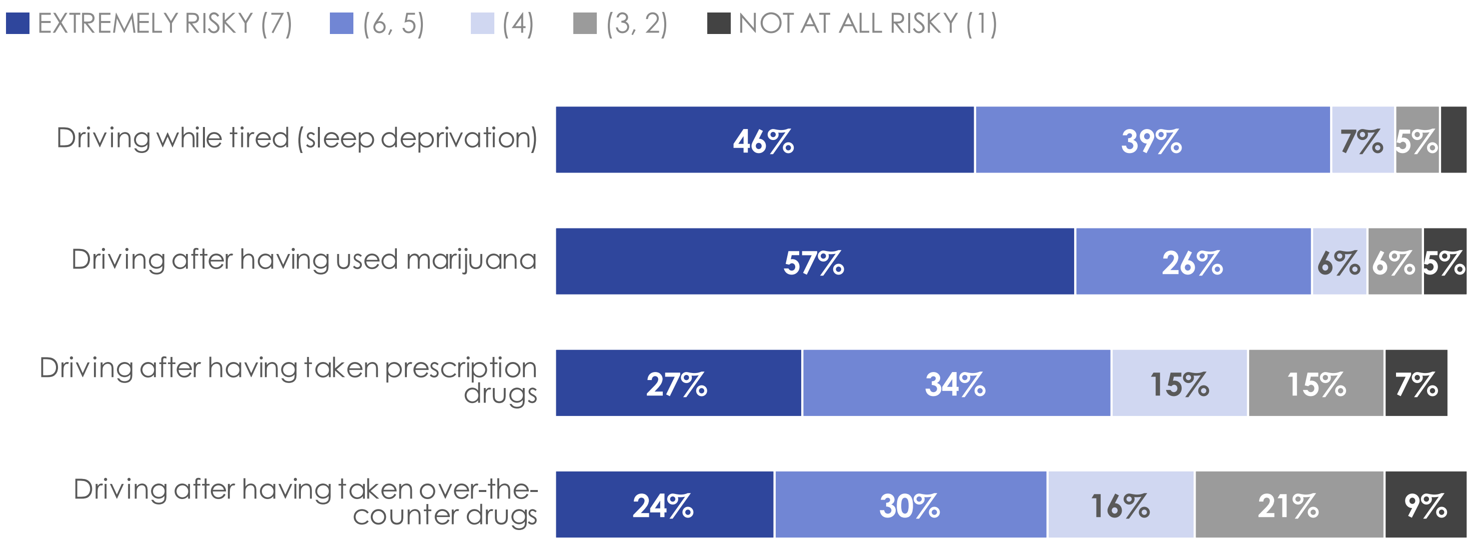
- Most (69%) would be highly uncomfortable being a passenger if the driver has a pet in their lap.
  [Age: 18-25 59%, 26-50 65%, **51-65 77% 66+ 78%**]
  [Lower Mainland 66%, **Outside Lower Mainland 73%**]
- 58% would be highly uncomfortable being a passenger if the driver was looking at any type of display screen when driving.
  [Age: 18-25 41%, 26-50 52%, **51-65 72%, 66+ 71%**]
- Following closely, 54% are highly uncomfortable with a driver talking their eyes off the road for 1 second at a time.
  [**Men 58%,** Women 51%]
  [Age: 18-25 44%, 26-50 51%, **51-65 59%**, **66+ 66%**]
- A similar proportion (54%) are highly uncomfortable with a driver who is holding items that they eat or drink while driving.
  [Age: 18-25 45%, 26-50 51%, 51-65 57%, **66+ 69%**]

TRENDED RESULTS

- We are beginning to see a declining trend in those who are uncomfortable with drivers looking at a display screen while driving. This measure has incrementally decreased since first measured in Spring 2020 and is now statistically significant against the baseline in 2020.
- Other measures are consistent with past waves.

A/B/C/D/E *denotes a significant difference at the 95% confidence interval.*

Perceived Risk of Possible Impairment



% HIGHLY RISKY (5, 6, 7)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2021
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Driving while tired (sleep deprivation)	88%	90% CE	87%	90% CE	85%
Driving after having used marijuana	86%	88% CE	83%	87% CE	83%
Driving after having taken prescription drugs	66% E	65%	65%	67% E	62%
Driving after having taken over-the-counter drugs	57%	61% E	58%	60% E	54%

- Nearly nine-in-ten (85%) BC drivers consider it highly risky (5, 6, or 7 out of 7) to drive while tired (possibly sleep deprived), with half (46%) saying this is 'extremely risky'.
  Highly risky [18-25 67%, **26-50 84%, 51-65 90%, 66+ 91%**]
- Following closely, (83%) consider it risky to drive after having used marijuana (57% 'extremely risky').
  Highly risky [Men 80%, **Women 86%**][18-25 73%, 26-50 79%, **51-65 89%, 66+ 95%**]
- Relatively fewer (62%) say it is risky to drive after having taken prescription drugs (27% 'extremely risky').
  Highly risky [**18-25 49%,** 26-50 64%, 51-65 61%, 66+ 65%]
- And fewer still (54%) say it is risky to drive after having taken over-the-counter drugs (24% 'extremely risky').
  Highly risky [**18-25 42%,** 26-50 58%, 51-65 53%, 66+ 55%]
  [**Lower Mainland 58**%, Outside Lower Mainland 49%]

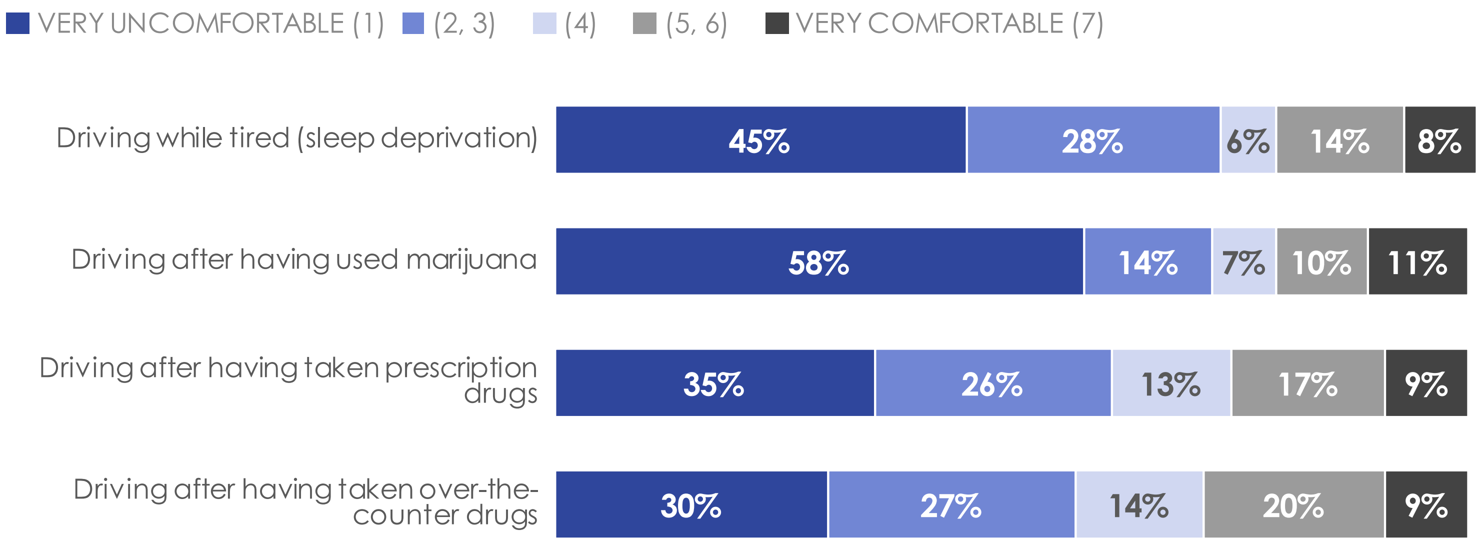
TRENDED RESULTS

- All measures have experienced a significant decline since Fall 2021. Compared to the fall, BC drivers are less inclined to consider each of these behaviours to be risky.
- For driving while tired and driving after having used marijuana, and driving after taking OTC drugs, this wave's results are also lower than Fall 2020.

Base: All respondents (n=1000) Note: Data <4% not labelled.
Q8. In your personal opinion, how RISKY (in terms of being in an accident or near miss) do you consider the following behaviours to be? Please use a scale from 1 to 7 where 7 means extremely likely and 1 means not at all likely.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

Comfort Level of Passenger when Driver is Possibly Impaired



% HIGHLY UNCOMFORTABLE (1, 2, 3)	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
Driving while tired (sleep deprivation)	**75%**	**75%**	**72%**	**73%**	**73%**
Driving after having used marijuana	**78%** E	**78%** E	**76%** E	**76%** E	**72%**
Driving after having taken prescription drugs	**62%**	**62%**	**60%**	**62%**	**62%**
Driving after having taken over-the-counter drugs	**58%**	**60%** C	**55%**	**57%**	**58%**

Base: All respondents (n=1001) Note: Data <4% not labelled.
Q32. Now, thinking about times when you are a passenger in a car, how comfortable would you feel if the driver was doing the following? Please use a scale from 1 to 7 where 7 means very comfortable and 1 means very uncomfortable.

Most BC drivers would not be comfortable being a passenger with a driver whose driving could potentially be impaired.

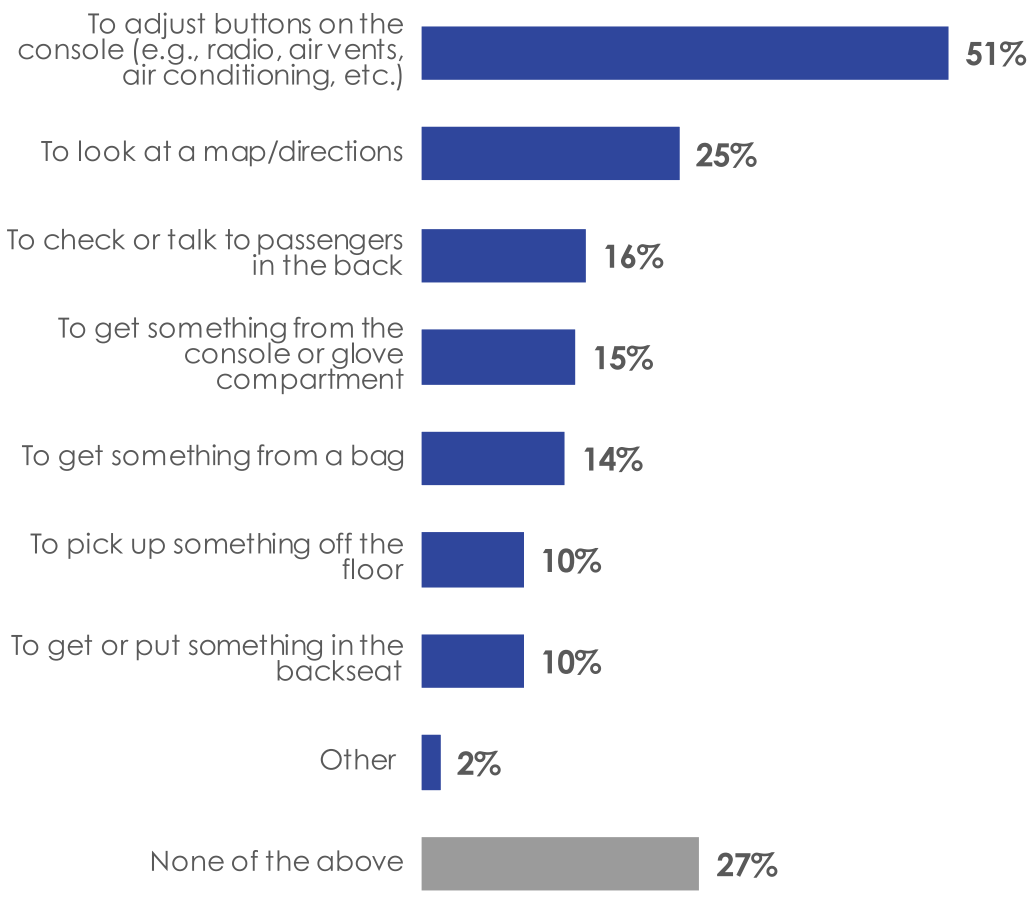
- Specifically, 73% would be highly uncomfortable being a passenger if the driver was sleep deprived.
  [18-25 63%, 26-50 69%, **51-65 79%, 66+ 78%**]
  [Lower Mainland 68%, **Outside Lower Mainland 77%**]
- Similarly, 72% would be highly uncomfortable (1, 2 or 3 out of 7) being a passenger if the driver had used marijuana.
  [**Lower Mainland 69%,** Outside Lower Mainland 76%]
- Relatively fewer (62%) are uncomfortable with a driver driving after taking prescription drugs.
  [**Men 66%,** Women 58%]
  [18-25 60%, 26-50 58%, **51-65 67%, 66+ 67%**]
- And 58% are uncomfortable with a driver driving after taking over-the-counter drugs.

TRENDED RESULTS

- This wave there has been a significant drop in the proportion who say that they are uncomfortable driving with a driver who has used marijuana.
- All other measures are generally consistent with previous waves.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

Occasions when Driving and Take Eyes Off the Road



Three-quarters (73%) of BC drivers admit that there has been one or more occasion this month when they have taken their eyes off the road for up to one second at a time while driving. On the flipside, 27% indicate that they have not taken their eyes off the road for any reason.

- The most common reason for taking eyes of the road is to *adjust buttons on the console* (51%) [**18-25 60%,** 26-50 46%**, 51-65 55**%, **66+ 54%**] [Lower Mainland 47%**, Outside Lower Mainland 56%]**
- Other reasons *include to look at a map/directions* (25%), to *check or talk to passengers in the back* (16%), *to get something from the console or glove compartment* (15%), *to get something from a bag* (14%), *to pick up something off the floor* (10%), and/or *to get or put something in the backseat* (10%).
- For most actions listed, it is a higher proportion of younger drivers age 18 to 25 than older age groups that admit to taking their eyes off the road. Subgroup differences include:
  - *Look at a map/directions* [**18-25 46%, 26-50 30%, 51-65 15**%, 66+ 8%] [**Lower Mainland 28%,** Outside Lower Mainland 21%]
  - *Check on passengers in back* [**18-25 25%, 26-50 19%, 51-65 12%**, 66+ 5%]
  - *Get something from the glove compartment* [**18-25 27%**, **26-50 17**%, 51-65 8%, 66+ 5%] [**Lower Mainland 17%,** Outside Lower Mainland 12%]
  - *Get something from a bag* [**18-25 25%**, 26-50 14%, 51-65 10%, 66+ 9%]
  - *Pick something from floor* [**18-25 18%, 26-50 11%, 51-65 8%**, 66+ 3%]
  - *Get something in backseat* [**18-25 26%, 26-50 10%,** 51-65 4%, 66+ 2%]

Base: All respondents (n=1000)
Q31. In the past month, were there any occasions where you were driving and took your eyes off the road for up to 1 second at a time? Please select all that apply.

Occasions when Driving and Take Eyes Off the Road (cont.)

	MAY 2020	NOV 2020	APR 2021	NOV 2021	APR 2022
Base size:	1000 A	1000 B	1000 C	1001 D	1000 E
To adjust buttons on the console (e.g., radio, air vents, air conditioning, etc.)	**54%**	**55%**	**55%**	**57%** E	**51%**
To look at a map/directions	**20%**	**22%**	**22%**	**24%** A	**25%** A
To check or talk to passengers in the back	**15%**	**15%**	**14%**	**15%**	**16%**
To get something from the console or glove compartment	**15%**	**14%**	**14%**	**13%**	**15%**
To get something from a bag	**16%**	**13%**	**13%**	**13%**	**14%**
To pick up something off the floor	**10%**	**10%**	**9%**	**11%**	**10%**
To get or put something in the backseat	**9%**	**9%**	**9%**	**8%**	**10%**
Other please specify	**2%**	**2%**	**2%**	**3%**	**2%**
None of the above	**27%**	**27%**	**28%**	**25%**	**27%**

TRENDED RESULTS

- Most measures are generally consistent with all previous waves.
- This wave we see a decline in the proportion of those who say that they have taken their eyes of the road to adjust buttons on the console compared to last wave. This wave's results however are still consistent with prior waves and it may not be a trend that we are seeing.
- Last wave we first spotted an increase in those who say that they have taken their eyes off the road momentarily to look at maps/directions. This continues to be on the rise this wave.

Base: All respondents (n=1000)
Q31. In the past month, were there any occasions where you were driving and took your eyes off the road for up to 1 second at a time? Please select all that apply.

A/B/C/D/E denotes a significant difference at the 95% confidence interval.

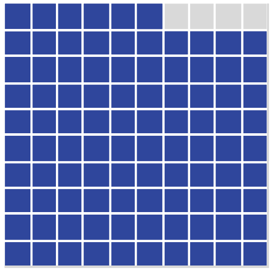
RESPONDENT PROFILE

Cell Phone Ownership

CELL PHONE OWNERSHIP

- In total, 96% of BC Drivers surveyed this wave own or use a cell phone.

  Yes [**18-25 98%**, **26-50 97%**, **51-65 95%**, 66+ 88%]



96%
of BC drivers own/use a cell phone

Base: All respondents (n=1000)
Q4. Do you personally own and/or use a cell phone?

CELL PHONE TYPE

- Among drivers who own or use cell phones, nearly all (95%) own a smartphone. Still, 5% own a traditional cell phone.

  Smartphone [**18-25 95%, 26-50 97%, 51-65 95%,** 66+ 85%]

  Traditional [18-25 5%, 26-50 2%, 51-65 5%, **66+ 14%**]

95%
own smartphones

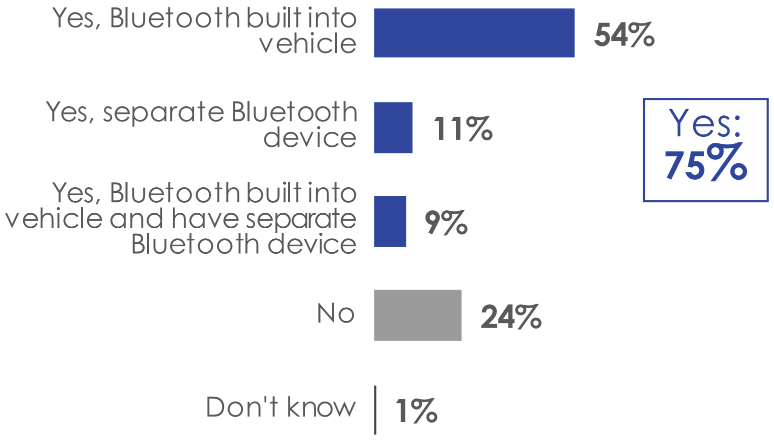
5%
own traditional cell phones

<1%
own other types

Reduced Base: Respondents who own/use a cell phone (n=949)
Q5. Which of the following best describes the phone you own?

HANDS-FREE DEVICE OWNERSHIP

- Among drivers who own or use a cell phone, 75% also have a method to use their phone hands-free.
  Yes [[**18-25 83%, 26-50 81%,** 51-65 64%, 66+ 67%]



Reduced Base: Respondents who own/use a cell phone (n=949)
Q6. Do you own a hands-free set/blue tooth device to use with your cell phone? This would include Bluetooth that is built into your vehicle or a separate, portable device like a headset.

Demographics

AGE	
18 – 25	**12%**
26 – 50	**49%**
51 – 65	**25%**
65+	**13%**

REGION	
GV	**33%**
FV	**25%**
VI	**18%**
SI	**16%**
NC	**8%**

GENDER	
Male	**48%**
Female	**52%**

APPENDIX 8H

GOVERNMENT INITIATIVES

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A INTRODUCTION

1. As a Crown corporation, ICBC is mandated to undertake various initiatives on behalf of Government. Some of these government initiatives are funded on a cost-recovery basis, while others are funded by Basic insurance premiums pursuant to *Special Direction IC2 to the BC Utilities Commission, BC Regulation 307/2004*, *as amended (Special Direction IC2).*[1] In the September 2009 Amended Application for a Streamlined Regulatory Process, ICBC committed to provide additional reporting on government initiatives, which BCUC approved in the April 6, 2010 Decision on the Streamlined Regulatory Process (Order G-65-10). In the May 16, 2017 Decision regarding the 2016 Revenue Requirements Application (Order G-71-17), the BCUC approved ICBC's proposal to continue annual reporting of government initiatives as a chapter in each revenue requirements application (RRA).

2. The government initiatives to which the reporting applies are new programs as identified in the Addendum to the Service Agreement between ICBC and Government (Agreement Addendum) that ICBC undertakes on behalf of Government.[2]

3. As ICBC was exempt from filing for a general rate change order and associated reporting requirements for fiscal year (FY) 2021/22, this report includes two years of Agreement Addendum and Appendices to the Service Agreement (Agreement Appendices). The FY 2020/2021 Agreement Addendum and Agreement Appendices are provided as Attachment 8H.1, and the FY 2021/2022 Agreement Addendum and Appendices are provided as Attachment 8H.2 of this report. Section B of this report provides an update on the new and ongoing government initiatives identified in the Agreement Addendum.

4. As discussed below, some government initiatives underway at ICBC are funded through the established funding framework by the responsible agencies involved, unless those priorities are still under development. For those under development, ICBC works with the responsible agency to identify costs and finalize a funding arrangement. Some agencies that provide funding are:

[1] *Special Direction IC2,* sections 3(1)(c) (i), (ii), 3(1)(g), and 3(4).

[2] The Service Agreement is an agreement between ICBC and Government with an effective date of September 1, 2003 and revised on December 31, 2006 pursuant to amendments to the *Insurance Corporation Act* passed in 2003. This agreement documents the Non-insurance services that ICBC will deliver on behalf of Government. The Addendum to the Service Agreement and the Appendices to the Service Agreement are normally updated annually. The Addendum to the Service Agreement documents any actual or proposed changes in service or service delivery that will substantially change the cost of delivering Non-insurance services that have not been previously identified. It is also the mechanism to update the Appendices to the Service Agreement to reflect existing, new or changed services.

- RoadSafetyBC
- Ministry of Finance
- Ministry of Public Safety and Solicitor General
- Ministry of Transportation and Infrastructure (MOTI)

B GOVERNMENT INITIATIVES IDENTIFIED IN THE ADDENDUM TO THE SERVICE AGREEMENT

5. Funding for the development and ongoing operating expenses of government initiatives follows a funding framework, and the costs may be handled in different ways. Costs of initiatives may be recovered from Government, including other government entities, or from user fees with no impact to Basic insurance rates. If there are quantifiable potential operational or claims savings for ICBC or if there is a government directive that directs ICBC to bear costs, all or part of the initiative may be funded by Basic insurance premiums.

- Figure 8H.1 lists initiatives that are either new to the Agreement Addendum or included in the government initiatives compliance reports to BCUC for the first time.
- Figure 8H.2 provides updates on other ongoing or completed government initiatives that are included in the attached Agreement Addendum.

Figure 8H.1 - New Government Initiatives Identified in the Addendum to the Service Agreement

Initiative	Description	Estimated Cost/ Funded by
BC's Graduated Licensing Program for Motorcyclists (GLP-M)	• ICBC continues to support the policy and regulatory development of a GLP-M by engaging with Government on ways to improve road safety outcomes for BC's rider population, including discussions on any potential changes to BC's GLP-M.	• Recoverable costs to be determined.
Black Book versus Declared Value	• Effective October 1, 2022, on behalf of Government, ICBC is required to collect the Provincial Sales Tax (PST) on a used vehicle sale based on the greater of the Black Book indicated average wholesale value of a vehicle or the declared purchase price. • ICBC is required to update its policies, procedures, and systems to determine the amount of PST to be collected by ICBC upon vehicle registration or transfer.	• All costs funded by the Ministry of Finance. • No costs to ICBC.
Digital forms for 12 and 24 hour suspensions	• ICBC continues to support RoadSafetyBC's implementation of digital forms for 12-hour suspensions and 24-hour prohibitions to allow electronic delivery to ICBC and RoadSafetyBC. • Work is anticipated to be completed for spring 2023.	• All costs funded by the Ministry of Public Safety and Solicitor General. • No costs to ICBC.
Driver's Licence Number Project	• ICBC is working towards implementing a solution to extend the driver licence number range from seven digits to eight digits, effective July 2023, as ICBC expects that all potential seven digit numbers will be exhausted by late 2023. • This will enable ICBC's ability to accept new clients and deliver on its government mandated services of issuing new BC Driver Licenses, BC Identification Cards and BC Services Cards. • This is primarily an ICBC driven initiative to an existing non-insurance service.	• ICBC is funding $3.2 million in FY 2022/23.
Driver Medical Fitness Transformation Project (DMFT)	• ICBC continues to support RoadSafetyBC's goal to streamline Driver Medical Fitness processes by digitizing forms, improving the related systems interactions, and providing a digital portal for physicians to submit forms electronically. • Work on this release II of the project is anticipated to continue into 2023.	• All costs funded by the Ministry of Public Safety and Solicitor General. • No costs to ICBC.

Initiative	Description	Estimated Cost/ Funded by
International Registration Compliance Project	• BC is a member of the International Registration Plan (IRP) which governs the apportionment of relevant licensing fees and taxes of commercial vehicles that operate across different jurisdictions throughout Canada and the USA. • ICBC is in the process of replacing its IRP legacy system with a modern and user friendly IRP Data Repository certified system. • The new system needs to adhere to the new IRP standards in order to meet the requirements of the IRP agreement and the requirements of other IRP member jurisdictions. • Project go-live date is January 22, 2023.	• ICBC is funding $4.41 million in FY 2022/2023.
Ministry of Transportation and Infrastructure (MOTI) Data Exchange Services	• ICBC is required by MOTI to replace existing insurance systems data exchange services with new services to retrieve ICBC data and verify driver license and vehicle information. • ICBC has engaged in further discovery work with MOTI. Work on this project is expected to commence in FY 2023/2024.	• All costs funded by the Ministry of Transportation and Infrastructure. • No costs to ICBC.
Online Renewal of Vehicle Licence (Automated Licence Plate Recognition Program)	• In February 2022, Government amended the *Motor Vehicle Act* such that effective May 1, 2022, ICBC is no longer required to issue and BC motorists are not required to display a licence plate validation decal. The elimination of the decal is part of business process changes related to the implementation of ICBC's online insurance renewals that launched on May 1, 2022. • On March 31, 2022, ICBC entered into a funding agreement with the province to enhance and expand the Automated Licence Plate Recognition program helping law enforcement in BC detect unlawful, unlicensed and uninsured drivers. • This initiative was in support of ICBC and the Government's shift towards additional online service options.	• ICBC made a one-time Optional insurance funded investment of $1 million to the Automated Licence Plate Recognition program.
PST Exemption for Zero Emission Vehicles	• Effective February 23, 2022, Government removed the PST for previously owned Zero Emission Vehicles. • ICBC was required to make minor system and process changes to discontinue the collection of PST on eligible vehicles.	• Development and ongoing operational costs are nominal and paid by ICBC.

Figure 8H.2 - Updates on Other Government Initiatives

Initiative	Description	Funded by/Estimated Cost
Affinity Licence Plates	• ICBC is continuing to work with Government to explore a potential future offering of an online affinity plate program where customers can purchase a specialty number plate to support a cause or charity. • There is no timeline for a decision to proceed with a project at this time.	• To be determined.
BC Securities Commission Debts Refuse-to-Issue	• In 2021, amendments were made to the Agreement Appendices to reflect that, as of March 29, 2021, ICBC is required to refuse to issue a driver's licence, vehicle licence or vehicle number plate for an outstanding debt owed to the BC Securities Commission.	• $12,500 was funded in FY 2021/22 through ICBC's Change Management Fund.
Commercial Vehicle Safety Enforcement (CVSE) Inspection and Safety Programs for Commercial Vehicles	• In 2021, amendments were made to the Agreement Appendices to provide greater clarity on ICBC's role in administering the registration and licensing of vehicles with CVSE being responsible for the statutory requirements for provincial safety standards and programs. • The amended Agreement Addendum also reflects minor edits to the Agreement Appendices made for clarity and accuracy. Among those edits, references were updated to the MOTI's vehicle inspection and safety programs to better reflect the Ministry's responsibility for determining a vehicle's fitness for on-highway operation.	• There are no changes in costs with the updating of the language in the Agreement Appendices.
COVID-19 Refuse to Issue (RTI)	• Effective July 1, 2021, amendments to the Motor Vehicle Act extended 'Refuse to Issue' (RTI) restrictions under the Emergency Program Act and COVID-19 Related Measures Act, requiring ICBC to refuse to issue a driver's licence, vehicle licence or vehicle number plate to an applicant with outstanding debt for unpaid tickets.	• $32,000 implementation cost covered by ICBC's Change Management Fund. Ongoing operational costs are nominal and funded by ICBC.
Enhanced Driver's Licence Phase-Out	• In 2021, amendments were made to the Agreement Appendices to reflect the January 18, 2021 Government announcement of the phase-out of the BC Enhanced Driver's Licence (EDL) program. • With the discontinuance of the EDL program, ICBC is no longer issuing new EDLs. • The phase-out will be completed in September 2025 when all current cards will have expired. Active licences and ID cards will remain valid up to their expiry dates, and existing cards will not be renewed.	• All costs funded by the Ministry of Public Safety and Solicitor General. • No costs to ICBC.
Mandatory Entry-Level Training (MELT)	• Government introduced legislative amendments to the *Motor Vehicle Act*, which were passed on August 14, 2020 (*Motor Vehicle Amendment Act, 2020 ((Bill 2)*), and MELT took effect on October 18, 2021. • MELT is a mandatory driving training program for Class 1 (commercial) driver's licence applicants to demonstrate the successful completion of an ICBC approved MELT course. • ICBC provides and approves the course curriculum. ICBC also approves driver training schools to deliver the MELT program.	• All costs funded by the Ministry of Transportation and Infrastructure. • No costs to ICBC.

C CONCLUSION

ICBC submits that, through the information provided in this Appendix and associated attachments, it has met its commitments to provide reporting on government initiatives. This Appendix also provides the necessary transparency regarding ICBC's involvement in government initiatives and their funding.

Attachment 8H.1 – 2020/21 Addendum and Appendices to the Service Agreement

Service Agreement Addendum

Changes in Costs and Services to March 31, 2021

I. Introduction

1. Section 11.3 of the Service Agreement between ICBC and the Ministry of Public Safety and Solicitor General dated September 1, 2003, and revised on December 31, 2006, requires that an addendum be prepared that identifies any actual or proposed change in service or service delivery that:
   a) has or will add to or reduce substantially the cost of delivering non-insurance services; and,
   b) has not been identified in any previous Addendum.

2. Addendums were prepared for all previous years up to and including 2020 with updates to the Appendices to the Service Agreement submitted to the British Columbia Utilities Commission (the Regulator). This Addendum and update to the Appendices cover the period from April 1, 2020 through to March 31, 2021.

3. Section 3(1)(c)(i) of the Special Direction IC2 requires that the Regulator, in exercising its powers and functions, must fix rates for basic insurance after taking into account ICBC's costs in that year for services it provides on behalf of the provincial government, including vehicle licensing, driver licensing, and other activities in accordance with the Service Agreement, including its amendments.

4. The attached "Appendices to the Service Agreement", revised to March 31, 2021, incorporates changes in services on a cumulative basis since the Service Agreement was signed in 2003.

II. Actual Substantial Changes in Service or Delivery since April 1, 2020

Minor operational changes throughout the period from April 1, 2020 through to March 31, 2021 are shown in the revised Service Agreement Appendices. The following substantial changes in service or delivery were made during the 2020/21 fiscal year:

Initiative	Estimated Costs
Enhanced Driver's Licence phase-out. On January 18, 2021, government announced the phase-out of the B.C. Enhanced Driver's Licence program. The phase-out will	There are no costs to ICBC. All costs, including initial and ongoing costs are recovered from the

be complete in September 2025 when all current cards will have expired. Active licences and ID cards will remain valid through their expiry, and existing cards will not be renewed.	Ministry of Public Safety and Solicitor General.
BC Securities Commission Debts – Refuse to Issue. As of March 29, 2021, ICBC is required to refuse to issue a driver's licence, vehicle licence or vehicle number plate for outstanding debt owed to the BC Securities Commission.	The $12,500 implementation cost was covered by the ICBC Change Management Fund. Ongoing operational costs are nominal and paid for by ICBC.
CVSE inspection and safety programs for commercial vehicles. Amendments were made to the Appendices to provide greater clarity on ICBC's role in administering the registration and licensing of vehicles with CVSE being responsible for the statutory requirements for provincial safety standards and programs.	N/A

III. Proposed Substantial Changes in Service or Delivery

The following substantial items are currently being developed or are under discussion with the provincial government. Completed initiatives that resulted in costs and/or changes to services delivered by ICBC after March 31, 2021 will be included in section II of next year's 2022 Addendum update covering the entirety of fiscal period 2021/22.

Initiative	Estimated Costs
Affinity licence plates. ICBC is working with government in the discovery phase for the delivery of an online affinity plate program where customers can purchase a specialty number plate to support a cause or charity. Delivery of the program is anticipated as early as spring 2023.	Scope, costs and funding mechanisms to be determined.
Online renewal of vehicle licence. ICBC is modernizing the way in which they, through their broker partners, delivers insurance products and services to customers	The online project is part of a larger piece of work for on-line insurance for Basic and Optional.

Initiative	Estimated Costs
by delivering additional online capabilities in May 2022. ICBC and government have also engaged with stakeholders to explore eliminating the licence plate decal in support of online vehicle licence/insurance renewals and to reduce decal related costs.	ICBC will be making a one-time payment of up to $1 million to support the purchase of automated licence plate readers to be used by law enforcement as a tool to help maintain low/uninsured rates.
Graduated Licensing Program for Motorcycles (GLP-M). Support the policy development of a Graduated Licensing Program for motorcycles (GLPM).	Scope, costs and funding mechanisms to be determined.
Mandatory Entry Level Training (MELT). Development and implement a Mandatory Entry Level Training (MELT) for commercial drivers. Announced in March 2021 and launched on October 18, 2021.	All costs funded by the Ministry of Transportation and Infrastructure.
Driver Medical Fitness Transformation project. Support RoadSafetyBC's transformation of the Driver Fitness processes by streamlining manual tasks and using technology to digitize paper and fax based processes to reduce errors and increase timely provision of required information to RoadSafetyBC, drivers, healthcare providers, and ICBC.	All costs funded by Ministry of Public Safety and Solicitor General.
Digital forms for 12 and 24 hour suspensions. Support RoadSafetyBC's implementation of digital forms for 12 hour suspensions and 24 hour prohibitions to allow for their electronic delivery to ICBC and RoadSafetyBC.	All costs funded by Ministry of Public Safety and Solicitor General.
COVID Refuse to issue (RTI). ICBC was required, as of July 1, 2021, to refuse to issue a driver's licence, vehicle licence or number plate where there are outstanding unpaid violation tickets issued under the Covid-19 Related Measures Act and the Emergency Program Act.	The $32,500 cost was covered by the ICBC Change Management Fund.
MOTI Data Exchange Services. Support the replacement of existing mainframe data exchange services required by the Ministry of Transportation and Infrastructure with new services to retrieve ICBC data and verify driver licence and vehicle information.	All costs funded by the Ministry of Transportation and Infrastructure.

Mark Sieben
Deputy Solicitor General
Ministry of Public Safety and Solicitor General

Date: December 15, 2021

Nicolas Jimenez
President and CEO
ICBC

Date: December 13, 2021

APPENDICES

TO THE

SERVICE AGREEMENT

BETWEEN

THE MINISTRY OF PUBLIC SAFETY AND SOLICITOR GENERAL

AND

THE INSURANCE CORPORATION OF BRITISH COLUMBIA

Effective Date: September 1, 2003
Amended on:

July 6, 2004
August 8, 2005
December 31, 2006
December 31, 2007
December 31, 2009
December 31, 2010
December 31, 2011
December 31, 2012
December 31, 2013
December 31, 2014
December 31, 2015
March 31, 2017
March 31, 2018
March 31, 2020
March 31, 2021

APPENDIX A: VEHICLE RELATED SERVICES

A1 INTRODUCTION

- Section 3 of the *Motor Vehicle Act* (MVA) requires that unless exempt, a motor vehicle or trailer must be registered, licensed and insured before it is operated on public roadways. In addition to providing the minimum required universal compulsory automobile insurance and optional insurance coverage, ICBC has the legislated mandate to act as the Province's vehicle registration and licensing authority. As part of this role, ICBC strives to ensure and promote consumer protection and road safety in regards to the registration and licensing of vehicles.
- A network of Autoplan insurance and Service BC agents acting in the name of ICBC provide vehicle registration and licensing services to the motoring public. ICBC provides technical and operational support to these agents.

A2 VEHICLE REGISTRATION

- A vehicle cannot be licensed or insured without first being registered with ICBC. Vehicle registration involves the collection and recording of owner and vehicle identification information, such as the owner's name and address, and a vehicle's year of manufacture, make, model, colour, and vehicle identification number (VIN). In establishing a registration record, ICBC representatives must satisfy themselves as to a vehicle's true identification and ownership. This is often achieved by physically viewing a vehicle to confirm its VIN and ensuring that complete ownership documentation is presented. Table A.1 summarizes the vehicle registration services provided by ICBC.
- The existence of vehicle registration information benefits many parties, including vehicle owners, prospective purchasers, insurers, financial institutions, policing authorities, and Government. Having vehicle identification and ownership information centrally recorded and readily accessible establishes a reasonable level of certainty regarding ownership for the owner of record, any prospective buyer, and insurance companies. This information is also important in increasing the reliability of the private property lien registry and improves financial institutions' ability to secure personal loans to their customers. Also, the registration records provide policing authorities with a valuable tool used for vehicle and owner identification in traffic enforcement, violation ticket administration, investigation of crimes, and facilitating the issuance of vehicle safety recall notices.
- The requirement to register vehicles and update the ownership records, such as when a vehicle is purchased, provides Government with significant revenues. These revenues are derived from the collection of established registration-related fees and the provincial sales taxes required to be paid whenever a vehicle is purchased.

TABLE A.1
VEHICLE REGISTRATION SERVICES

Service	Description of Service	Relevant Authority	Classification of Service*
Vehicle Registration	• Creation of a record of vehicle ownership and description for each vehicle to be operated on provincial roadways. • Registration records are updated upon change of ownership, and customer notification of name and/or address change, or upon vehicle branding (salvage or irreparable). • Ensures that applicable provincial sales taxes are paid upon registration.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations	Prime
Off-Road Vehicle Registry Administration	• ICBC maintains an ownership registry for all wheeled ORVs and snowmobiles in B.C. whether they operate on roadways or not. • Service is now provided by Autoplan brokers (as of Nov 2014) and expanded from snowmobiles to include all ORVs. As of Nov 16, 2014, DLOs no longer register vehicles. • ICBC issues a number plate or number sticker (as of Nov 2015) as proof of registration, which is, effective Nov 1, 2015, a mandatory requirement for ORV operation on Crown land.	• *Off Road Vehicle Act* and Regulation.	Prime
B.C. Assigned VIN Program	• Whenever a vehicle's primary vehicle identifier, the VIN, becomes damaged or otherwise requires replacement, a new VIN is created for the vehicle. The B.C. Assigned VIN is attached to the vehicle and the vehicle ownership records are updated. • Also issued as a unique identifier for newly constructed vehicles, which may not conform to federal standards, such as a u-built vehicle.	• *Motor Vehicle Act* and Regulations • *Off-Road Vehicle Act* and Regulation.	Prime

** See Section 7.2 of the Service Agreement for a definition of the classifications of service.*

A3 VEHICLE LICENSING

- Even though a vehicle is registered with ICBC, it cannot legally be operated on provincial roadways until it is licensed and insured. The licensing of a vehicle is essentially synonymous with the granting of permission to operate a vehicle on a roadway accessible to the public. Unlike vehicle registration, which is a "one-time" transaction (unless some element of the record requires updating), licences can only be issued for periods of up to twelve months. Table A.2 summarizes the vehicle licensing services provided by ICBC.
- The Vehicle Licensing program fulfills the following objectives:
  - Ensures that any applicable insurance, safety inspection, National Safety Code, or Passenger Transportation requirements are satisfied before a vehicle is operated on a roadway;
  - Establishes safety-related operational limitations on certain vehicles based on intended use or vehicle design;
  - Provides a readily visible means of vehicle and owner identification through the use of licence plates linked to the registration records; and
  - Provides a significant source of revenue through the collection of annual licence fees.

TABLE A.2
VEHICLE LICENSING SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Vehicle Licensing	• Determination of a vehicle's eligibility for licensed on-road operation and type of vehicle licence. Issuance of an appropriate licence, number plate, annual validation decal, and documentation. • Transferring of plates from one vehicle to another. • Replacing vehicle registration, licensing and insurance certificates. • Administration, manufacturing, storage, and distribution of licence plates and companion validation decals as proof of licence and insurance. • Collection of provincial offence fines.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration • International Registration Plan	Prime
Specialized Licensing Frameworks	• Administration of specialized registration and licensing programs for Consular vehicles, and Collector, Modified Collector, Multi-Collector and Antique vehicles. • Administration of specialized licensing programs based on special agreements, and the needs of vehicle	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • *Off-Road Vehicle Act* and Regulations	Prime

Service	Description of Service	Relevant Authority	Classification of Service
	manufacturers, dealers, repairers, and transporters. • Administration of licensing for limited on-road operation of farm, industrial, off-road vehicles, and non-conforming vehicles. • Issuance of special licence plates, including BC Parks plates, Veteran's Plates, and Memorial Cross plates. • Administration of the Personalized Number Plates program.		
Inter-jurisdictional Licensing Agreements and Financial Responsibility for Commercial Vehicles	• Administration of inter-jurisdictional licensing agreements. • Billing, collection, and remission of licensing revenues to B.C. and other provincial and state authorities. • Administration of the provincial requirements for financial responsibility obligations for commercial vehicles and out-of-province students vehicles entering B.C.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration • International Registration Plan	Prime
Temporary operating permits	• Determination of vehicle owner or operator eligibility for temporary operation permit. • Issuance of permit and windshield decal.	• *Motor Vehicle Act* and Regulations	Prime

A4 OTHER SERVICES

- Table A.3 lists the other services provided by ICBC that support the Vehicle Registration and Licensing functions. Some of these services also provide complementary benefits to government agencies.

TABLE A.3
OTHER SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Vehicle Data Management	• Provision and maintenance of the computers and associated software used to capture, store, and access vehicle and ownership related data. • Implementation of any systems modifications required as a result of	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • *Off-Road Vehicle Act* and Regulations	Prime

Service	Description of Service	Relevant Authority	Classification of Service
	legislative, regulatory, or business initiated changes. • Providing registration data for parking lot enforcement, automated licence plate readers by law enforcement, and consumer protection purposes.		
Policy Development and Implementation	• Works in partnership with government to respond to internal and external proposals for changes. • Works in partnership with government to develop regulatory and legislative changes and lead them through the approval processes. • Business policy and process change and implementation to comply with legislative / regulatory change and to improve operational efficiency.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • International Registration Plan • Canadian Agreement on Vehicle Registration	Prime
Vehicle and Ownership Information Searches	• Conducted for vehicle owners, governments, policing authorities, and other parties.	• *Motor Vehicle Act* and Regulations • *Off-Road Vehicle Act* and Regulations • *Motor Vehicle (All Terrain) Act* and Regulations	Prime and Administrative
Representation on Inter-jurisdictional Bodies	• Supports the Superintendent of Motor Vehicles as the voting member of B.C. on the CCMTA Board. • Co-represents B.C. on the CCMTA Drivers and Vehicles standing committee, is the voting member for B.C. on the International Registration Plan, the B.C. administrator for CAVR, and represents B.C. on vehicle matters and acts as the voting member with AAMVA.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration (CAVR) • International Registration Plan • Canadian Council of Motor Transport Administrators (CCMTA) • American Association of Motor Vehicle Administrators (AAMVA)	Prime

A5 PROGRAM RELATED INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to vehicle registration and licensing. The following registration or vehicle licensing initiatives are under consideration or in progress at this time.

- Affinity licence plates
- Number plate validation decal elimination
- Online renewal of vehicle licence (and insurance)

APPENDIX B: DRIVER RELATED SERVICES

B1 INTRODUCTION

- Section 24 of the *Motor Vehicle Act* states that a driver must hold an appropriate class of B.C. licence for the vehicle that they operate on B.C. roads, the details of which are set out in Division 30 of the Motor Vehicle Act Regulations. To obtain a licence a person must first pass a B.C. knowledge and road test or prove they passed equivalent tests in a recognized reciprocal jurisdiction, vision and in some cases medical screening and pay the prescribed fees. New drivers have restrictions placed upon them and must graduate from the Graduated Licensing Program (GLP) before becoming full privilege drivers. ICBC is responsible for licensing qualified drivers.
- A person's licence may be suspended or removed under certain prescribed circumstances. Under the delegated authority of the Superintendent of Motor Vehicles, ICBC helps administer the driver fitness program and programs that sanction drivers for unacceptable driving practices, including adjudicating driving records under the Driver Improvement Program.
- ICBC is also responsible for regulating the driver training industry.

B2 DRIVER LICENSING

- ICBC is responsible for the creation, delivery and funding of driver licensing programs and services in British Columbia.
- Driver licences can be obtained at 19 Driver Licensing Offices, 68 Appointed Agents and 29 Service B.C. offices across British Columbia. Road testing is available province-wide with remote communities being serviced by itinerant driver examiners. From the information collected at the time of licence issuance, ICBC creates a driver record with which it can record and track violations, outstanding debts, driving restrictions and other information used in the administration of a licence. ICBC owns, maintains and updates the driver and client systems. ICBC may provide updates to the driver and client systems on behalf of the Superintendent of Motor Vehicles.
- A person who resides in British Columbia may apply for an identification card by delivering an application in a form satisfactory to ICBC. This identification card is called a British Columbia Identification card (BCID).
- Effective February 2013, ICBC provides key services as a partner with the Ministry of Health and Ministry of Citizens' Services in the provincial government B.C. Services Card (BCSC) program. ICBC provides identity proofing services for combination BCSC driver's licences and standalone photo BCSC, and card production and distribution services for combination BCSC driver's licences, standalone photo BCSC and non-photo BCSC.
- On March 1, 2016, ICBC delivered a BC Transplant pilot program (where customers are prompted to register their decision on organ donation at the time of DL renewal) to increase organ donation. The successful pilot project resulted in ICBC receiving endorsement by government to roll out the Organ Donation Registry across the remaining 14 ICBC driver

licensing offices February 19, 2017. Based on the results of the pilot, ICBC supported full implementation with little to no operational impact to the corporation.

- Table B.1 summarizes Driver Licensing Services provided by ICBC.

TABLE B.1
DRIVER LICENSING SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Issues Driver Licences / BCID Cards/	• Issues and renews driver licences (including combination driver licence and BCSC), and BCID, including processing licence applications and eligibility; verifying the person's identity; assessing accuracy and validity of forms and information submitted. • Maintain support for existing BC Enhanced Driver Licences (EDL) until expiry up to September 2025. . • Maintains driver licensing model, including application requirements, licensing restrictions and classifications, according to legislation and in line with other Canadian jurisdictions. • Sets driver testing standards and administers driver tests. • Researches, develops, implements, supports and evaluates new driver licensing programs / initiatives towards improving road safety and customer experience. • Manages BCDL, BCSC, BCID, and EDL/EIC card production contracts. • Evaluates, recommends and implements new driver licence arrangements with other licensing jurisdictions. • Executes awareness of BC Transplant program to increase organ donation.	• *Motor Vehicle Act* and Regulations • *Medical and Health Care Services Regulation* • *Freedom of Information and Protection of Privacy Act*	Prime
Supports BC Service Cards	• Provides key services as a partner in the provincial government B.C. Services Card initiative related to identity proofing, residency, card production and point of service for application and issuance of the photo BCSC. Provides card production services for the non-photo BCSC.	• *Medical and Health Care Services Regulation* • *Freedom of Information and Protection of Privacy Act*	Delegated and/or Administrative
Support Services for Driver	• Maintains driver records to ensure they are accurate and comply with policy, delegations and directives	• *Motor Vehicle Act* and Regulations	Prime

Service	Description of Service	Relevant Authority	Classification of Service
Licensing Function	from the Superintendent of Motor vehicles, and legislation. • Publishes and maintains driving guides and information brochures and information online at ICBC.com. • Investigates driver licensing fraud. • Produces evidentiary packages for courts. • Provides driver abstracts/records for varying uses, including to support the National Safety Code. • Pre-screens for commercial licence applicants. • Participates in inter-jurisdictional committees for driver programs. • Bills, collects and remits licensing revenues to the provincial government. • Administers licence cancellation, refuse to issue, short term licence, prohibitions and suspensions, collection of driver licence fines for motor vehicle and related debt. • Supports appointed agents and Service B.C. agents that deliver driver licensing services on ICBC's behalf. • Maintains call center to provide customer services and information by phone.	• National Safety Code	

B3 DRIVER RELATED SUPPORT TO RoadSafetyBC

- The Superintendent of Motor Vehicles is responsible for a variety of programs that help ensure that persons unfit to drive and persons with unsatisfactory driving records are not permitted to drive. Under delegated authority from the Superintendent, ICBC helps administer these programs. Details of ICBC's role are provided in Table B.2.

TABLE B.2
SUPPORT to RoadSafetyBC*

(*formerly the **Office of the Superintendent of Motor Vehicles (OSMV))**

Service	Description of Service	Relevant Authority	Classification of Service
Driver Improvement Program and	• Reviews and adjudicates driving records based on RoadSafetyBC-developed directives and guidelines. • Takes appropriate action such as a driver prohibition.	• *Motor Vehicle Act*	Delegated and/or

Service	Description of Service	Relevant Authority	Classification of Service
Remedial Programs, Ignition Interlock Program (IIP), Responsible Driver Program (RDP).	• Manages communications with drivers concerning the Driver Improvement Program (e.g. warning, probation and prohibition letters). • Confirms acceptable acknowledgement and receipt of a prohibition / suspension from a driver and records the information on the system. • Reviews driving submissions on prohibitions of three months or less. • Reviews submissions from drivers who are sent an intent to prohibit of any length of term. • Processes certified extracts for court purposes. • Processes suspensions by adding them to the driving record and adjudicating the record for a further prohibition. • Processes Criminal Code of Canada convictions by adding them to the driving record. • Provides support to the IIP and RDP (e.g. updating DLs).	and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Administ rative
Driver Fitness Program/Enha nced Road Assessments (ERA)	• Conducts vision screening and issues driver medical forms on behalf of the Superintendent. • Issues medical notices to drivers (under set guidelines and delegation from RoadSafetyBC), and sends licence cancellation notices for failing to comply with an ERA, medical or vision exam or where a driver is found by RoadSafetyBC to be medically unfit to drive. • Manages communications with drivers (e.g. re-examination and vision screening letters). • Adds driving restrictions on licences resulting from driver testing. • Conducts ERA as part of a driver medical fitness review.	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and Administ rative
Administrative Driving Prohibition (ADP), Immediate Roadside Prohibitions (IRP), and Vehicle Impoundment Program	• Provides administrative support to the IRP, ADP, Vehicle Impoundment and Unlicensed review processes (e.g. answering questions, scheduling reviews and sending letters). • Processes vehicle releases. • Collect administrative fees and reinstate licences • Provides court/enforcement agency with driving certificates (abstracts) for court on all MVA, MVAR and, plus all Criminal Code convictions (excluding dispositions Adjudged Delinquent and Pardons) and prohibition / suspension record. • Provides administrative support with the Remedial Programs and IRP roadside prohibitions by answering questions from customers, updating driver records on behalf of the Superintendent, providing regular system downloads to RoadSafetyBC, which	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and Administ rative

Service	Description of Service	Relevant Authority	Classification of Service
	help to determine eligibility to enter the Remedial Programs • Disclosure of documents for reviews • Cancels and refuses to issue licences as per Superintendent of Motor Vehicle's direction.		
Refuse to issue for unpaid debt owed to impound lot operators related to vehicle Impoundment	• Effective 2016, in support of RoadSafetyBC programs, ICBC accepts requests to refuse to issue a driver's licence and other services for unpaid debt owed to impound lot operators related to vehicle impoundments	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintendent of Motor Vehicles	Delegated and Administrative

B4 DRIVER TRAINING REGULATION

- ICBC is responsible for administering the regulations on services provided by driver training schools, instructors, and agencies that train and assess their own drivers. Table B.3 summarizes the functions of ICBC.

TABLE B.3
DRIVER TRAINING

Service	Description of Service	Relevant Authority	Classification of Service
Driver Training Regulation	• Administers licensing standards for driver training schools and instructors as set out in provincial regulations. • Issues school and instructor licences and monitors compliance with standards. • Sanctions non-compliant schools and instructors through violation tickets, ICBC limited term sanctions, or de-licensing (subject to a show cause hearing conducted by the Superintendent of Motor Vehicles). • Administers and monitors curriculum standards, including setting curriculum and delivery standards for the GLP Approved Driver Education Course. • Administers standards and requirements for instructors, driver training schools and/or companies/agencies that are certified to deliver both training and testing (e.g., motorcycle skills) or training only where licensing privileges are granted (e.g., GLP approved course).	• *Motor Vehicle Act* and Regulations	Prime

	• Administers and oversees deliver of the MELT course through approved schools and instructors.		

B5 DRIVER LICENSING - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to Driver Licensing. Initiatives currently under consideration or in progress include:

- Supporting the policy development and stakeholder outreach in support of a Graduated Licensing Program for motorcycles (GLP-M).
- Developing and implementing a Mandatory Entry Level Training (MELT) for commercial drivers. MELT was announced March 31, 2021 and will be fully implemented and effective as of October 18, 2021.
- Supporting RoadSafetyBC's Driver Medical Fitness Transformation project to transform the Driver Fitness processes by streamlining manual tasks and using technology to digitize paper and fax based processes to reduce errors and increase timely provision of required information to RoadSafetyBC, drivers, healthcare providers, and ICBC
- Supporting RoadSafetyBC's implementation of digital forms for 12 hour suspensions and 24 hour prohibitions to allow for their electronic delivery to ICBC and RoadSafetyBC.

APPENDIX C:
VIOLATION TICKETS AND OTHER SERVICES

C1 VIOLATION TICKETS AND REFUSE TO ISSUE PROGRAMS

- ICBC withholds issuance of a driver's licence or vehicle licence where a person has outstanding fines payable to the Government or Crown as a result of certain violation tickets or prohibitions issued under various federal and provincial statutes.
- ICBC administers all violation tickets issued in B.C. ICBC must ensure that the tickets are valid and in accordance with legislation, regulations and Attorney General policy.
- There are five categories of violation tickets ICBC deals with on behalf of the provincial government, and one type of Federal *Contraventions Act* violation ticket:
  - Driver related moving violations
  - Driver related non-moving violations
  - Intersection Safety Camera violations
  - Provincial non-driver related (e.g., wildlife, public transit, liquor control)
  - E-tickets for *Motor Vehicle Act and Motor Vehicle Act Regulation* violations.
- In addition, ICBC administers the process and collects outstanding fines payable to the federal government under the federal *Contraventions Act,* (e.g., quarantine, marine, seaway property, national parks, environment, fisheries, wildlife, airport and government property, wild animal and plant trade, tobacco, radio communications and commercial vehicle drivers).
- Table C.1 describes the functions fulfilled by ICBC.

TABLE C.1
VIOLATION TICKETS

Service	**Description of Service**	**Relevant Authority**	**Classification of Service**
Violation Ticket Related	• Processes Violation Tickets (VT), enters VT information into the contraventions system, resolves and identifies errors on the VT, as well as court interface errors. • Ensures the VTs processed are valid in accordance with legislation and regulations and Ministry of Justice and Attorney General policy. • Maintains the contraventions system. • Creates client record if none exists. • Cancels VTs. • Processes VT disputes and appeals. • Prepares evidentiary packages for courts. • Processes and prepares supporting documentation for personation claims for violation tickets.	• The Assistant Deputy Attorney General (Criminal Justice Branch) gives the authority and directives for ICBC to carry out its responsibilities under the *Offence Act* and the federal *Contraventions Act*. • Criminal Justice Branch gives the directive for ICBC to cancel violation tickets.	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
	• Collects fines and debts on behalf of the federal and provincial governments and outstanding ICBC debts. • Shares VT data with Government, as appropriate. • Provide ongoing operational support for Provincial e-Ticketing Program.		
Intersection Safety Camera Program (ISC)	• Enters ISC violation tickets in the database (as of X date, adds speeding contraventions to red-light contraventions). • Creates client record if none exists. • Produces tickets. • Sends for process serving when applicable. • Tracks process serving progress. • Prepares evidentiary packages for courts. • Processes disputes. • Quality assurance review of all printed tickets/packages. • Reports on program activity. • Accepts payments for VT's and other administrative fees.	See above	Administrative

C2 OTHER SERVICES

- Other services include database maintenance and information sharing (e.g. the Traffic Accident System), collection of sales tax (Social Service Tax, Harmonized Sales Tax, and Provincial Sales Tax, depending on the vehicle purchase date). These and other services are described in Table C.2.

TABLE C.2
OTHER SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Traffic Accident System (TAS)	• Maintains the TAS that is shared with police and transport authorities. • Enters accident report information into TAS that is received from police attending the accident.	• *Motor Vehicle Act*	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
Collection of Sales Tax	• Collects sales tax on behalf of the government when a vehicle is registered or transferred.	• *Social Services Tax Act* • *Motor Vehicle Act* • *Commercial Transport Act* • *Provincial Sales Tax Act*	Administrative
Family Maintenance Enforcement Program (FMEP)	• Manages refusal to issue of, and as of April 2019, cancellations of driver licences and vehicle licences/insurance for clients owing money under the FMEP.	• *Family Maintenance Enforcement Act* and Regulations	Administrative
Fare Evasion Fines	• Provides client address information for fare evasion fine collection. • Manages refusal to issue of driver licences and vehicle licences/insurance for clients owing excessive fare evasion debt.	• *Transportation Investment Act* • *South Coast British Columbia Transportation Authority Act*	Administrative
BC Securities Commission Debts	• As of March 29, 2021, ICBC refuses to issue a driver's licence, vehicle licence or vehicle number plate for outstanding debt owed to the BC Securities Commission.	• *Securities Act*	Administrative

C3 VIOLATION TICKETS AND OTHER SERVICES - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives for violation tickets and other related services.

ICBC will be required, as of July 1, 2021, to refuse to issue a driver's licence, vehicle licence or number plate where there are outstanding unpaid violation tickets issued under the *Covid-19 Related Measures Act* and the *Emergency Program Act*.

In addition, it can be anticipated that from time to time ICBC will be called upon to make minor systems enhancements to process tickets issued under new enactments. These changes are typically covered under the Change Management Fund and as such are not enumerated here.

APPENDIX D: COMMERCIAL VEHICLE SAFETY AND ENFORCEMENT SERVICES (CVSE)

D1 INTRODUCTION

- The relationship between ICBC and CVSE is interdependent with long-standing systems and business links between registration, licensing and insurance systems and business processes and core provincial road safety systems and programs. In many cases these are real-time systems links on which the proper functioning of computer systems, business processes, customer service and ultimately the safety of B.C.'s roads, rely. To ensure Government and ICBC are able to discharge their respective responsibilities, the parties work together to determine the appropriate service levels, escalation procedures and remedies.
- This appendix describes the interrelated services of ICBC and CVSE and outlines the services that ICBC provides in support of CVSE programs.
- CVSE is part of the Ministry of Transportation and Infrastructure and is responsible for:
  - Enforcing provisions of the *Motor Vehicle Act*, *Commercial Transport Act*, *Transport of Dangerous Goods Act*, *Passenger Transportation Act*, *Transportation Act* and *Motor Fuel Tax Act* and applicable regulations;
  - Developing and promulgating safety regulations governing commercial transport, vehicle inspection, vehicle equipment regulations and carrier safety;
  - Maintaining and promoting road safety through the implementation and management of the National Safety Code Program, Commercial Vehicle Inspection Program, Private Vehicle Inspection Program, VIN Inspection Program, Roadside Inspection Program, Weigh2GoBC, Commercial Transport Program, Transport of Dangerous Goods Program and Commercial Vehicle Safety Alliance; and,
  - Participating on various national and international government road safety bodies to coordinate and harmonize commercial transport, vehicle equipment and safety standards.

D2 ICBC/CVSE RELATIONSHIP AND PROGRAM INTERDEPENDENCIES

- The responsibilities and objectives of CVSE and ICBC are interconnected, and program delivery and compliance are often reliant on each other. CVSE shares responsibility with ICBC for vehicle-related requirements under the *Commercial Transport Act* and associated regulations, as well as the *Motor Vehicle Act* and associated regulations.
- CVSE oversees the inspection and safety programs for commercial vehicles operating in the province and enforces the necessary safety statutes, regulations and programs. These programs outline the conditions of vehicle operation on a provincial highway and for vehicles requiring an inspection serve to provide a pre-condition of issuing or renewing a vehicle licence. Through the sharing of CVSE data, ICBC Autoplan Agents are able to determine at the time of registration and licensing, if a vehicle has been prohibited from on-road operation as a result of non-compliance with provincial vehicle standards, statutory requirements and CVSE safety programs. Preventing non-complying vehicles from on-road operation serves both the public

safety mandate of Government and ICBC's role as an automobile insurer by reducing the risk of loss.

A vehicle that has properly met and satisfied the CVSE inspection and safety programs can be issued a vehicle licence by ICBC for operation on B.C. highways. Conversely, a vehicle that cannot meet safety programs requirements cannot obtain a vehicle licence from ICBC. CVSE relies on ICBC data for enforcement of CVSE based safety programs and ICBC relies on CVSE data for compliance with provincial safety standards and provincial safety programs.

D3 CVSE PROGRAMS SUPPORTED BY ICBC

- ICBC provides support to several key CVSE programs, as outlined in Table D1.

TABLE D.1
ICBC ONGOING SERVICES TO SUPPORT CVSE

Service	Description of Service	Relevant Authority	Classification of Service
Transportation Permitting System. (TPS) (formerly Commercial Transport Management System (CTMS) TPS provides a variety of functions to CVSE staff as authorized and required under the MVA, Inspectors Authorization Regulation and/or appointed by the Director.	ICBC provides: • Real time access to the Client Application and Client Database; • Operation and maintenance of the Client Database; • Commercial Vehicle Safety and Enforcement (CVSE) access to ICBC mainframe transactions; and • Financial responsibility filing inquiry (ICBC confirms that a company has a valid financial responsibility number).	• *Commercial Transport Act* and Regulations • *Motor Vehicle Act* and Regulations • *Motor Fuel Tax Act* and Regulations • *Passenger Transportation Act* and Regulations	Administrative
National Safety Code System (NSCS) NSCS provides access to National Safety Code (NSC) Program Administration staff and other authorized staff, for a variety of systems, reports and databases, to monitor carrier performance and to allow exchange of information about inter-provincial	ICBC provides: • The Client Database; • The Contraventions Database; • The Driver Database; • Transfer and transform a subset of the *Traffic Accidents System* (TAS) for NSC to import into database; • Corrections to TAS database; • Access to the Business Information Warehouse (BIW) Claims data; • Remote data retrieval; • Transmittal of carrier/vehicle data for NSC database; • Vehicle Database and Driver Licence retrieval for NSC Audit and online application; • Updates for Motor Vehicle database;	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
carriers with other jurisdictions.	• Provide NSC abstracts to NSC carriers; • Access to the ICBC national Safety Code & Motor Carrier Inquiry transaction; • Blocking licensing transactions to ensure regulated vehicle inspection requirements are met; • Data entry and microfilm Notice and Orders and maintain Notice and Order data base; • Support to monitoring of NSC safety certificate for each commercial vehicle during the licensing processing; • Access to vehicle data base for vehicle inspection information and to the driver licensing system for NSC audit and carrier profile; and • Access to vehicle file for online population of vehicle inspection forms.		

D4 COMMERCIAL VEHICLE SAFETY AND ENFORCEMENT - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to support for Commercial Vehicle Safety and Enforcement. Initiatives currently under consideration or in progress include*:

- As part of the Ministry of Transportation and Infrastructure's Modernization of Passenger Directed Transportation, ICBC will develop and implement updated data exchange services required by MOTI to retrieve and verify driver licence and vehicle information.

* *Projects funded from the Change Management Fund, as provided for in the Service Agreement, are not included here.*

APPENDIX E: REVENUE COLLECTION

- ICBC is responsible for collecting various forms of revenue on behalf of Government, including various fees under the *Motor Vehicle Act*, the *Commercial Transport Act, Off-Road Vehicle Act* and fines under the *Offence Act* – see Table E.1.
- ICBC also provides regular revenue reports to Government, including forecasts.
- Table E.1 provides a breakdown of actual revenue collected by type. In some circumstances, revenue is recorded net of commissions paid to collection agencies. Other commissions paid are included under ICBC expenditures – see Appendix F.

TABLE E.1 REVENUE COLLECTED ON BEHALF OF GOVERNMENT

Revenue by Type	2016/17* Actual Revenue $000s	2017/18 Actual Revenue $000s	2018/19 Actual Revenue $000s	2019/20 Actual Revenue $000s	2020/21 Actual Revenue $000s
Net Motor Vehicle Act	349,624	302,038	279,218	307,136	293,317
Net Commercial Transport Act	278,445	240,474	266,952	250,221	249,232
Net Fines Revenue	82,423	71,808	78,553	77,392	65,459
Net Other Revenues	1,455	4,066	5,603	6,667	7,653
TOTAL NET REVENUE:	**711,947**	**618,386**	**630,326**	**641,416**	**615,661**

* The 2016/17 actuals are for the 15 month transitional fiscal period from January 1, 2016 to March 31, 2017. In 2016, ICBC changed its fiscal year-end from December 31 to March 31, to align with Government's fiscal year-end. 2016/17 was a 15-month transitional period to transition to the new fiscal year-end.

- Beginning in May 2006, ICBC assumed responsibility for collecting fines on behalf of the federal government for violations under the *Contraventions Act* and regulations. The regulations designate numerous fines, such as: violations pertaining to environmental protection; federal and federally-regulated property such as seaways, airports and national parks; fish and wildlife; wild animal and plant trade; tobacco; radio communications; commercial vehicle drivers; and maritime violations.

  The delivery of this service replicates the provincial model for non-motor vehicle fines and is to be delivered at no net cost to ICBC. ICBC collects fines owing under the federal *Contraventions Act* and regulations and remits these to the provincial government. The costs of providing the service are deducted quarterly. If fines collected are insufficient to cover costs, the provincial government is to provide reimbursement for costs in excess of fines collected.

EI REVENUE COLLECTION - INITIATIVES

In addition to the functions described above, ICBC works, from time to time, with Government on other initiatives related to revenue collection. Initiatives in other non-insurance areas may also have an impact on the process or the amount of revenue ICBC collects on behalf of Government.

APPENDIX F: COST ESTIMATES

F1 INTRODUCTION

- This Appendix provides an overview of the costs incurred by ICBC in delivering the non-insurance services covered by this Agreement based on an approach and methodology originally developed in June 2003 by ICBC and reviewed by an independent financial services company.[1]
- In deriving the cost of non-insurance services, three different concepts of cost can be used:
  - The incremental cost to the organization of undertaking the services.
  - The average cost of delivering the service when integrated with the delivery of insurance services.
  - The total cost of delivering the services on a stand-alone basis.
- These three approaches can give very different results, depending on the nature of the service and the degree to which it is integrated with the delivery of insurance services. ICBC has adopted the second of these approaches. Therefore, the cost estimates derived should not be interpreted as: the incremental cost savings that would accrue to ICBC if it no longer delivered non-insurance services; or, the incremental costs that Government would incur if it chose to deliver the services itself.
- ICBC provides Basic insurance, Optional insurance and non-insurance services. Costs incurred by ICBC that are tracked separately and are clearly identifiable as Basic, Optional or non-insurance service costs are assigned directly to the appropriate service area. Where services are integrated, costs are allocated across the functions based on cost allocation methodologies approved by the B.C. Utilities Commission.

F2 THE COST OF NON-INSURANCE SERVICES

- Table F.1 summarizes the actual cost of non-insurance services delivered by ICBC over the past five years. Costs for Vehicle Registration and Licensing activities are included in the sections labeled "Administration and Other" and "Commissions".
- The figures include amortization costs, as well as an allocation of specific fees and commissions paid to brokers and agents. However, some commissions are recorded by ICBC as subtractions from revenue and are therefore included in Appendix E.

[1] *PriceWaterhouseCoopers "Revenue and Cost Allocation Evaluation"* prepared in June 2003.

TABLE F.1 ACTUAL COST OF NON-INSURANCE SERVICES

Type of Service	2016/17 ($000s)	2017/18 ($000s)	2018/19 ($000s)	2019/20 ($000s)	2020/21 ($000s)
Administrative and Other	40,694	30,870	29,931	33,963	30,104
Commissions	37,517	31,226	31,380	30,864	34,306
Driver Services	85,792	71,042	71,819	75,712	77,110
Total Non-Insurance Services	**163,503 ****	**133,138**	**133,130**	**140,539**	**141,520**

All figures conform to the International Financial Reporting Standards (IFRS).

** The 2016/17 amounts are for the 15 month transitional fiscal period from January 1, 2016 to March 31, 2017.

APPENDIX G: OTHER AGREEMENTS

- In addition to the Service Agreement itself, Table G.1 lists the agreements, contracts, and memoranda and letters of understanding (MOUs/LOUs) in place concerning the non-insurance services provided by ICBC on behalf of Government. (Note: The list includes governing agreements with Government ministries and agencies named at the time of the agreement's signing – it does not include agreements with private companies and municipalities nor service level agreements.)

TABLE G.1
LIST OF AGREEMENTS, CONTRACTS AND MOUs

	Agreement/Details	Related Service
1	**Superintendent/ICBC Delegation MOU** • Series of delegation instruments with RoadSafetyBC. • Provides ICBC with authority to act on behalf of the Superintendent of Motor Vehicles in the administration of the driver improvement program, ADP-VI Program, Driver fitness, records and prohibitions, and other programs.	Driver Licensing
2	**International Registration Plan** • Reciprocity agreement between the 10 Canadian provinces and all U.S. states except Alaska and Hawaii providing for prorated/apportioned payment of licence fees on the basis of total distance operated in all jurisdictions. B.C. became a signatory to the Plan in 1996.	Vehicle Registration and Licensing
3	**Canadian Agreement on Vehicle Registration (CAVR)** • Agreement between the 10 Canadian provinces regarding limited licensing reciprocity for vehicles not covered under International Registration Plan. B.C. signed on to CAVR in 1981. The agreement was revised from a prorate agreement to a reciprocity agreement in 2001 when all Canadian provinces joined International Registration Plan.	Vehicle Registration and Licensing
4	**Information Technology Agreement** • Agreement with Shared Services B.C. (formerly Workplace Technology Services). • Covers provision of mainframe data processing (drivers), network services, and associated charges.	Driver Licensing
5	**Access to Customer Information MOUs** • MOUs exist with various Government ministries. • Covers sharing of ICBC customer information (e.g., name and address).	Driver Licensing/ Vehicle Licensing
6	**Elections B.C./Elections Canada MOU** • MOU with Elections B.C. and Elections Canada. • Covers sharing of ICBC customer address information (from driver's database).	Driver Licensing
7	**Canadian Police Information Centre (CPIC) MOU** • MOU with CPIC. • Covers categories I, II and III CPIC agency access to ICBC's driver licence data and vehicle information.	Driver Licensing/ Vehicle Licensing

	Agreement/Details	Related Service
8	**Access to ICBC's Databases MOU** • MOU with RoadSafetyBC • Covers OSMV access to ICBC's databases.	Driver Licensing Vehicle Registration and Licensing
9	**Refuse to Issue MOU (Family Maintenance Enforcement)** • MOU with Ministry of Attorney General (Family Maintenance Enforcement Program). • Establishes a protocol for ICBC refusing to issue (RTI) driver licences, vehicle licences and insurance for FMEP arrears when instructed to do so by the Director of Family Maintenance. Also contains an indemnity from Government. • Agreement amended to include cancellation of driver's licences in addition to existing refuse to issue protocols (cancellation of driver's licences was implemented in April 2019).	Driver Licensing
10	**ICBC / Service BC Partnership** • Agreement signed in 2012 with Service BC (prior to 2012, ICBC and SBC had several agreements that governed their relationship). • Covers the establishment of principles of cooperation and joint effort relating to the delivery of ICBC services at Service BC offices. • Includes the SBC systems agreement as an appendix, covering ownership, support and change control processes used by Government Agents offices to deliver Driver Services, and the Revenue Management System used by Government Agents and ICBC to collect motor vehicle fines.	Driver Licensing
11	**Drinking and Driving Initiative Memorandum of Understanding:** • **On Ongoing Costs:** MOU signed in March 2006 confirms the financial agreements relating to ICBC's operating costs for this initiative. By way of a 2019 Letter of Agreement, RoadSafetyBC reimburses ICBC for agreed upon operating costs.	Driver Licensing
12	**Federal Contraventions Act** • LOU with the Province signed in December 2004 describes the services that ICBC will provide to support this initiative and affirms that ICBC will realize full cost recovery for providing these services.	Driver Licensing
13	**Canadian Driver Licence Agreement (CDLA)** • In March 2017, BC's Minister of Transportation and Infrastructure and Minister of Public Safety and Solicitor General signed the CDLA to improve harmonization of driver licensing requirements across Canada.	Driver Licensing
14	**Interprovincial Record Exchange** • System of sharing information across Canadian and some US jurisdictions. • Managed by the Canadian Council of Motor Transport Administrators and updated in 2006.	Driver Licensing and Vehicle Registration and Licensing
15	**Applications Maintained on ICBC's Mainframe** • Agreements on the transfer and ongoing operation/access for programs migrated from government to ICBC's mainframe (completed in 2009).	Information Services Division
16	**Memorandum of Understanding between ICBC and the Province regarding tax collection** • Agreement governing procedures and protocols for managing the collection of taxes owing related to importing or transferring regulated vehicles.	Finance Division

	Agreement/Details	Related Service
17	**Operational Services Agreement with Ministry of Health regarding the B.C. Services Card** • Management of day to day operations and business touch points between Heath Insurance BC and ICBC relating to the B.C. Services Card program and associated changes.	Driver Licensing
18	**Integrated Program Agreement with Ministry of Health & Ministry of Labour, Citizens' Services and Open Government regarding the B.C. Services Card** • Establishment of an agreement to collaboratively deliver the BCSC program as an integrated program.	Driver Licensing
19	**Memorandum of Understanding with ICBC, MPSSG, Canada Border Services (Canada) and Citizenship and Immigration Canada (Canada).** • MOU respecting the development and implementation of British Columbia's Enhanced Driver's Licence and Enhanced Identification Card Program. • Addendum signed May 2016.	Driver Licensing
20	**Memorandum of Agreement between RoadSafetyBC and ICBC regarding the Age 79 Medical Notification Letter** • ICBC agrees to provide ongoing generation and mailing of letter to notify drivers at age 79 of the medical requirements under the Driver Fitness Program that apply at age 80.	Driver Licensing
21	**Electronic Ticketing and Online Payment Project & Operational Memorandum of Agreement (MOA) between RoadSafetyBC and ICBC regarding the Road Safety Initiative** • RSBC agrees to provide cost recovery in the Operational MOA between RSBC and ICBC for the ongoing support of the Road Safety Initiatives at ICBC. Effective October 1, 2019.	Driver Licensing
22	**Memorandum of Agreement (MOA) between RoadSafetyBC and ICBC regarding the Enhanced Road Assessment** • ICBC agrees to provide services for the purposes of delivering the Enhanced Road Assessment, Operational MOA, signed March 2018.	Road Safety
23	**Letter of Agreement (LOA) between Ministry of Public Safety and Solicitor General (RoadSafetyBC) and ICBC regarding the Intersection Safety Camera (ISC) Program** • ICBC agrees to provide services for the purposes of implementing the Intersection Safety Camera (ISC) Program, signed December 24, 2018.	Road Safety
24	**Memorandum of Agreement (MOA) between ICBC and the BC Securities Commission for Refuse to Issue (RTI) actions by ICBC.** • In accordance with the Securities Act, upon direction of the Executive Director of the BC Securities Commission, ICBC will refuse to issue a driver's licence, vehicle licence or number plate where there is outstanding debt owed to the BC Securities Commission. MOA signed April 1, 2021.	Driver and Vehicle Licensing

	Agreement/Details	Related Service
25	**Memorandum of Understanding between ICBC and MPSSG for the decommissioning of the Enhanced Driver Licence Program** • MOU, effective September 1, 2020, addresses the winding down of Enhanced Driver's Licence program, including the final system/program decommissioning after the last EDL expires in September 2025. • ICBC will recover all related costs from MPSSG under the terms of the MOU.	Driver Licensing
26	**Memorandum of Agreement (MOA) between Ministry of transportation and Infrastructure and ICBC regarding Mandatory Entry-Level Training (MELT)** • ICBC agrees to provide services for the purposes of implementing and delivering MELT. MOA effective July 1. 2021.	Driver Licensing

Attachment 8H.2 – 2021/22 Addendum and Appendices to the Service Agreement

Service Agreement Addendum

Changes in Costs and Services to March 31, 2022

I. Introduction

1. Section 11.3 of the Service Agreement between the Ministry of Public Safety and Solicitor General and the Insurance Corporation of British Columbia and dated September 1, 2003, and revised on December 31, 2006, requires that an addendum be prepared that identifies any actual or proposed change in service or service delivery that:
   a) has or will add to or reduce substantially the cost of delivering non-insurance services; and,
   b) has not been identified in any previous Addendum.

2. Addendums were prepared for all previous years up to and including 2021 with updates to the Appendices to the Service Agreement submitted to the British Columbia Utilities Commission (the Regulator). This Addendum and update to the Appendices cover the period from April 1, 2021 through to March 31, 2022.

3. Section 3(1)(c)(i) of the Special Direction IC2 to the British Columbia Utilities Commission (B.C. Reg. 307/2004) requires that the Regulator in exercising its powers and functions must fix rates for Basic insurance after taking into account ICBC's costs in that year for services it provides on behalf of the provincial government, including vehicle licensing, driver licensing and other activities in accordance with the Service Agreement, including its amendments.

4. The attached "Appendices to the Service Agreement", revised to March 31, 2022, incorporates changes in services on a cumulative basis since the Service Agreement was signed in 2003.

II. Actual Substantial Changes in Service or Delivery since April 1, 2021 through to March 31, 2022.

Minor operational changes throughout the period from April 1, 2021 through to March 31, 2022 are shown in the revised Appendices to the Service Agreement. The following substantial changes in service or delivery were made during the 2021/22 fiscal year:

Initiative	Estimated Costs
Mandatory Entry-Level Training for Class 1 Drivers (MELT). On October 18, 2021, MELT, a mandatory Class 1 driving training program, took effect requiring most new Class 1 driver's licence applicants to demonstrate the successful completion of an ICBC approved MELT course. ICBC provides and approved course curriculum and approves driver training schools to deliver the MELT program.	There are no costs to ICBC. All costs, including development and ongoing costs are recovered from the Ministry of Transportation and Infrastructure.
COVID-19 Refuse-to-Issue. Effective July 1, 2021, ICBC is required to refuse to issue a driver's licence, vehicle licence or vehicle number plate to an applicant with outstanding debt for unpaid tickets issued under the *COVID-19 Related Measures Act* or the *Emergency Program Act.*	The $32k implementation cost was covered by ICBC's Change Management Fund. Ongoing operational costs are nominal and are paid by ICBC.
Provincial Sales Tax (PST) exemption for Zero Emission Vehicles. Effective February 23, 2022, the provincial government removed the PST for certain previously owned Zero Emission Vehicles which required ICBC to make systems and process changes to not collect PST on eligible vehicles.	Development and ongoing operational costs are nominal and paid for by ICBC.

III. Proposed Substantial Changes in Service or Delivery for Fiscal Year April 1, 2022 to March 31, 2023.

The following substantial items are currently being developed or are under discussion with the provincial government. Completed initiatives that resulted in costs and/or changes to services delivered by ICBC after March 31, 2022 will be included in the Addendum update for the 2023/2024 fiscal year.

Initiative	Estimated Costs
Driver's Licence Number Project. Implement a change to increase the length of the Driver's Licence Number (DLN) from seven to eight digits, effective July 2023.	ICBC is funding ICBC's project costs ($3.2M operational expense in FY 2022/23) to update ICBC systems and processes, and also includes

Initiative	Estimated Costs
Enables ICBC's continued ability to accept new clients and deliver on its government mandated services of issuing new B.C. Driver Licences, B.C. Identification Cards and B.C. Services Cards.	ICBC's direct support costs for joint testing and implementation with impacted ministries. All impacted ministries and other stakeholders are responsible for their costs to update their systems and processes.
Graduated Licensing Program for Motorcycles (GLP-M). Continue the policy and regulatory development in support of a Graduated Licensing Program for Motorcycles (GLPM).	Scope, costs and funding mechanisms to be determined.
Driver Medical Fitness Transformation project. Continue to support RoadSafetyBC's transformation of the Driver Fitness processes by streamlining manual tasks and using technology to digitize paper and fax based processes to reduce errors and increase timely provision of required information to RoadSafetyBC, drivers, healthcare providers, and ICBC. Work is anticipated to continue into 2023.	All costs funded by Ministry of Public Safety and Solicitor General.
Digital forms for 12 and 24 hour suspensions. Continued to support RoadSafetyBC's implementation of digital forms for 12 hour suspensions and 24 hour prohibitions to allow for their electronic delivery to ICBC and RoadSafetyBC. Work is anticipated to be completed for spring 2023.	All costs funded by Ministry of Public Safety and Solicitor General.
Online renewal of vehicle licence. ICBC is modernizing the way in which ICBC, through their broker partners, delivers insurance products and services to customers by delivering additional online capabilities starting May 1, 2022. In February 2022, government passed regulations, effective May 1, 2022, that eliminates the requirement for ICBC to issue, and for motorists to display, a validation decal.	The online project is part of a larger piece of work for online insurance for Basic and Optional. On March 31, 2022, ICBC entered into a funding agreement with the province to make a one-time financial contribution of $1 million to support the enhancement and expansion of law enforcement's current Automated Licence Plate Recognition program.

Initiative	Estimated Costs
Black Book versus declared value. Effective October 1, 2022, ICBC will be required to collect the provincial sales tax on a used vehicle sale based on the greater of the Black Book's average wholesale value of a vehicle or the declared purchase price. Policies, procedures, and systems will be updated.	All costs funded by the Ministry of Finance.
International Registration Compliance Project. Replace ICBC's International Registration Plan (IRP) legacy prorate systems with an IRP Data Repository certified system. A new system is required to comply with IRP requirements with how data is exchanged with the IRP Data Repository. Project go-live date is January 22, 2023.	Total project cost $4.41M FY 2022/2023 to replace the prorate legacy system with the Apportioned Management Information System (AIMS) solution. Included is the delivery of new IT security requirements by building a new Enterprise platform.

Douglas S. Scott
Deputy Solicitor General
Ministry of Public Safety and Solicitor General

Date: November 7, 2022

Nicolas Jimenez
President and CEO
ICBC

Date: November 1, 2022

APPENDICES

TO THE

SERVICE AGREEMENT

BETWEEN

THE MINISTRY OF PUBLIC SAFETY AND SOLICITOR GENERAL

AND

THE INSURANCE CORPORATION OF BRITISH COLUMBIA

Effective Date: September 1, 2003
Amended on:

July 6, 2004
August 8, 2005
December 31, 2006
December 31, 2007
December 31, 2009
December 31, 2010
December 31, 2011
December 31, 2012
December 31, 2013
December 31, 2014
December 31, 2015
March 31, 2017
March 31, 2018
March 31, 2020
March 31, 2021
March 31, 2022

APPENDIX A:
VEHICLE RELATED SERVICES

A1 INTRODUCTION

- Section 3 of the *Motor Vehicle Act* (MVA) requires that unless exempt, a motor vehicle or trailer must be registered, licensed and insured before it is operated on public roadways. In addition to providing the minimum required universal compulsory automobile insurance and optional insurance coverage, ICBC has the legislated mandate to act as the Province's vehicle registration and licensing authority. As part of this role, ICBC strives to ensure and promote consumer protection and road safety in regards to the registration and licensing of vehicles.
- A network of Autoplan insurance and Service BC agents acting in the name of ICBC provide vehicle registration and licensing services to the motoring public. ICBC provides technical and operational support to these agents.

A2 VEHICLE REGISTRATION

- A vehicle cannot be licensed or insured without first being registered with ICBC. Vehicle registration involves the collection and recording of owner and vehicle identification information, such as the owner's name and address, and a vehicle's year of manufacture, make, model, colour, and vehicle identification number (VIN). In establishing a registration record, ICBC representatives must satisfy themselves as to a vehicle's true identification and ownership. This is often achieved by physically viewing a vehicle to confirm its VIN and ensuring that complete ownership documentation is presented. Table A.1 summarizes the vehicle registration services provided by ICBC.
- The existence of vehicle registration information benefits many parties, including vehicle owners, prospective purchasers, insurers, financial institutions, policing authorities, and Government. Having vehicle identification and ownership information centrally recorded and readily accessible establishes a reasonable level of certainty regarding ownership for the owner of record, any prospective buyer, and insurance companies. This information is also important in increasing the reliability of the private property lien registry and improves financial institutions' ability to secure personal loans to their customers. Also, the registration records provide policing authorities with a valuable tool used for vehicle and owner identification in traffic enforcement, violation ticket administration, investigation of crimes, and facilitating the issuance of vehicle safety recall notices.
- The requirement to register vehicles and update the ownership records, such as when a vehicle is purchased, provides Government with significant revenues. These revenues are derived from the collection of established registration-related fees and the provincial sales taxes required to be paid whenever a vehicle is purchased.

TABLE A.1
VEHICLE REGISTRATION SERVICES

Service	Description of Service	Relevant Authority	Classification of Service*
Vehicle Registration	• Creation of a record of vehicle ownership and description for each vehicle to be operated on provincial roadways. • Registration records are updated upon change of ownership, and customer notification of name and/or address change, or upon vehicle branding (salvage or irreparable). • Ensures that applicable provincial sales taxes are paid upon initial registration or transfer.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations	Prime
Off-Road Vehicle Registry Administration	• ICBC maintains an ownership registry for all wheeled ORVs and snowmobiles in B.C. whether they operate on roadways or not. • Service is now provided by Autoplan brokers (as of Nov 2014) and expanded from snowmobiles to include all ORVs. As of Nov 16, 2014, DLOs no longer register vehicles. • ICBC issues a number plate or number sticker (as of Nov 2015) as proof of registration, which is, effective Nov 1, 2015, a mandatory requirement for ORV operation on Crown land.	• *Off Road Vehicle Act* and Regulation.	Prime
B.C. Assigned VIN Program	• Whenever a vehicle's primary vehicle identifier, the VIN, becomes damaged or otherwise requires replacement, a new VIN is created for the vehicle. The B.C. Assigned VIN is attached to the vehicle and the vehicle ownership records are updated. • Also issued as a unique identifier for newly constructed vehicles, which may not conform to federal standards, such as a u-built vehicle.	• *Motor Vehicle Act* and Regulations • *Off-Road Vehicle Act* and Regulation.	Prime
Collection of Vehicle Sales Taxes	• Collects applicable sales tax on behalf of the government when a vehicle is registered or transferred	• *Social Services Tax Act* • *Motor Vehicle Act* • *Commercial Transport Act*	Administrative

		• *Provincial Sales Tax Act* • *Consumption Tax Rebate and Transition Act* • *Excise Tax Act* (Canada)	

* *See Section 7.2 of the Service Agreement for a definition of the classifications of service.*

A3 VEHICLE LICENSING

- Even though a vehicle is registered with ICBC, it cannot legally be operated on provincial roadways until it is licensed and insured. The licensing of a vehicle is essentially synonymous with the granting of permission to operate a vehicle on a roadway accessible to the public. Unlike vehicle registration, which is a "one-time" transaction (unless some element of the record requires updating), licences can only be issued for periods of up to twelve months. Table A.2 summarizes the vehicle licensing services provided by ICBC.
- The Vehicle Licensing program fulfills the following objectives:
  - Ensures that any applicable insurance, safety inspection, National Safety Code, or Passenger Transportation requirements are satisfied before a vehicle is operated on a roadway;
  - Establishes safety-related operational limitations on certain vehicles based on intended use or vehicle design;
  - Provides a readily visible means of vehicle and owner identification through the use of licence plates linked to the registration records; and
  - Provides a significant source of revenue through the collection of annual licence fees.

TABLE A.2
VEHICLE LICENSING SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Vehicle Licensing	• Determination of a vehicle's eligibility for licensed on-road operation and type of vehicle licence. Issuance of an appropriate licence, number plate, annual validation decal, and documentation. • Transferring of plates from one vehicle to another. • Replacing vehicle registration, licensing and insurance certificates. • Administration, manufacturing, storage, and distribution of licence plates and companion validation	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration • International Registration Plan	Prime

Service	Description of Service	Relevant Authority	Classification of Service
	decals as proof of licence and insurance. • Collection of provincial offence fines.		
Specialized Licensing Frameworks	• Administration of specialized registration and licensing programs for Consular vehicles, and Collector, Modified Collector, Multi-Collector and Antique vehicles. • Administration of specialized licensing programs based on special agreements, and the needs of vehicle manufacturers, dealers, repairers, and transporters. • Administration of licensing for limited on-road operation of farm, industrial, off-road vehicles, and non-conforming vehicles. • Issuance of special licence plates, including BC Parks plates, Veteran's Plates, and Memorial Cross plates. • Administration of the Personalized Number Plates program.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • *Off-Road Vehicle Act* and Regulations	Prime
Inter-jurisdictional Licensing Agreements and Financial Responsibility for Commercial Vehicles	• Administration of inter-jurisdictional licensing agreements. • Billing, collection, and remission of licensing revenues to B.C. and other provincial and state authorities. • Administration of the provincial requirements for financial responsibility obligations for commercial vehicles and out-of-province students vehicles entering B.C.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration • International Registration Plan	Prime
Temporary operating permits	• Determination of vehicle owner or operator eligibility for temporary operation permit. • Issuance of permit and windshield decal.	• *Motor Vehicle Act* and Regulations	Prime

A4 OTHER SERVICES

- Table A.3 lists the other services provided by ICBC that support the Vehicle Registration and Licensing functions. Some of these services also provide complementary benefits to government agencies.

TABLE A.3
OTHER SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Vehicle Data Management	• Provision and maintenance of the computers and associated software used to capture, store, and access vehicle and ownership related data. • Implementation of any systems modifications required as a result of legislative, regulatory, or business initiated changes. • Providing registration data for parking lot enforcement, automated licence plate readers by law enforcement, and consumer protection purposes. • Provide vehicle data extracts to government ministries, Crowns, and local government to support government initiatives, policy and programs development and planning.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • *Off-Road Vehicle Act* and Regulations	Prime
Policy Development and Implementation	• Works in partnership with government to respond to internal and external proposals for changes. • Works in partnership with government to develop regulatory and legislative changes and lead them through the approval processes. • Business policy and process change and implementation to comply with legislative / regulatory change and to improve operational efficiency.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • International Registration Plan • Canadian Agreement on Vehicle Registration	Prime
Vehicle and Ownership Information Searches	• Conducted for vehicle owners, governments, policing authorities, and other parties.	• *Motor Vehicle Act* and Regulations • *Off-Road Vehicle Act* and Regulations • *Motor Vehicle (All Terrain) Act* and Regulations	Prime and Administrative
Representation on Inter-jurisdictional Bodies	• Supports the Superintendent of Motor Vehicles as the voting member of B.C. on the CCMTA Board. • Co-represents B.C. on the CCMTA Drivers and Vehicles standing committee, is the voting member for B.C. on the International Registration Plan, the B.C. administrator for CAVR, and represents B.C. on vehicle matters and acts as the voting member with AAMVA.	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations • Canadian Agreement on Vehicle Registration (CAVR)	Prime

Service	Description of Service	Relevant Authority	Classification of Service
		• International Registration Plan (IRP) • Canadian Council of Motor Transport Administrators (CCMTA) • American Association of Motor Vehicle Administrators (AAMVA)	

A5 PROGRAM RELATED INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to vehicle registration and licensing. The following registration or vehicle licensing initiatives are under consideration or in progress at this time.

- **Black Book value versus declared value.** Effective October 1, 2022, ICBC will be required to collect the provincial sales tax on a used vehicle sale based on the greater of the Black Book's average wholesale value of a vehicle or the declared purchase price.

- **Online renewal of vehicle licence.** ICBC delivered additional online capabilities starting May 1, 2022. In February 2022, government passed regulations, effective May 1, 2022, that eliminates the requirement for ICBC to issue, and for motorists to display, a validation decal.

- **International Registration Plan Compliance Project.** Replace the International Registration Plan (IRP) legacy prorate system with an IRP Data Repository certified system.

APPENDIX B: DRIVER RELATED SERVICES

B1 INTRODUCTION

- Section 24 of the *Motor Vehicle Act* states that a driver must hold an appropriate class of B.C. licence for the vehicle that they operate on B.C. roads, the details of which are set out in Division 30 of the Motor Vehicle Act Regulations. To obtain a licence a person must first pass a B.C. knowledge and road test or prove they passed equivalent tests in a recognized reciprocal jurisdiction, vision and in some cases medical screening and pay the prescribed fees. New drivers have restrictions placed upon them and must graduate from the Graduated Licensing Program (GLP) before becoming full privilege drivers. ICBC is responsible for licensing qualified drivers.
- A person's licence may be suspended or removed under certain prescribed circumstances. Under the delegated authority of the Superintendent of Motor Vehicles, ICBC helps administer the driver fitness program and programs that sanction drivers for unacceptable driving practices, including adjudicating driving records under the Driver Improvement Program.
- ICBC is also responsible for regulating the driver training industry.

B2 DRIVER LICENSING

- ICBC is responsible for the creation, delivery and funding of driver licensing programs and services in British Columbia.
- Driver licences can be obtained at 19 Driver Licensing Offices, 68 Appointed Agents and 29 Service B.C. offices across British Columbia. Road testing is available province-wide with remote communities being serviced by itinerant driver examiners. From the information collected at the time of licence issuance, ICBC creates a driver record with which it can record and track violations, outstanding debts, driving restrictions and other information used in the administration of a licence. ICBC owns, maintains and updates the driver and client systems. ICBC may provide updates to the driver and client systems on behalf of the Superintendent of Motor Vehicles.
- A person who resides in British Columbia may apply for an identification card by delivering an application in a form satisfactory to ICBC. This identification card is called a British Columbia Identification (BCID) card.
- Effective February 2013, ICBC provides key services as a partner with the Ministry of Health and Ministry of Citizens' Services in the provincial government B.C. Services Card (BCSC) program. ICBC provides identity proofing services for combination BCSC driver's licences and standalone photo BCSC, and card production and distribution services for combination BCSC driver's licences, standalone photo BCSC and non-photo BCSC.
- On March 1, 2016, ICBC delivered a BC Transplant pilot program (where customers are prompted to register their decision on organ donation at the time of DL renewal) to increase organ donation. The successful pilot project resulted in ICBC receiving endorsement by government to roll out the Organ Donation Registry across the remaining 14 ICBC driver

licensing offices on February 19, 2017. Based on the results of the pilot, ICBC supported full implementation with little to no operational impact to the corporation.

- Effective October 2021, ICBC is responsible for delivering Mandatory Entry-Level Training (MELT), a mandatory Class 1 driving training program, requiring all new Class 1 driver's licence applicants to demonstrate the successful completion of an ICBC approved MELT course. ICBC is responsible for course content and approving driver training schools to deliver the MELT program.
- Table B.1 summarizes Driver Licensing Services provided by ICBC.

TABLE B.1
DRIVER LICENSING SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Issues Driver Licences / BCID Cards/	• Issues and renews driver licences (including combination driver licence and BCSC), and BCID, including processing licence applications and eligibility; verifying the person's identity; assessing accuracy and validity of forms and information submitted. • Maintain support for existing BC Enhanced Driver Licences (EDL) until expiry up to September 2025. • Maintains driver licensing model, including application requirements, licensing restrictions and classifications, according to legislation and in line with other Canadian jurisdictions. • Sets driver testing standards and administers driver tests. • Researches, develops, implements, supports and evaluates new driver licensing programs / initiatives towards improving road safety and customer experience. • Manages BCDL, BCSC, and, BCID, card production contracts. • Evaluates, recommends and implements new driver licence arrangements with other licensing jurisdictions. • Executes awareness of BC Transplant program to increase organ donation.	• *Motor Vehicle Act* and Regulations • *Medical and Health Care Services Regulation* • *Freedom of Information and Protection of Privacy Act*	Prime
Supports BC Service Cards	• Provides key services as a partner in the provincial government B.C. Services Card initiative related to identity proofing, residency, card production and point of service for	• *Medical and Health Care Services Regulation*	Delegated and/or Administrative

Service	Description of Service	Relevant Authority	Classification of Service
	application and issuance of the photo BCSC. Provides card production services for the non-photo BCSC.	• *Freedom of Information and Protection of Privacy Act*	
Support Services for Driver Licensing Function	• Maintains driver records to ensure they are accurate and comply with policy, delegations and directives from the Superintendent of Motor vehicles, and legislation. • Publishes and maintains driving guides and information brochures and information online at ICBC.com. • Investigates driver licensing fraud. • Produces evidentiary packages for courts. • Provides driver abstracts/records for varying uses, including to support the National Safety Code. • Pre-screens for commercial licence applicants. • Participates in inter-jurisdictional committees for driver programs. • Bills, collects and remits licensing revenues to the provincial government. • Administers licence cancellation, refuse to issue, short term licence, prohibitions and suspensions, collection of driver licence fines for motor vehicle and related debt. • Supports appointed agents and Service B.C. agents that deliver driver licensing services on ICBC's behalf. • Maintains call center to provide customer services and information by phone.	• *Motor Vehicle Act* and Regulations • National Safety Code	Prime

B3 DRIVER RELATED SUPPORT TO RoadSafetyBC

- The Superintendent of Motor Vehicles is responsible for a variety of programs that help ensure that persons unfit to drive and persons with unsatisfactory driving records are not permitted to drive. Under delegated authority from the Superintendent, ICBC helps administer these programs. Details of ICBC's role are provided in Table B.2.

TABLE B.2
SUPPORT to RoadSafetyBC*

(*formerly the **Office of the Superintendent of Motor Vehicles (OSMV))**

Service	Description of Service	Relevant Authority	Classification of Service
Driver Improvement Program and Remedial Programs, Ignition Interlock Program (IIP), Responsible Driver Program (RDP).	• Reviews and adjudicates driving records based on RoadSafetyBC-developed directives and guidelines. • Takes appropriate action such as a driver prohibition. • Manages communications with drivers concerning the Driver Improvement Program (e.g. warning, probation and prohibition letters). • Confirms acceptable acknowledgement and receipt of a prohibition / suspension from a driver and records the information on the system. • Reviews driving submissions on prohibitions of three months or less. • Reviews submissions from drivers who are sent an intent to prohibit of any length of term. • Processes certified extracts for court purposes. • Processes suspensions by adding them to the driving record and adjudicating the record for a further prohibition. • Processes Criminal Code of Canada convictions by adding them to the driving record. • Provides support to the IIP and RDP (e.g. updating DLs).	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and/or Administrative
Driver Fitness Program/Enhanced Road Assessments (ERA)	• Conducts vision screening and issues driver medical forms on behalf of the Superintendent. • Issues medical notices to drivers (under set guidelines and delegation from RoadSafetyBC), and sends licence cancellation notices for failing to comply with an ERA, medical or vision exam or where a driver is found by RoadSafetyBC to be medically unfit to drive. • Manages communications with drivers (e.g. re-examination and vision screening letters). • Adds driving restrictions on licences resulting from driver testing. • Conducts ERA as part of a driver medical fitness review.	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and Administrative

Service	Description of Service	Relevant Authority	Classification of Service
Administrative Driving Prohibition (ADP), Immediate Roadside Prohibitions (IRP), and Vehicle Impoundment Program	• Provides administrative support to the IRP, ADP, Vehicle Impoundment and Unlicensed review processes (e.g., answering questions, scheduling reviews and sending letters). • Processes vehicle releases. • Collect administrative fees and reinstate licences • Provides court/enforcement agency with driving certificates (abstracts) for court on all MVA, MVAR and, plus all Criminal Code convictions (excluding dispositions Adjudged Delinquent and Pardons) and prohibition / suspension record. • Provides administrative support with the Remedial Programs and IRP roadside prohibitions by answering questions from customers, updating driver records on behalf of the Superintendent, providing regular system downloads to RoadSafetyBC, which help to determine eligibility to enter the Remedial Programs • Disclosure of documents for reviews • Cancels and refuses to issue licences as per Superintendent of Motor Vehicle's direction.	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and Administ rative
Refuse to issue for unpaid debt owed to impound lot operators related to vehicle Impoundment	• Effective 2016, in support of RoadSafetyBC programs, ICBC accepts requests to refuse to issue a driver's licence and other services for unpaid debt owed to impound lot operators related to vehicle impoundments	• *Motor Vehicle Act* and Regulations • Delegated authority from the Superintend-ent of Motor Vehicles	Delegated and Administ rative

B4 DRIVER TRAINING REGULATION

- ICBC is responsible for administering the regulations on services provided by driver training schools, instructors, and agencies that train and assess their own drivers. Table B.3 summarizes the functions of ICBC.

TABLE B.3
DRIVER TRAINING

Service	Description of Service	Relevant Authority	Classification of Service
Driver Training Regulation	• Administers licensing standards for driver training schools and instructors as set out in provincial regulations. • Issues school and instructor licences and monitors compliance with standards. • Sanctions non-compliant schools and instructors through violation tickets, ICBC limited term sanctions, or de-licensing (subject to a show cause hearing conducted by the Superintendent of Motor Vehicles). • Administers and monitors curriculum standards, including setting curriculum and delivery standards for the GLP Approved Driver Education Course. • Administers standards and requirements for instructors, driver training schools and/or companies/agencies that are certified to deliver both training and testing (e.g., motorcycle skills) or training only where licensing privileges are granted (e.g., GLP approved course). • Administers and oversees delivery of the Mandatory Entry-Level Training (MELT) course through approved schools and instructors.	• *Motor Vehicle Act* and Regulations	Prime

B5 DRIVER LICENSING - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to Driver Licensing. Initiatives currently under consideration or in progress include:

- **Driver Licence Number Project.** Work towards implementing extension of the driver licence number range from seven digits to eight digits.
- **Graduated Licensing Program for Motorcycles (GLP-M).** Continue the policy and regulatory development in support of a Graduated Licensing Program for motorcycles.
- **Driver Medical Fitness Transformation project.** Continue to support RoadSafetyBC's transformation of the Driver Fitness processes by streamlining manual tasks and using technology to digitize paper and fax based processes to reduce errors and increase timely

provision of required information to RoadSafetyBC, drivers, healthcare providers, and ICBC.

- **Digital forms for 12 and 24 hour suspensions.** Continued to support RoadSafetyBC's implementation of digital forms for 12 hour suspensions and 24 hour prohibitions to allow for their electronic delivery to ICBC and RoadSafetyBC.

APPENDIX C:
VIOLATION TICKETS AND OTHER SERVICES

C1 VIOLATION TICKETS AND REFUSE TO ISSUE PROGRAMS

- ICBC withholds issuance of a driver's licence or vehicle licence where a person has outstanding fines payable to the Government or Crown as a result of certain violation tickets or prohibitions issued under various federal and provincial statutes.
- ICBC administers all violation tickets issued in B.C. ICBC must ensure that the tickets are valid and in accordance with legislation, regulations and Attorney General policy.
- There are five categories of violation tickets ICBC deals with on behalf of the provincial government, and one type of Federal *Contraventions Act* violation ticket:
  - Driver related moving violations
  - Driver related non-moving violations
  - Intersection Safety Camera violations
  - Provincial non-driver related (e.g., wildlife, public transit, liquor control, *Emergency Program Act*)
  - E-tickets for *Motor Vehicle Act and Motor Vehicle Act Regulation* violations.
- In addition, ICBC administers the process and collects outstanding fines payable to the federal government under the federal *Contraventions Act,* (e.g., quarantine, marine, seaway property, national parks, environment, fisheries, wildlife, airport and government property, wild animal and plant trade, tobacco, radio communications and commercial vehicle drivers).
- Table C.1 describes the functions fulfilled by ICBC.

TABLE C.1
VIOLATION TICKETS

Service	Description of Service	Relevant Authority	Classification of Service
Violation Ticket Related	• Processes Violation Tickets (VT), enters VT information into the contraventions system, resolves and identifies errors on the VT, as well as court interface errors. • Ensures the VTs processed are valid in accordance with legislation and regulations and Ministry of Justice and Attorney General policy. • Maintains the contraventions system. • Creates client record if none exists. • Cancels VTs. • Processes VT disputes and appeals. • Prepares evidentiary packages for courts.	• The Assistant Deputy Attorney General (Criminal Justice Branch) gives the authority and directives for ICBC to carry out its responsibilities under the *Offence Act* and the federal *Contraventions Act.* • Criminal Justice Branch gives the directive for ICBC	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
	• Processes and prepares supporting documentation for personation claims for violation tickets. • Collects fines and debts on behalf of the federal and provincial governments and outstanding ICBC debts. • Shares VT data with Government, as appropriate. • Provide ongoing operational support for Provincial e-Ticketing Program.	to cancel violation tickets.	
Intersection Safety Camera Program (ISC)	• Enters ISC violation tickets in the database (as of X date, adds speeding contraventions to red-light contraventions). • Creates client record if none exists. • Produces tickets. • Sends for process serving when applicable. • Tracks process serving progress. • Prepares evidentiary packages for courts. • Processes disputes. • Quality assurance review of all printed tickets/packages. • Reports on program activity. • Accepts payments for VT's and other administrative fees.	See above	Administrative

C2 OTHER SERVICES

- Other services include database maintenance and information sharing (e.g. the Traffic Accident System), collection of sales tax (Social Service Tax, Harmonized Sales Tax, and Provincial Sales Tax, depending on the vehicle purchase date). These and other services are described in Table C.2.

TABLE C.2
OTHER SERVICES

Service	Description of Service	Relevant Authority	Classification of Service
Traffic Accident System (TAS)	• Maintains the TAS that is shared with police and transport authorities. • Enters accident report information into TAS that is received from police attending the accident.	• *Motor Vehicle Act*	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
Family Maintenance Enforcement Program (FMEP)	• Manages refusal to issue of, and as of April 2019, cancellations of driver licences and vehicle licences/insurance for clients owing money under the FMEP.	• *Family Maintenance Enforcement Act* and Regulations	Administrative
Fare Evasion Fines	• Provides client address information for fare evasion fine collection. • Manages refusal to issue of driver licences and vehicle licences/insurance for clients owing excessive fare evasion debt.	• *Transportation Investment Act* • *South Coast British Columbia Transportation Authority Act*	Administrative
BC Securities Commission Debts	• As of March 29, 2021, ICBC refuses to issue a driver's licence, vehicle licence or vehicle number plate for outstanding debt owed to the BC Securities Commission.	• *Securities Act*	Administrative

C3 VIOLATION TICKETS AND OTHER SERVICES - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives for violation tickets and other related services.

In addition, it can be anticipated that from time to time ICBC will be called upon to make minor systems enhancements to process tickets issued under new enactments. These changes are typically covered under the Change Management Fund and as such are not enumerated here.

APPENDIX D: COMMERCIAL VEHICLE SAFETY AND ENFORCEMENT SERVICES (CVSE)

D1 INTRODUCTION

- The relationship between ICBC and CVSE is interdependent with long-standing systems and business links between registration, licensing and insurance systems and business processes and core provincial road safety systems and programs. In many cases these are real-time systems links on which the proper functioning of computer systems, business processes, customer service and ultimately the safety of B.C.'s roads, rely. To ensure Government and ICBC are able to discharge their respective responsibilities, the parties work together to determine the appropriate service levels, escalation procedures and remedies.
- This appendix describes the interrelated services of ICBC and CVSE and outlines the services that ICBC provides in support of CVSE programs.
- CVSE is part of the Ministry of Transportation and Infrastructure and is responsible for:
  - Enforcing provisions of the *Motor Vehicle Act*, *Commercial Transport Act*, *Transport of Dangerous Goods Act*, *Passenger Transportation Act*, *Transportation Act* and *Motor Fuel Tax Act* and applicable regulations;
  - Developing and promulgating safety regulations governing commercial transport, vehicle inspection, vehicle equipment regulations and carrier safety;
  - Maintaining and promoting road safety through the implementation and management of the National Safety Code Program, Commercial Vehicle Inspection Program, Private Vehicle Inspection Program, VIN Inspection Program, Roadside Inspection Program, Weigh2GoBC, Commercial Transport Program, Transport of Dangerous Goods Program and Commercial Vehicle Safety Alliance; and,
  - Participating on various national and international government road safety bodies to coordinate and harmonize commercial transport, vehicle equipment and safety standards.

D2 ICBC/CVSE RELATIONSHIP AND PROGRAM INTERDEPENDENCIES

- The responsibilities and objectives of CVSE and ICBC are interconnected, and program delivery and compliance are often reliant on each other. CVSE shares responsibility with ICBC for vehicle-related requirements under the *Commercial Transport Act* and associated regulations, as well as the *Motor Vehicle Act* and associated regulations.
- CVSE oversees the inspection and safety programs for commercial vehicles operating in the province and enforces the necessary safety statutes, regulations and programs. These programs outline the conditions of vehicle operation on a provincial highway and, for vehicles requiring an inspection, serve to provide a pre-condition of issuing or renewing a vehicle licence. Through the sharing of CVSE data, ICBC Autoplan Agents are able to determine at the time of registration and licensing, if a vehicle has been prohibited from on-road operation as a result of non-compliance with provincial vehicle standards, statutory requirements and CVSE safety programs. Preventing non-complying vehicles from on-road operation serves both the public

safety mandate of Government and ICBC's role as an automobile insurer by reducing the risk of loss.

A vehicle that has properly met and satisfied the CVSE inspection and safety programs can be issued a vehicle licence by ICBC for operation on B.C. highways. Conversely, a vehicle that cannot meet safety programs requirements cannot obtain a vehicle licence from ICBC. CVSE relies on ICBC data for enforcement of CVSE based safety programs and ICBC relies on CVSE data for compliance with provincial safety standards and provincial safety programs.

D3 CVSE PROGRAMS SUPPORTED BY ICBC

- ICBC provides support to several key CVSE programs, as outlined in Table D1.

TABLE D.1
ICBC ONGOING SERVICES TO SUPPORT CVSE

Service	Description of Service	Relevant Authority	Classification of Service
Transportation Permitting System. (TPS) (formerly Commercial Transport Management System (CTMS) TPS provides a variety of functions to CVSE staff as authorized and required under the MVA, Inspectors Authorization Regulation and/or appointed by the Director of CVSE.	ICBC provides: • Real time access to the Client Application and Client Database; • Operation and maintenance of the Client Database; • Commercial Vehicle Safety and Enforcement (CVSE) access to ICBC mainframe transactions; and • Financial responsibility filing inquiry (ICBC confirms that a company has a valid financial responsibility number).	• *Commercial Transport Act* and Regulations • *Motor Vehicle Act* and Regulations • *Motor Fuel Tax Act* and Regulations • *Passenger Transportation Act* and Regulations	Administrative
National Safety Code System (NSCS) NSCS provides access to National Safety Code (NSC) Program Administration staff and other authorized staff, for a variety of systems, reports and databases, to monitor carrier performance and to allow exchange of information about	ICBC provides: • The Client Database; • The Contraventions Database; • The Driver Database; • Transfer and transform a subset of the *Traffic Accidents System* (TAS) for NSC to import into database; • Corrections to TAS database; • Access to the Business Information Warehouse (BIW) Claims data; • Remote data retrieval; • Transmittal of carrier/vehicle data for NSC database; • Vehicle Database and Driver Licence retrieval for NSC Audit and online application;	• *Motor Vehicle Act* and Regulations • *Commercial Transport Act* and Regulations	Administrative

Service	Description of Service	Relevant Authority	Classification of Service
inter-provincial carriers with other jurisdictions.	• Updates for Motor Vehicle database; • Provide NSC abstracts to NSC carriers; • Access to the ICBC national Safety Code & Motor Carrier Inquiry transaction; • Blocking licensing transactions to ensure regulated vehicle inspection requirements are met; • Data entry and microfilm Notice and Orders and maintain Notice and Order data base; • Support to monitoring of NSC safety certificate for each commercial vehicle during the licensing processing; • Access to vehicle data base for vehicle inspection information and to the driver licensing system for NSC audit and carrier profile; and • Access to vehicle file for online population of vehicle inspection forms.		

D4 COMMERCIAL VEHICLE SAFETY AND ENFORCEMENT - INITIATIVES

In addition to the functions described above, ICBC undertakes initiatives related to support for Commercial Vehicle Safety and Enforcement. Initiatives currently under consideration or in progress include*:

- ICBC will develop and implement updated data exchange services required by MOTI to retrieve and verify vehicle information.

** Projects funded from the Change Management Fund, as provided for in the Service Agreement, are not included here.*

APPENDIX E: REVENUE COLLECTION

- ICBC is responsible for collecting various forms of revenue on behalf of Government, including various fees under the *Motor Vehicle Act*, the *Commercial Transport Act, Off-Road Vehicle Act* and fines under the *Offence Act* – see Table E.1.
- ICBC also provides regular revenue reports to Government, including forecasts.
- Table E.1 provides a breakdown of actual revenue collected by type. In some circumstances, revenue is recorded net of commissions paid to collection agencies. Other commissions paid are included under ICBC expenditures – see Appendix F.

TABLE E.1 REVENUE COLLECTED ON BEHALF OF GOVERNMENT

Revenue by Type	2017/18 Actual Revenue $000s	2018/19 Actual Revenue $000s	2019/20 Actual Revenue $000s	2020/21 Actual Revenue $000s	2021/22 Actual Revenue $000s
Net Motor Vehicle Act	302,038	279,218	307,136	293,317	311,516
Net Commercial Transport Act	240,474	266,952	250,221	249,232	264,865
Net Fines Revenue	71,808	78,553	77,392	65,459	68,160
Net Other Revenues	4,066	5,603	6,667	7,653	7,790
TOTAL NET REVENUE:	**618,386**	**630,326**	**641,416**	**615,661**	**652,331**

- Beginning in May 2006, ICBC assumed responsibility for collecting fines on behalf of the federal government for violations under the *Contraventions Act* and regulations. The regulations designate numerous fines, such as: violations pertaining to environmental protection; federal and federally-regulated property such as seaways, airports and national parks; fish and wildlife; wild animal and plant trade; tobacco; radio communications; commercial vehicle drivers; and maritime violations.

  The delivery of this service replicates the provincial model for non-motor vehicle fines and is to be delivered at no net cost to ICBC. ICBC collects fines owing under the federal *Contraventions Act* and regulations and remits these to the provincial government. The costs of providing the service are deducted quarterly. If fines collected are insufficient to cover costs, the provincial government is to provide reimbursement for costs in excess of fines collected.

EI REVENUE COLLECTION - INITIATIVES

In addition to the functions described above, ICBC works, from time to time, with Government on other initiatives related to revenue collection. Initiatives in other non-insurance areas may also have an impact on the process or the amount of revenue ICBC collects on behalf of Government.

APPENDIX F: COST ESTIMATES

F1 INTRODUCTION

- This Appendix provides an overview of the costs incurred by ICBC in delivering the non-insurance services covered by this Agreement based on an approach and methodology originally developed in June 2003 by ICBC and reviewed by an independent financial services company.[1]
- In deriving the cost of non-insurance services, three different concepts of cost can be used:
  - The incremental cost to the organization of undertaking the services.
  - The average cost of delivering the service when integrated with the delivery of insurance services.
  - The total cost of delivering the services on a stand-alone basis.
- These three approaches can give very different results, depending on the nature of the service and the degree to which it is integrated with the delivery of insurance services. ICBC has adopted the second of these approaches. Therefore, the cost estimates derived should not be interpreted as: the incremental cost savings that would accrue to ICBC if it no longer delivered non-insurance services; or, the incremental costs that Government would incur if it chose to deliver the services itself.
- ICBC provides Basic insurance, Optional insurance and non-insurance services. Costs incurred by ICBC that are tracked separately and are clearly identifiable as Basic, Optional or non-insurance service costs are assigned directly to the appropriate service area. Where services are integrated, costs are allocated across the functions based on cost allocation methodologies approved by the B.C. Utilities Commission.

F2 THE COST OF NON-INSURANCE SERVICES

- Table F.1 summarizes the actual cost of non-insurance services delivered by ICBC over the past five years. Costs for Vehicle Registration and Licensing activities are included in the sections labeled “Administration and Other” and “Commissions”.
- The figures include amortization costs, as well as an allocation of specific fees and commissions paid to brokers and agents. However, some commissions are recorded by ICBC as subtractions from revenue and are therefore included in Appendix E.

[1] *PriceWaterhouseCoopers “Revenue and Cost Allocation Evaluation”* prepared in June 2003.

TABLE F.1 ACTUAL COST OF NON-INSURANCE SERVICES

Type of Service	2017/18 ($000s)	2018/19 ($000s)	2019/20 ($000s)	2020/21 ($000s)	2021/22 ($000s)
Administrative and Other	30,870	29,931	33,963	30,104	36,078
Commissions	31,226	31,380	30,864	34,306	36,497
Driver Services	71,042	71,819	75,712	77,110	88,422
Total Non-Insurance Services	**133,138**	**133,130**	**140,539**	**141,520**	**160,997**

All figures conform to the International Financial Reporting Standards (IFRS).

APPENDIX G: OTHER AGREEMENTS

- In addition to the Service Agreement itself, Table G.1 lists the agreements, contracts, and memoranda and letters of understanding (MOUs/LOUs) in place concerning the non-insurance services provided by ICBC on behalf of Government. (Note: The list includes governing agreements with Government ministries and agencies named at the time of the agreement's signing – it does not include agreements with private companies and municipalities nor service level agreements.)

TABLE G.1
LIST OF AGREEMENTS, CONTRACTS AND MOUs

	Agreement/Details	Related Service
1	**Superintendent/ICBC Delegation Memorandum of Understanding (MOU)** • Series of delegation instruments with RoadSafetyBC. • Provides ICBC with authority to act on behalf of the Superintendent of Motor Vehicles in the administration of the driver improvement program, ADP-VI Program, Driver fitness, records and prohibitions, and other programs.	Driver Licensing
2	**International Registration Plan (IRP)** • Reciprocity agreement between the 10 Canadian provinces and all U.S. states except Alaska and Hawaii providing for prorated/apportioned payment of licence fees on the basis of total distance operated in all jurisdictions. B.C. became a signatory to the Plan in 1996.	Vehicle Registration and Licensing
3	**Canadian Agreement on Vehicle Registration (CAVR)** • Agreement between the 10 Canadian provinces regarding limited licensing reciprocity for vehicles not covered under International Registration Plan. B.C. signed on to CAVR in 1981. The agreement was revised from a prorate agreement to a reciprocity agreement in 2001 when all Canadian provinces joined International Registration Plan.	Vehicle Registration and Licensing
4	**Information Technology Agreement** • Agreement with Shared Services B.C. (formerly Workplace Technology Services). • Covers provision of mainframe data processing (drivers), network services, and associated charges.	Driver Licensing
5	**Access to Customer Information, Information Sharing Agreements (ISAs)** • ISAs exist with various Government ministries and agencies. • Covers sharing of ICBC customer information.	Driver Licensing/ Vehicle Licensing
6	**Elections B.C./Elections Canada Information Sharing Agreements (ISAs)** • ISAs with Elections B.C. and Elections Canada. • Covers disclosure of ICBC customer information.	Driver Licensing
7	**Canadian Police Information Centre (CPIC) MOU** • MOU with CPIC. • Covers categories I, II and III CPIC agency access to ICBC's driver licence data and vehicle information.	Driver Licensing/ Vehicle Licensing

	Agreement/Details	Related Service
8	**Access to ICBC's Databases Information Sharing Agreement (ISA)** • ISA with RoadSafetyBC • Covers OSMV access to ICBC's databases.	Driver Licensing Vehicle Registration and Licensing
9	**Refuse to Issue Memorandum of Understanding (MOU) (Family Maintenance Enforcement)** • MOU with Ministry of Attorney General (Family Maintenance Enforcement Program). • Establishes a protocol for ICBC refusing to issue (RTI) driver licences, vehicle licences/insurance for FMEP arrears when instructed to do so by the Director of Family Maintenance. Also contains an indemnity from Government. • A new agreement to include cancellation of driver's licences in addition to existing refuse to issue protocols was signed in November 2021	Driver Licensing
10	**ICBC / Service BC Partnership** • Agreement signed in 2012 with Service BC (prior to 2012, ICBC and SBC had several agreements that governed their relationship). • Covers the establishment of principles of cooperation and joint effort relating to the delivery of ICBC services at Service BC offices. • Includes the SBC systems agreement as an appendix, covering ownership, support and change control processes used by Government Agents offices to deliver Driver Services, and the Revenue Management System used by Government Agents and ICBC to collect motor vehicle fines.	Driver Licensing
11	**Drinking and Driving Initiative Memorandum of Understanding (MOU):** • **On Ongoing Costs:** MOU signed in March 2006 confirms the financial agreements relating to ICBC's operating costs for this initiative. By way of a 2019 Letter of Agreement, RoadSafetyBC reimburses ICBC for agreed upon operating costs.	Driver Licensing
12	**Federal Contraventions Act** • Letter of Understanding with the Province signed in December 2004 describes the services that ICBC will provide to support this initiative and affirms that ICBC will realize full cost recovery for providing these services.	Driver Licensing
13	**Canadian Driver Licence Agreement (CDLA)** • In March 2017, BC's Minister of Transportation and Infrastructure and Minister of Public Safety and Solicitor General signed the CDLA to improve harmonization of driver licensing requirements across Canada.	Driver Licensing
14	**Interprovincial Record Exchange** • System of sharing information across Canadian and some US jurisdictions. • Managed by the Canadian Council of Motor Transport Administrators and updated in 2006.	Driver Licensing and Vehicle Registration and Licensing
15	**Applications Maintained on ICBC's Mainframe** • Agreements on the transfer and ongoing operation/access for programs migrated from government to ICBC's mainframe (completed in 2009).	Information Services Division

	Agreement/Details	Related Service
16	**Memorandum of Understanding between ICBC and the Province regarding tax collection** • Agreement governing procedures and protocols for managing the collection of taxes owing related to importing or transferring regulated vehicles.	Finance Division
17	**Operational Services Agreement with Ministry of Health regarding the B.C. Services Card** • Management of day to day operations and business touch points between Heath Insurance BC and ICBC relating to the B.C. Services Card program and associated changes.	Driver Licensing
18	**Integrated Program Agreement with Ministry of Health & Ministry of Labour, Citizens' Services and Open Government regarding the B.C. Services Card (BCSC)** • Establishment of an agreement to collaboratively deliver the BCSC program as an integrated program.	Driver Licensing
19	**Memorandum of Understanding (MOU) with ICBC, MPSSG, Canada Border Services (Canada) and Citizenship and Immigration Canada (Canada).** • MOU respecting the development and implementation of British Columbia's Enhanced Driver's Licence and Enhanced Identification Card Program. • Addendum signed May 2016.	Driver Licensing
20	**Memorandum of Agreement between RoadSafetyBC and ICBC regarding the Age 79 Medical Notification Letter** • ICBC agrees to provide ongoing generation and mailing of letter to notify drivers at age 79 of the medical requirements under the Driver Fitness Program that apply at age 80.	Driver Licensing
21	**Electronic Ticketing and Online Payment Project & Operational Memorandum of Agreement (MOA) between RoadSafetyBC and ICBC regarding the Road Safety Initiative** • RSBC agrees to provide cost recovery in the Operational MOA between RSBC and ICBC for the ongoing support of the Road Safety Initiatives at ICBC. Effective October 1, 2019.	Driver Licensing
22	**Memorandum of Agreement (MOA) between RoadSafetyBC and ICBC regarding the Enhanced Road Assessment** • ICBC agrees to provide services for the purposes of delivering the Enhanced Road Assessment, Operational MOA, signed March 2018.	Road Safety
23	**Letter of Agreement between Ministry of Public Safety and Solicitor General (RoadSafetyBC) and ICBC regarding the Intersection Safety Camera (ISC) Program** • ICBC agrees to provide services for the purposes of implementing the Intersection Safety Camera (ISC) Program, signed December 24, 2018.	Road Safety
24	**Memorandum of Agreement (MOA) between ICBC and the BC Securities Commission for Refuse to Issue (RTI) actions by ICBC.** • In accordance with the Securities Act, upon direction of the Executive Director of the BC Securities Commission, ICBC will refuse to issue a driver's licence, vehicle licence or number plate where there is outstanding debt owed to the BC Securities Commission. MOA signed April 1, 2021.	Driver and Vehicle Licensing

	Agreement/Details	Related Service
25	**Memorandum of Understanding (MOU) between ICBC and MPSSG for the decommissioning of the Enhanced Driver Licence Program** • MOU, effective September 1, 2020, addresses the winding down of Enhanced Driver's Licence (EDL) program, including the final system/program decommissioning after the last EDL expires in September 2025. • ICBC will recover all related costs from MPSSG under the terms of the MOU.	Driver Licensing
26	**Memorandum of Agreement (MOA) between Ministry of Transportation and Infrastructure and ICBC regarding Mandatory Entry-Level Training (MELT)** • ICBC agrees to provide services for the purposes of implementing and delivering MELT. MOA effective July 1, 2021.	Driver Licensing
27	**Agreement on Retained Fees for Driver Licensing and Other Related Services between ICBC and MPSSG for retention of prescribed fees to pay Appointed Agents** • The Agreement, effective January 1, 2022, outlines the allowable costs ICBC may retain from prescribed fees to pay for Appointed Agents' services. • The agreement is to be reviewed every five years.	Driver Licensing
28	**Traffic Court Online Cycle 2 (Initiate Resolution) and Ticket Change Project, Letter of Agreement.** • The Agreement, signed July 2022, provides for ICBC's cost recovery and related terms for ICBC's support of the Ministry of Attorney General's Traffic Court Online Project to provide for the ability to initiate a dispute for a violation ticket on-line.	Driver Licensing

APPENDIX 8I

HISTORICAL INFORMATION

AND

BASIC INSURANCE INFORMATION SHARING (BIIS)

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A HISTORICAL INFORMATION

1. In accordance with BCUC's Order G-65-10, Decision on the Streamlined Regulatory Process on April 6, 2010 (section 3.3), ICBC is providing the following historical information set out in Figure 8I.1 below. In this Application, for purposes of streamlining and making compliance reporting more efficient, where information is already available within other sections of this revenue requirements application (RRA), ICBC is providing references instead of replicating such information.

Figure 8I.1 – Historical Information – Basic Insurance Only[1]

BASIC only	2017/18	2018/19	2019/20	2020/21[5]	2021/22[6]
Net premiums written ($000's)	$3,268,865	$3,476,763	$3,578,821	$2,735,426	$2,800,397
Net premiums earned ($000's)	$3,149,312	$3,390,016	$3,564,581	$2,945,115	$2,753,668
Autoplan policies earned[2]	3,833,000	3,895,000	3,883,000	3,904,000	4,124,000
Average premium of a policy[3]	$852	$885	$895	$874	$754
Operating Expenses ($000's)					
Insurance	$395,694	$400,271	$445,788	$421,964	$469,217
Non-insurance	$101,912	$101,750	$109,675	$107,214	$124,500
Total Operating expense ($000's)	$497,606	$502,021	$555,463	$529,178	$593,717
Combined Ratio[4]	147.5%	139.7%	124.4%	95.2%	91.4%

[1] Financial information for all years is prepared based on International Financial Reporting Standards (IFRS).

[2] Annualized values have been used for policies with a term of less than 12 months. Autoplan policies earned include Basic insurance certificate, storage policies, and temporary operation permits. Starting in fiscal year 2019/20, Autoplan policies earned, specific to Basic insurance excludes storage policies, which is an Optional insurance product. Autoplan policies earned for ICBC as a whole, as reflected in the Annual Service Plan Report, includes storage policies.

[3] Average premium of a policy is calculated by taking the total gross Basic insurance premiums written in dollars, divided by the gross number of policies written, which are both before cancellations and mid-term refunds. This calculation is an average across all groups of policies (including temporary operation permits (annualized), trailers and off-road vehicles), excluding garage and fleet reporting policies, and other special coverages.

[4] The ratio of all costs (claims costs, claims-related costs, administrative costs, premium taxes and commissions, and non-insurance costs) to premiums earned. A ratio below 100% indicates an underwriting profit, while a ratio above 100% indicates an underwriting loss. The Basic insurance combined ratio has been restated to reflect a reallocation of broker commissions between Basic and Optional insurance as described in the 2019 RRA, Chapter 8, Performance Measures and Transitional Reporting, Appendix 8A, Figure 8A.7.

[5] 2020/21 net premiums written reflect the two approved COVID-19 rebates and the Enhanced Care Coverage refund to eligible ICBC customers; whereas, 2020/21 net premiums earned reflect the two approved COVID-19 rebates; this also impacts average premium per policy and Combined Ratio.

[6] 2021/22 net premiums written and earned reflect the Relief Rebate to eligible ICBC customers; this also impacts average premium per policy and Combined Ratio.

BASIC only	Reference: Chapter 8, Appendix 8A – Performance Measures
MCT at year-end[1]	Sections D.2.2 and D.2.2.3
Loss Ratio	Sections D.2.2 and D.2.2.4
Expense ratio[2]	Section D.2.3.3

[1] Minimum Capital Test (MCT) adheres to the Guidelines for MCT for Federally Regulated Property and Casualty Insurance Companies as issued by Office of the Superintendent of Financial Institutions (OSFI) for the respective time period in which the guidelines apply.
[2] Expense ratio excludes Deferred Premium Acquisition Cost (DPAC) adjustment, whereas the combined ratio includes the DPAC adjustment.

Figure 8I.2 – Historical Information – Corporate

CORPORATE	Reference: Chapter 8, Appendix 8C – Detailed Operating Expenses
Total ICBC FTEs (including contractors)[1]	Figure 8C.5, Page 8C-10
Total Corporate ICBC FTEs	Figure 8C.6 Page 8C-12

[1] Total ICBC FTEs exclude employees seconded to support RAAP and ACE (funded 100% by Optional insurance), FTEs working on cost recoverable government initiatives, and FTEs who are front-line investment managers.

B BASIC INSURANCE INFORMATION SHARING

2. Further to BCUC's Order G-75-03 and in accordance with the May 2004 Negotiated Settlement Agreement (NSA) on Basic Insurance Information Sharing (BIIS),[1] ICBC agreed to provide certain Basic insurance premium and loss experience information to its competitors that would further assist their understanding of ICBC's Basic insurance claims costs and premiums in a way that did not violate individual customer confidentiality. Since then, ICBC has provided this information, which consists of approximately 100 pages of Basic insurance data, in its RRAs.[2]

3. As was done in the 2021 RRA, ICBC is including this information in PDF format on its public website, www.icbc.com. The updated BIIS report, with information as of March 31, 2022 is provided in the link below:

Basic Insurance Information Sharing

4. ICBC will continue its practice of filing the BIIS pages electronically as agreed in the 2004 NSA, Order G-49-04, when the RRA is uploaded and filed with BCUC.

[1] As approved in BCUC Order G-49-04. https://www.ordersdecisions.bcuc.com/bcuc/orders/en/item/115428/index.do
[2] With the exception of the 2006 RRA when the BIIS report was submitted shortly after the October 24, 2005 revised RRA.

APPENDIX 8J

2022/23 ANNUAL INFORMATION TECHNOLOGY (IT) CAPITAL EXPENDITURE PLAN

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A PURPOSE OF THE ANNUAL IT CAPITAL EXPENDITURE PLAN

1. ICBC is filing this 2022/23 Annual IT Capital Expenditure Plan (IT Capital Plan) with the BCUC in accordance with the BCUC's directives related to the IT Capital Plan reporting requirements (see Attachment: IT Capital Reporting Parameters Established by BCUC Orders for a list of the BCUC directives and orders related to the IT Capital Plan).

2. The purpose of preparing and submitting this IT Capital Plan to the BCUC is to provide transparency regarding ICBC's IT capital expenditures as well as the resulting depreciation and amortization that impact Basic insurance rates. In accordance with the BCUC's directives, ICBC includes in its IT capital plans a description of any project forecasted to exceed the $2 million reporting threshold for IT capital expenditures. ICBC believes this IT Capital Plan meets its commitment to the BCUC to provide information on IT capital expenditures that could impact Basic insurance rates. It also provides further assurance that ICBC's IT capital expenditures are being managed efficiently and effectively to meet the needs of ICBC and ICBC customers through improvements in the design and delivery of products and services.

3. This IT Capital Plan includes information on IT capital projects with costs that are, in whole or in part, allocated to Basic insurance and excludes any projects that are funded entirely by Optional insurance.

4. ICBC wishes to advise the BCUC that this IT Capital Plan contains financial information which, if publicly disclosed, could influence negotiations on future IT capital projects and could result in economic harm to ICBC or third parties.[1] Therefore, ICBC has redacted some of the financial information in the public version of this IT Capital Plan. ICBC is filing an unredacted version of this IT Capital Plan under separate confidential cover, filed contemporaneously with this compliance report filing, and respectfully requests that the unredacted version be treated as confidential in a manner consistent with BCUC's Rules of Practice and Procedure.

[1] Specifically, Figure 8J.2 and paragraphs 18, 19, 22, 23 and 27.

B DEFINITION AND CAPITALIZATION OF IT CAPITAL PROJECTS

5. In compliance with the International Financial Reporting Standards (IFRS), ICBC's capitalization policy for IT assets is to capitalize costs that result in probable future economic benefit to ICBC for more than one year.[2] Activities not related to development, such as planning, decommissioning, training and data migration, are expensed because they do not meet the asset capitalization criteria.

6. Under ICBC's current capitalization policy, ICBC capitalizes IT expenditures for bulk purchases of assets where capital costs exceed $50,000 per asset or $200,000 in total.

7. ICBC's total IT capital comprises of business change and renewal expenditures:

- An IT **business change** is a project where the primary business driver for IT technology is to support a change to internal business processes and workflows that will enhance business capabilities. This includes changes that affect external stakeholders (e.g., suppliers, customers, and the general public), and/or investments made in new information security and disaster recovery capabilities.

- An IT **renewal** project, by contrast, is the routine update or the outright replacement of existing technology assets at or near end-of-life. These projects sustain existing applications, infrastructure and operational services at required service levels and ensure compliance with mandated legislative and regulatory demands. Renewal projects include capital expenditures for items such as servers, storage, telephone systems and routing software, network components, software licences, desktop computer hardware, including laptops and tablets, updates and version upgrades of Commercial Off The Shelf (COTS) products.

C IT CAPITAL PLAN – FISCAL YEARS 2020/21 TO 2023/24

8. This Section presents and explains the IT Capital Plan expenditures on a four-year time horizon, including two years of actual expenditures and a rolling two-year forecast, for the fiscal years 2020/21 to 2023/24. Any individual IT capital projects exceeding the $2 million reporting

[2] Project costs that extend the useful life or increase the service capacity of an asset are capitalized, and may include automation, end-of-life replacements, disaster recovery and enhanced security, hardware upgrades and the configuration of ICBC internal systems to externally owned software. Project costs for repairs and maintenance, including non-enhancement software upgrades are expensed.

threshold of IT capital expenditure are identified and described in Section C.2.

9. The IT Capital Plan is not a static plan and it is revised as appropriate on an ongoing basis. ICBC's planning of future IT capital expenditures must remain flexible, as technology advancements may introduce unknown opportunities (or challenges), vendor changes, product stability issues or business needs may change.

10. This IT Capital Plan provides explanations for any significant year-to-year variances in order to provide the BCUC with assurance that ICBC's IT capital expenditures are being managed efficiently and effectively. ICBC regularly reviews and updates project costs to identify variances.

11. ICBC prioritizes projects and manages project scope, schedule and costs through cross-functional teams of business leaders who are responsible for reviewing opportunity assessments and business cases for new initiatives as well as change requests for in-flight initiatives. Considerations for approval include strategic outcomes, funding requirements, resource availability, risks and the overall impact of the initiative on ICBC's 2025 Corporate Strategy.[3]

C.1 IT CAPITAL EXPENDITURES CLASSIFIED AS BUSINESS CHANGE OR RENEWAL

12. Information provided in Figures 8J.1 to 8J.3 reflects corporate IT capital project costs. These costs are allocated between Basic insurance, Optional insurance and Non-insurance lines of business in accordance with the BCUC-approved financial allocation methodology.[4]

13. Capital expenditures from fiscal years 2020/21 to 2023/24 for information technology are shown in Figure 8J.1 below. Figure 8J.1 disaggregates business change project and renewal project expenditures above and below the $2 million IT capital project reporting threshold.

[3] ICBC's 2025 Corporate Strategy centers on ICBC being affordable, customer driven, smart & efficient and future focused.

[4] Corporate IT capital project costs are allocated by employing weighted average allocators of the line of business causing the project to be implemented or are directly attributable to either Basic, Non-insurance or Optional.

Figure 8J.1 – Total IT Capital Expenditures

Total IT Capital Expenditures ($ millions)	**FY 2020/21 Actuals**	**FY 2021/22 Actuals**	**FY 2022/23 Outlook**	**FY 2023/24 Forecast**
Business change projects >$2M	5.0	8.5	6.8	22.7
Business change projects <$2M	3.5	3.9	2.7	3.1
Renewal projects >$2M	10.5	23.0	14.4	18.4
Renewal projects <$2M	0.5	0.8	1.0	1.8
Total IT Capital Expenditures[1]	**19.5**	**36.2**	**24.9**	**46.0**

[1] Rounding may affect totals.

14. Capital expenditures for business change and renewal projects were higher in FY 2021/22 compared to previous years due to expenditures related to the Data Network Evergreening, Insurance Sales & Services Modernization, Flexible Work, Oracle Evergreening and PolicyCenter Upgrades projects. Expenditures are again expected to be higher in FY 2023/24 due to high expenditures related to the Data Network Evergreening, Managed Print Solution, Microsoft E5 License Renewal, Integrated People System and Streamline Claims Processes Program projects, as detailed in Figure 8J.2.

C.2 PROJECTS WITH IT CAPITAL EXPENDITURES OVER $2 MILLION - FISCAL YEARS 2020/21 TO 2023/24

15. IT business change and renewal projects with a capital expenditure of greater than $2 million are shown in Figure 8J.2 below and each project is described in Sections C.2.1 or C.2.2 below. IT capital expenditures for fiscal years 2020/21 to 2023/24 are shown if the multi-year capital expenditure exceeds the $2 million reporting threshold.

16. Project descriptions and timing are based on current estimates and our understanding of the scope of each project. These projects are subject to change as further analysis is completed throughout the year and may be re-prioritized. ICBC takes into account its strategic priorities, current IT capability and capacity, as well as industry trends, to guide decisions on the allocation of IT resources and investments. This is necessary to deliver required business capabilities, to continue to meet appropriate operational service levels, and to enhance IT capabilities costs effectively and securely. In addition, cybersecurity is integrated into ICBC's business processes and is a core element of ICBC's IT planning and spending.

Figure 8J.2 – Business Change and Renewal Projects with IT Capital Expenditures Over $2 Million

	Projects with IT Capital Expenditures over $2 Million ($ millions)	FY 2020/21 Actuals	FY 2021/22 Actuals	FY 2022/23 Outlook	FY 2023/24 Forecast	Capital Budget[1]	Total Actuals to Date[2]	Estimate at Completion[3]	Status	Planned Schedule		Actual Schedule	
										Start	End	Start	End
	Business Change Projects												
1	System Enhancements	2.9	1.8	1.9	2.7	6.6	5.9	9.3	Annual	-	-	-	-
2	International Financial Reporting Standard 17 (IFRS 17) Solution	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Active	Feb-18	Apr-23	Feb-18	Active
3	Streamline Claims Processes Program (SCPP)[4]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Active	Feb-22	Sep-24	Feb-22	Active
4	Integrated People System Project (IPSP)[4]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Not Started	Apr-23	Jun-24	n/a	n/a
5	Customer Experience (CX) Strategy[4]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Not Started	Apr-23	Mar-27	n/a	n/a
6	Data and Analytics Platform (DAP)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Complete	Apr-18	Dec-19	Jul-18	Jan-21
7	Insurance Sales & Services Modernization (ISSM)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Complete	Mar-20	Jul-22	Mar-20	Jul-22
	Renewal Projects												
8	Data Network Evergreening	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Annual	-	-	-	-
9	Server Evergreening	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Annual	-	-	-	-
10	Desktop Laptop Monitor Evergreening	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Annual	-	-	-	-
11	Storage Evergreening	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Annual	-	-	-	-
12	Hardware and Software for FTE Increases	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Annual	-	-	-	-
13	Oracle Enterprise Database Infrastructure Evergreening	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Active	May-21	Mar-22	May-21	Active
14	Managed Print Solutions	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Active	Nov-22	Mar-24	Nov-22	n/a
15	PolicyCenter Upgrade	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Active	Jun-21	Nov-22	Jun-21	Active
16	Microsoft 365 License Renewal	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Not Started	Apr-23	Mar-24	n/a	n/a
17	Microsoft 365	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Complete	Jul-20	Sep-20	Jul-20	Sep-20
18	Flexible Workplace	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	Complete	Mar-21	Jul-22	Mar-21	Jul-22
	Total[5]	**15.5**	**31.5**	**21.2**	**41.3**	**122.0**	**67.1**	**129.0**					

[1] Capital Budget refers to the initial amount of IT capital approved at the start of the project for business change projects. Renewal projects include two-year actuals and two-year forecasts.
[2] Project actuals include costs from project inception up to September 30, 2021 to provide more accurate and up-to-date information and to minimize future variances.
[3] Estimate at Completion (EAC) is actuals to date plus the remaining forecasted capital requirements for the completion of the project. Project variance can be calculated by comparing the EAC to Capital Budget.
[4] Estimate pending internal approval.
[5] Rounding may affect totals.

C.2.1 DESCRIPTION OF BUSINESS CHANGE LINE ITEMS

17. Line item 1, System Enhancements, is the capitalization of aggregated labour costs for ongoing system enhancements to claims, insurance, driver licensing and corporate applications, where the related costs meet the criteria for capitalization in accordance with ICBC's policy for capital assets. Examples of these types of system enhancements include business rule changes and enhanced reporting. In accordance with the BCUC's direction, ICBC will provide individual IT capital project reports for system enhancement costs on individual IT systems that exceed the $2 million threshold. There are no system enhancement costs for individual IT systems that are forecasted to exceed the $2 million threshold for this reporting period. The FY 2021/22 actuals and FY 2022/23 outlook are lower than regular expenditures for system enhancements as the focus was on the delivery of the Autoplan Care Enhancements (ACE) project.[5]

18. Line item 2, International Financial Reporting Standard 17 Solution (IFRS 17 Solution) will enable ICBC to comply with the mandatory requirements of IFRS 17 introduced by the International Accounting Standards Board (IASB) for insurance entities in the accounting for insurance contracts, effective for fiscal years beginning on or after January 1, 2023 (i.e., for ICBC, April 1, 2023). It includes a software solution to perform the newly required calculations, as well as reduce reliance on manual processes. It also includes a solution integrator to ensure the software achieves ICBC's business requirements, is compatible with ICBC's system architecture and meets all mandatory requirements of IFRS 17. Estimated costs at completion of $[redacted] million are lower than the $[redacted] million reflected in the IFRS 17 Solution IT capital report filed with the BCUC on June 1, 2021 and the $[redacted] million reported in the FY 2021/22 IT Capital Plan as less contingency funds were required to complete the project.

19. Line item 3, Streamline Claims Processes Program (SCPP), will redesign and implement a new operating model for non-injury claims operations and handling processes. It aims to deliver a more efficient claims organization by removing redundant activities and automating routine processes, thereby allowing resources to focus on more complex work, as well as enhancing customer and employee experience. [redacted]

[5] ACE is the project that delivered the new Enhanced Care model. In accordance with the Government Direct of January 24, 2020 with respect to funding ACE from Optional insurance (approved by Order in Council (OIC) No.046 (046/20) dated February 6, 2020), ACE is 100% funded by Optional insurance. All ACE costs prior to February 6, 2020 are allocated between Basic and Optional insurance in accordance with the financial allocation methodology approved by the BCUC.

[redacted]. Phase 2 will build on the foundations laid in Phase 1 and address further opportunities to enhance efficiency and the experience of customers and employees through the deployment of a new operating model for non-injury claims handling and processes. The estimate at completion has been updated in Figure 8J.2 to include an estimate of the added cost of Phase 2. However, as of the filing of this report, funding has not yet been approved for Phase 2. Thus, as funding, scope and other project details are not yet finalized for this phase, it is still premature to file a meaningful project update in accordance with Order G-139-18. ICBC will file a progress update on this project when internal approval for Phase 2 has been received.

20. Line item 4, Integrated People System Project (IPSP), (previously reflected as Human Capital Management System in the 2021/22 IT Capital Plan), will renew or replace the SAP tool that manages capacity, teams, individual performance and the employee experience. An IT capital report will be filed once internal approval for this project has been received but before implementation, in accordance with BCUC direction.

21. Line item 5, Customer Experience (CX) Strategy, will implement the customer experience model across ICBC to advance the 2025 Corporate Strategy goal of being more Customer Driven. In 2023, detailed strategy and planning work will commence to identify CX priorities. Accepted priorities will then be planned and estimated in more detail in late 2023 or early 2024. At this early stage, it is not yet known which priorities will be identified and accepted. They may potentially relate to new customer communication channels and methods of gaining customer feedback, improved employee and customer communication, and improved workforce and knowledge management. An IT capital report will be filed as needed once planning is complete and internal approvals for funding and scope have been received, in accordance with BCUC direction.

22. Line item 6, Data and Analytics Platform (DAP), was for the acquisition of computer and storage hardware, software licensing, implementation and development costs associated with the data preparation tool/self-service capability and predictive model integration capability that leverages the Hadoop-based platform. An IT capital project report was filed on June 4, 2018. ICBC provided an update on the pilot for the project in the 2019 Revenue Requirements Application (RRA) filed on December 14, 2018. ICBC also provided an update on the success of the data migration, cost variances associated with the new data and analytics platform, and other operational impacts in the 2021 RRA filed on December 15, 2020. DAP is now complete and the total cost of $[redacted] million is consistent with the total project costs previously reported.

23. Line item 7, Insurance Sales and Services Modernization (ISSM), enables ICBC to offer online insurance purchasing capabilities to renew core insurance product offerings (limited to non-fleet personal rate classes which make up the majority of ICBC's business). ISSM also put in place foundations for future online customer-facing services, such as digital identity, authentication and authorization, electronic signature and online payment processing. The estimate at completion is $[redacted] million less than the 2021/22 IT Capital Plan because a simpler model and training approach were selected, resulting in lower labour and contractor costs. An IT Capital Report for this project was filed on November 25, 2020 and an update was filed on October 15, 2021. The ISSM project is now complete.

24. Claims Legacy Data Migration was listed in the 2021/22 IT Capital Plan as a project with IT capital costs over $2 million. Since then, the project costs are now understood to fall below the reporting threshold. Thus, this project is no longer listed in Figure 8J.2.

C.2.2 DESCRIPTION OF RENEWAL LINE ITEMS

25. Line items 8 to 18 in Figure 8J.2 are evergreening projects for which IT capital project reports were previously filed and/or for which ICBC is not required to file individual IT capital reports, as per Orders G-189-11, G-191-15 and G-13-22. In accordance with the BCUC's direction, ICBC will continue to provide information on these projects in its future IT capital plan reports.

26. Line item 8, Data Network Evergreening, is the replacement of switches (computer networking devices that connect network segments), wireless access points (similar to switches, but providing secure network connectivity via wireless), firewalls, routers, security components and other related technology (e.g., Wide Area Application Services, a network optimization technology that prevents network slow-down and, in turn eliminates and/or minimizes business and customer impact) at ICBC's data centres and offices. The replacement/upgrade of network equipment has been significantly delayed by global shipping/supply chain issues in recent years.

27. Line item 9, Server Evergreening, involves the ongoing replacement and retirement of servers and system software that are at end-of-life to maintain a reliable and cost-effective computing environment in support of ICBC's business operations. The FY 2022/23 outlook is $[redacted] million higher than what was reported last year due to an increased cost of migrating end-of-life servers to new higher-density virtual servers, which will help with stability, simplification and allow for increased automation in the server build process.

28. Line item 10, Desktop Laptop Monitor Evergreening, is the evergreen cycle for desktop/laptop computers and monitors. Expenditures are higher in FY 2022/23 due to an increase in the price of equipment.

29. Line item 11, Storage Evergreening (formerly Storage Area Networks (SAN) Evergreening) is the evergreening cycle for hardware (consisting of storage discs and high-speed network connections to the systems that use the storage), software (for the hardware components), and installation services for the hardware and software. The storage infrastructure is a centralized environment that allows many servers to simultaneously access corporate data and is designed to provide access to corporate data under heavy workloads for extended periods of time. This item was not included in last year's filing because the cumulative IT capital expenditure in that reporting period was below $2 million. However, it is now above $2 million in this reporting period due to increased expenditures for upgrades of the enterprise data backup and recovery system and increased storage requirements for the big data platform. The name change reflects that ICBC is moving from SAN to higher-density storage.

30. Line item 12, Hardware and Software for FTE Increases, is a recurring expenditure for the annual purchase of hardware and software for new ICBC employees. The EAC is lower than the budget due to the Flexible Workplace Project absorbing some of the hardware costs in recent years. As per Order G-139-18, ICBC is not required to file individual IT capital reports on this type of expenditure.

31. Line item 13, Oracle Enterprise Database Infrastructure Evergreening, is for the renewal of end-of-life Oracle Database Infrastructure systems. The project will consolidate the Oracle Database Infrastructure onto one single platform and provide the highest level of resiliency, scalability, availability and performance to all applications for all the databases that are being hosted on this infrastructure. The project's completion has been delayed due to project and operational interdependencies. An IT capital report was not filed for this project as the infrastructure is made up of evergreening components such as servers and storage, which are included under approved evergreening projects.

32. Line item 14, Managed Print Solutions, reflects costs associated with equipment leasing for all printer and multi-function devices. The forecast has increased since the last filing because of the need to renew the contract for the full printer fleet and the capitalization of five years of licensing costs. However, the cost is being offset by a 40% reduction in the printer fleet due to

the adoption of a flexible work from home strategy. An IT capital report will not be filed for this project as it is part of the evergreening cycle for printers.

33. Line item 15, PolicyCenter Upgrade, is upgrading the current version of Guidewire PolicyCenter® and supporting infrastructure which will reach the end of support in 2022. This project is a critical sustainment initiative that maintained operational support and avoided sustainability risks by moving ICBC to PolicyCenter 10. This is a recurring renewal of PolicyCenter that does not introduce significant change for PolicyCenter users, but it does enable features newly available with PolicyCenter 10. PolicyCenter Upgrade was added to the list of evergreening projects through BCUC Order G-13-22. There are no significant cost variances, but the project has been delayed three months to fix post-go-live defects and perform data cleanup.

34. Line item 16, Microsoft 365 License Renewal is the latest renewal of ICBC’s existing Microsoft Office Suite and Teams end user software licensing solution.

35. Line item 17, Microsoft 365, was for the previous renewal of ICBC’s existing end-user software licensing solution for the Microsoft Office Suite and Teams license, which will provide access to a suite of new collaboration and productivity tools.

36. Line item 18, Flexible Workplace, supports ICBC’s work from home initiative. An IT capital report was not filed as the majority of capital expenditures were for hardware like laptops, headsets, monitors and other equipment that replaced existing hardware that is included under approved evergreening projects. The project is now complete. The final project costs were higher than the original budget because the scope of the project was increased to include the purchase of peripherals (monitor, keyboard, mouse, etc.) for employees in roles that met the eligibility guidelines for working from home.

D DEPRECIATION AND AMORTIZATION OF IT CAPITAL EXPENDITURES

37. On page 22 of ICBC's 2021/22 Annual Service Plan Report (ASPR),[6] ICBC’s accounting policies state that property and equipment are initially recorded at fair value and subsequently measured at cost, less accumulated depreciation and impairment losses. Cost includes expenditures that are directly attributable to the acquisition or construction of the items, including retirement costs. Subsequent costs, such as betterments, are included in the asset only when it

[6] Insurance Corporation of British Columbia 2021/22 Annual Service Plan Report (icbc.com).

is probable that future economic benefits associated with the item will flow to ICBC. All other subsequent expenditures are recognized as repairs and maintenance. Capitalized software that is an integral part of the equipment is accounted for as equipment. Property and equipment is depreciated when it is available for use on a straight-line basis over the estimated useful life of each asset.

38. Finite life intangible assets, which are discussed on page 23 of the 2021/22 ASPR, are initially recorded at fair value and subsequently carried at cost less accumulated amortization and impairment losses. Intangible assets with finite useful lives are amortized over their estimated useful lives when they are available for use on a straight-line basis, taking into account the residual value. ICBC performs an annual asset review in compliance with IFRS.

39. Total depreciation and amortization for fiscal years 2020/21 to 2023/24 resulting from IT capital expenditures are shown in Figure 8J.3 below.

Figure 8J.3 – Depreciation and Amortization of IT Capital Expenditures

Description	FY 2020/21 Actuals	FY 2021/22 Actuals	FY 2022/23 Outlook	FY 2023/24 Forecast
Depreciation and Amortization of IT Capital[1] ($millions)	22.7	24.4	25.5	24.1
% of ICBC's operating expenses	2.7%	2.6%	2.7%	2.5%

[1] Rounding may affect totals.

E CONCLUSION

40. This IT Capital Plan provides information that is consistent with the BCUC’s current reporting requirements and includes two years of historical and two years of forecast expenditures, segregated into capital business change and renewal projects.

41. ICBC submits that this IT Capital Plan meets its commitment to the BCUC to provide further information on IT capital expenditures that could materially impact Basic insurance rates and provides further assurance that its IT capital expenditures are being managed efficiently and effectively.

Attachment 8J.1 – IT Capital Reporting Parameters Established by BCUC Orders

1. In the January 9, 2008 Decision on the 2007 Revenue Requirements Application (Order G-3-08), the British Columbia Utilities Commission (BCUC) directed the Insurance Corporation of British Columbia (ICBC) to:

> …continue the existing reporting regime consisting of a comprehensive annual IT capital plan filing that would identify the total IT capital expenditures (actuals and forecast). In addition, those individual projects that exceed a capital expenditure of $1 million are to be reported, with explanatory detail and project justification, in a timely way for Commission comments, once internal corporate approvals have been achieved, but before implementation.[7]

2. With respect to the Annual Information Technology Capital Expenditure Plan (IT Capital Plan), the BCUC stated:

> For reporting and internal management purposes, capital expenditures are divided into two main categories: capital renewal projects and business change projects. A rolling five-year forecast is presented (two years of actuals and a three-year rolling forecast). The description of the various projects is adequate for Commission purposes and provides a model that can be employed going forward.[8]

3. In September 2011, ICBC filed its Application to Streamline IT Capital Reporting Requirements with a proposal to discontinue filing individual IT capital reports on projects that involve routine replacement of computer hardware, software, and software infrastructure (evergreening projects).[9] In its November 16, 2011 Decision on ICBC's Application to Streamline IT Capital Reporting Requirements (Order G-189-11), the BCUC approved ICBC's proposal. The BCUC also directed ICBC to continue providing information on these projects in the IT Capital Plan. Accordingly, evergreening projects that were or are going to be undertaken during the reporting time horizon for this IT Capital Plan are identified in Section C.2.2. In November 2015, ICBC filed a request with the BCUC to include future Genesys upgrades (call routing software) to the list of evergreening projects that no longer require individual IT capital project reports. The BCUC approved ICBC's request in its December 3, 2015 Decision on the Addition of the 2016 Genesys Upgrade to the List of Evergreening Projects (Order G-191-15). In December 2021, ICBC also filed a request to include PolicyCenter Software to the list of evergreening projects.

[7] Order G-3-08, page 64: https://www.ordersdecisions.bcuc.com/bcuc/decisions/en/111616/1/document.do.
[8] Ibid, page 62.
[9] Evergreening IT capital projects (a subset of renewal projects) are recurring projects that involve the replacement of technology assets that have a regular replacement cycle, typically once every three to five years, where there is little change in the purpose of that technology from one replacement cycle to the next. IT assets that ICBC considers as evergreening include: end-user devices, end-user software, servers and mainframe, output management devices, data networks, and storage.

The BCUC approved ICBC's request in its January 18, 2022 Decision on the Addition of Policy Centre Software to the List of Evergreening Projects (Order G-13-22).

4. In April 2018, ICBC filed its 2018 Application to Streamline Information Technology Compliance Reporting Requirements (2018 Streamlining IT Reporting Application). In its July 26, 2018 Decision on ICBC's Application to Streamline IT Compliance Reporting Requirements (Order G-139-18), the BCUC directed ICBC to:

> …report on individual IT capital projects that exceed a capital expenditure of $2 million in a manner consistent with the instructions set out in the ICBC 2007 RRA Decision.[10]

5. The BCUC further approved (in Order G-139-18) ICBC's proposal to discontinue the provision of the asset category cost details reported in the IT Capital Plan,[11] and to reduce the forecast period in the IT Capital Plan from three years to two years.[12] The BCUC also approved ICBC's proposal to consolidate the renewal projects and business change projects figures, but directed ICBC to continue providing year-over-year actual and forecast information, with the following modifications:

- Add a summary line of the IT capital expenditures that are below the reporting threshold.
- Provide forecast end dates for those projects where the project status is "active".
- Provide forecast start and end dates for those projects where the project status is "not yet started".[13]

6. In accordance with BCUC Order G-139-18, for IT capital projects exceeding the reporting threshold of $2 million, ICBC files individual IT capital project reports with the BCUC after internal approval for the project to proceed has been obtained, and before project commencement.[14]

7. In Order G-139-18, the BCUC approved proposals to exclude hardware and software costs for new employees, and true-up costs from the requirement to file individual IT capital project

[10] Order G-139-18, page 4: https://www.ordersdecisions.bcuc.com/bcuc/orders/en/316600/1/document.do.
[11] Ibid, page 6.
[12] Ibid, page 7.
[13] Ibid, page 7.
[14] Project commencement refers to the point where ICBC begins, or commits to, spending IT capital.

reports, effective the date of the Order.[15] However, ICBC's proposal to exclude system enhancements costs from this reporting requirement was not accepted and ICBC was directed to:

> …file, in a manner consistent with the instructions set out in the ICBC 2007 RRA Decision, an individual IT capital project report to the BCUC where aggregate system enhancement costs for any individual IT system currently in use at ICBC are estimated to exceed $2 million.[16]

[15] Order G-139-18, pages 8 to 9.
[16] Ibid, page 9.