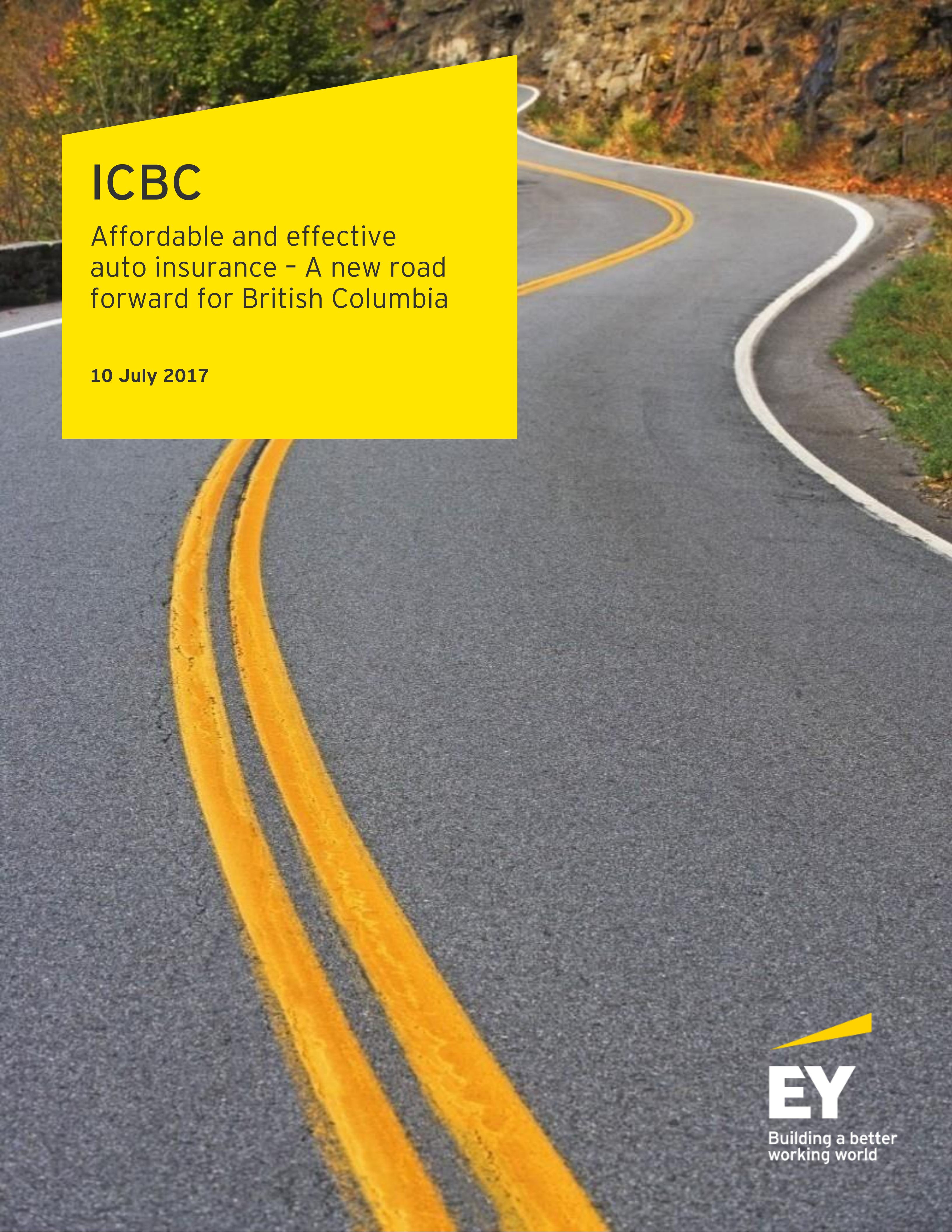

ICBC

Affordable and effective auto insurance – A new road forward for British Columbia

10 July 2017

EY
Building a better working world

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1. Introduction

1.1 Context for review

Over the past several years, the Insurance Corporation of British Columbia (ICBC) has experienced rapidly increasing vehicle repair and bodily injury claims costs, as well as a concerning increase in the number of car crashes on BC roads. This represents a significant change from the steadily declining accident rates and relatively stable premiums that had occurred over the previous decades. These new trends are causing concern about the long-term affordability of auto insurance within the province. The government, board and management of ICBC have become increasingly concerned about these negative trends and undertook a series of significant cost reduction initiatives[1] to flatten the organization and increase the efficiency of its claims operations and procurement processes. In addition, the Province of British Columbia introduced much stricter impaired driving enforcement in 2010 through the Immediate Roadside Prohibition program, moved to significantly increase penalties for distracted driving in 2016, doubled Basic premiums for high-value vehicles starting in 2017 and increased accountability for drivers who cause multiple crashes by having them lose their safe driving discounts faster than they have previously[2]. However, it has become apparent that these initiatives will not be enough to overcome the spike in accidents and escalating claims costs. In December 2016, the Minister of Transportation and Infrastructure directed the board of directors to initiate a comprehensive external review[3].

While other jurisdictions both in North America and abroad have also experienced increased claims costs, many have undertaken major changes to their auto insurance schemes to mitigate pressure on rates. British Columbia has been able to maintain essentially the same auto insurance scheme since 1973 but increasing financial losses and a limited public appetite for higher premiums bring into question whether this system is sustainable without significant reform or direct government financial support on a go-forward basis.

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[1] Including such initiatives as the Crown Corporation Core Review 2012, Claims Operations Review 2014, management and FTE reductions, implementation of new claims and insurance platforms, windshield repair policy, transforming the organization's legal function, anti-fraud program, strategic sourcing programs for auto repair and medical services, and starting in 2016 foregoing "dividends".

[2] Increased crash accountability effects policies renewed after May 6, 2018.

[3] "As the Minister responsible for ICBC, I am directing the ICBC Board of Directors to commission a comprehensive independent third party review. The objective of this review is to provide a wide range of options for ICBC and Government's consideration that would increase fairness and affordability related to Basic insurance, with the goal of future Basic rate increases being in line with the rate of inflation. Furthermore, it is Government's intention to maintain public ownership of ICBC, and to work within the current model in order to keep Basic automotive insurance as affordable as possible for British Columbians." (Letter from the Honourable Todd Stone to Mr. Barry Penner, Board Chair ICBC - Dec 19, 2016).

1.2 Scope

EY was selected through a competitive process to undertake an independent review of ICBC (the Review), with the objective of obtaining a range of options for ICBC and the BC government to consider that would increase fairness and affordability related to Basic insurance, with the goal of keeping future Basic rate increases in line with the rate of inflation (~2%).

The Review includes comparing ICBC against other relevant jurisdictions across Canada and internationally (including the UK, Australia, New Zealand, the US and select European countries) in the areas of road safety, operational and financial performance, investment management, governance and product design, as well as considering other potential revenue-generation opportunities.

The Review was based on the premise that ICBC would remain publicly owned, with the mandate to provide affordable Basic auto insurance for all BC motorists. It has been grounded on the application of five guiding principles for a modernized insurance program: *affordability*, *efficiency*, *sustainability*, *fairness* and *simplicity*. These guiding principles are seen as an essential framework to underpin potential solution options for ICBC and the BC government's review.

1.3 Structure of this report

This report is structured to present the following:

- Executive summary
- An overview of auto insurance in BC today
- Challenges to the current system, with discussion on what an effective system should deliver and comparison to performance of other global jurisdictions
- Potential reform options, focused on road safety, policy and product
- Interim measures that should be initiated while reform is under development
- Summary conclusions and implementation plan

1.4 Risks and uncertainties

There is always uncertainty associated with actuarial estimates. Estimates of future claims experience (claim numbers and payments) are inherently uncertain because they depend on the outcome of future events that cannot be forecast precisely. Examples of influences on claims experience that are particularly challenging to forecast include changes to social, economic and legal environments. Therefore, actual claims experience may emerge at levels higher or lower than the actuarial estimates.

When dealing with legislative reforms, the degree of uncertainty in estimating the cost of the future product design increases substantially. A major part of this increased uncertainty relates to the changes in behaviour of claimants and their representatives, and this is difficult to predict. We have drawn on the experience of product changes in other auto schemes in Canada and internationally as a guide to plausible changes in behaviour in our cost estimates. This uncertainty of the cost estimates has a consequential impact on the extent to which product changes need to be varied to achieve the cost and premium reduction objectives outlined later in this report. While we have assumed plausible changes in behaviour as reflected in reductions in claim numbers and legal representation in our work, other relevant assumptions could also be chosen.

The emerging costs of any product design depend on how well the changes are implemented, and in particular, how well claims are managed. The effectiveness of claims management can have a major impact on the extent to which the estimated claim costs savings are realized.

In relation to cost estimates for savings from road safety initiatives, ICBC operational efficiencies and non-insurance initiatives, there is also significant uncertainty whether the savings and additional revenue will be achieved. The estimates in this report are based on analysis and research undertaken by EY and are also based on a review of work undertaken by ICBC.

1.5 Reliance and limitations

In undertaking this assessment, reliance has been placed upon publicly available data and data provided to EY by ICBC in respect of the current ICBC auto insurance system. We have reviewed this information for reasonableness, but without independent audit or verification. The accuracy of our results is dependent on the accuracy and completeness of this data.

It is essential that any reader of this report understand its associated qualifications and limitations.

Judgments regarding the data, methods and assumptions contained in this report should be made only after studying the entire report, as conclusions reached by a review of a section or sections on an isolated basis may be incorrect.

1.6 Glossary

Term	Definition
Accident year	Denotes the year in which the vehicle accident giving rise to the claim occurred.
Basic insurance	Mandatory Coverage required for a vehicle in British Columbia. Provides a minimum level of coverage that includes a minimum level of third party liability coverage, medical cost and wage loss reimbursement.
BC	British Columbia
BCUC	British Columbia Utilities Commission
BI	Bodily Injury
Commissions	Refers to payments made to agents/brokers by insurers for writing ICBC insurance plans on behalf of the insurer.
Casualty	Any person killed or injured as a result of an accident attributable to the movement of a road vehicle on a road, as recorded by Police Traffic Accident System.
Claim liability discount rate	Rate used to discount expected future claim payments for calculating provision for unpaid claims.
Claim frequency	Ultimate number of claims divided by the number of vehicles.
Claim severity	Cost per insured claim
Cost per policy	Total cost of claims divided by the number of insured motor vehicles in BC.
Dividend	Excess optional capital transfer to Government
Driver risk premium	Each year just prior to a driver's assessment date (which is usually your date of birth), ICBC will review your driving record for offences in the previous three years. This provides a more accurate prediction of the risk a driver represents.

Term	Definition
FARM	Facility Association Residual Market. The FARM is established by regulation in the private sector provinces, and automobile insurers licensed in these provinces must be members. Should an insured, such as a high-risk driver, not meet the eligibility requirements of an insurer, they must be provided insurance by the FARM. As such, the FARM market share is a measure of availability in the private sector.
General damages	See Non-pecuniary damages
Incurred claims cost	Claim payments to date plus case estimates.
High-value vehicle (HVV)	Vehicles with a MSRP (Manufacturer's Suggested Retail Price) over $150,000
Loss cost	The average loss per car insured. Also referred to as pure premium.
MCT	Minimum Capital Target
Non-pecuniary damages	Also referred to as "general damages", non-pecuniary damages are for "pain and suffering", sometimes also described as "loss of enjoyment of life". These damages are supposed to compensate the claimant for having to experience symptoms caused by the accident, having a loss of expectation of life, etc.
Non-insurance services	ICBC business line that provides driver licensing services, vehicle licensing and registration services, and fines collection on behalf of the provincial government.
Optional insurance	Optional coverage offers protection for a driver's vehicle, additional third party liability and other protection such as loss of use coverage.
Propensity to claim	Ultimate number of claims divided by the number of road casualties.
Representation rate	The proportion of claims that have legal representation.
Risk premium	Expected claim payout without expenses and profit margin.
Threshold framework	A hybrid of the Tort and No-Fault frameworks whereby the ability to sue for damages is enabled upon meeting or exceeding a threshold. The threshold is typically expressed as "verbal" (a.k.a "descriptive") or "monetary".
Soft-tissue injury	Generally, an injury that heals within three months. Typically soft-tissue injuries include sprains, strains and whiplashes.

Term	Definition
Statutory discount rate	Statutory rate used to calculate the present value of future damage awards. This rate is set by regulation and is outside the control of ICBC.
Yield on basic equity	Current in yield available on ICBC invested asset holding. Rate is used to discount future claim payments for calculating claim reserves.

2. Executive summary

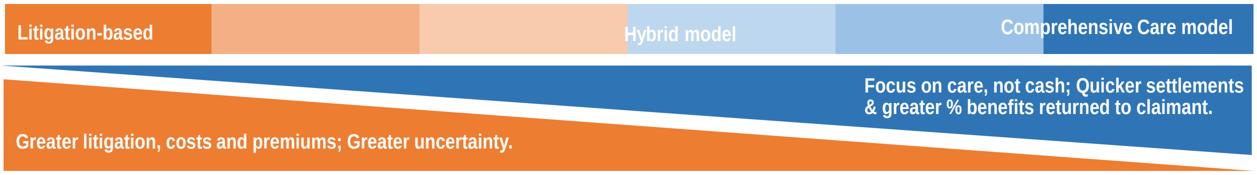
2.1 Auto insurance in BC today

The Insurance Corporation of BC (ICBC) is a provincial Crown corporation created in 1973 to provide universal public auto insurance to drivers in BC through a government owned and operated system. Any vehicle registered for driving in British Columbia must, by law, be covered by ICBC's Basic insurance package (called "Basic Autoplan"), which includes protection from third-party legal liability, under-insured motorist protection, accident benefits, hit-and-run protection and inverse liability (coverage in parts of Canada or the US where local laws can affect a claim). ICBC is the sole provider of this mandatory Basic insurance in BC and has been regulated by the BC Utilities Commission since 2003.

BC drivers also have the ability to buy optional insurance for additional coverage such as extended liability, collision and comprehensive plans. Optional insurance can be purchased from ICBC ("Autoplan Optional") or from a number of competitive private insurance firms.

The auto insurance landscape has evolved greatly across Canada, with a mixture of public and private providers as well as different insurance models in place. British Columbia has a litigation-based insurance model, which allows not-at-fault drivers to sue at-fault drivers for both economic loss (lost wages, treatment costs, material damages) and pain and suffering, regardless of severity of injury. BC is the only province in the country that has not modified this adversarial model. All other Canadian jurisdictions have reformed their insurance schemes over the past 20 years in response to escalating claims costs and concerns regarding affordability. The comprehensive care (or injury) model, as in place in Manitoba and Saskatchewan, does not generally include the right to sue for pain and suffering arising from minor injuries. Certain hybrid models (designed to bring benefits from both models) typically use caps to limit the payment for pain and suffering costs caused by minor injuries.

Chart 1: Spectrum of different auto insurance models, with features of litigation-based models on the left and care-based models on the right



As a public insurer, ICBC has a responsibility to keep Basic automobile insurance prices consistently affordable for British Columbians. Rates are approved through an annual rate filing process governed by the BC Utilities Commission. Historically, vehicle registration and a number of road safety responsibilities have been delivered by ICBC, and beginning in 1996, Motor Vehicle Branch functions were also transferred to ICBC (Driver testing and licensing). In addition, ICBC collects unpaid fines revenue and supports the BC Service Card initiative. The costs to deliver these additional services are borne by the Basic rate payers, and although associated revenues are not returned to ICBC, there are savings arising from changes that have allowed ICBC to directly influence the safety of roads and quality of drivers in British Columbia.

2.2 Challenges to the current system

BC's auto insurance system is facing unprecedented challenges. Premiums collected by ICBC today are higher than other provinces that have shifted away from a predominantly litigation-based model (they are the second highest in Canada), yet they are not high enough to cover the true cost of paying claims. More accidents are occurring on BC's roads, and the number and average settlement of claims are increasing. Only recent government intervention has protected BC drivers from the currently required 15%–20% price increases. This rate protection has eroded ICBC's financial situation to a point where it is not sustainable. **The average driver in BC may need to pay almost $2,000 in annual total premiums[4] for auto insurance by 2019, an increase of 30% over today's rates, assuming current trends persist, the objective is to have ICBC's rates cover its costs, and significant reform is not undertaken.**

In summary, the BC auto insurance system has significant structural problems. However, based on the experience of other jurisdictions, there are proven solutions available — but this additional work needs to start now. This report sets out in detail the key issues putting significant pressure on auto insurance premiums in BC. It also identifies a series of impactful solution options to underpin reform and support a safer, sustainable system.

Issue	Target outcome
1. More accidents on BC's roads are resulting in more claims	• Increasing the effectiveness of BC's road safety approach will change high-risk driver behaviours and result in fewer accidents on BC's roads
2. The number of claims being filed is going up faster than the number of accidents	• A re-design of the current insurance product will change claimant behaviour, and keep costs and premiums under control
3. Average settlements for minor injuries (such as minor soft-tissue) are increasing	• Focus will shift from cash to claimants' care and treatment, available to claimants sooner for more effective results
4. Claim costs for minor injuries have increased from 30% to almost 60% of total bodily injury claims costs since 2000	• Costs of pain and suffering will be limited, along with increased focus on lifetime care and a significant reduction to legal costs and disbursements
5. Insurance premiums collected by ICBC do not cover claim costs	• Rates will be more affordable and sustainable for the long term

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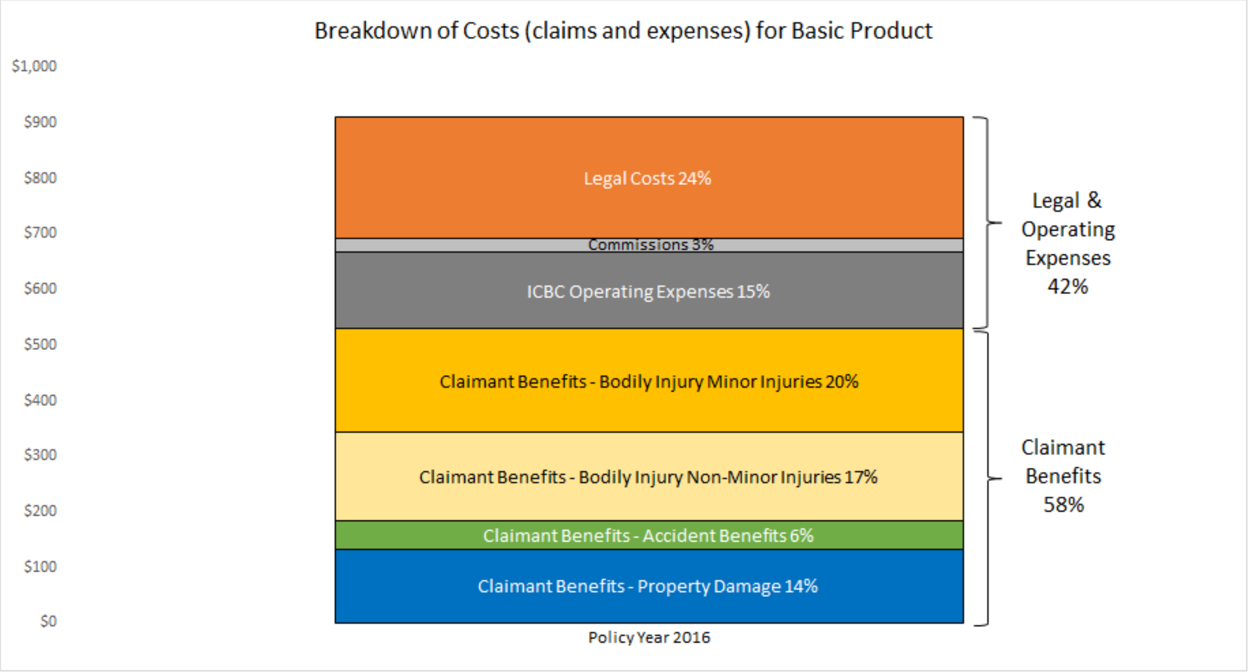
[4] $2,000 is the total consumer spend reflecting true expected claims costs on Basic and Optional coverages.

Chart 2 below shows the breakdown of costs and expenses in 2016 incurred against BC's Basic insurance product. Of note, minor injuries account for more annual cost than serious or catastrophic injuries, and legal costs are higher than either of these costs.

Chart 2: Breakdown of costs and expenses

- Minor injuries account for 20% of total annual cost, while serious and catastrophic injuries account for less at 17%. In most other jurisdictions, minor soft-tissue injury costs are only about half of more serious or catastrophic injuries.
- Legal costs account for 24% of total annual costs, greater than the cost to run ICBC and benefits received by either minor injuries or non-minor injuries.



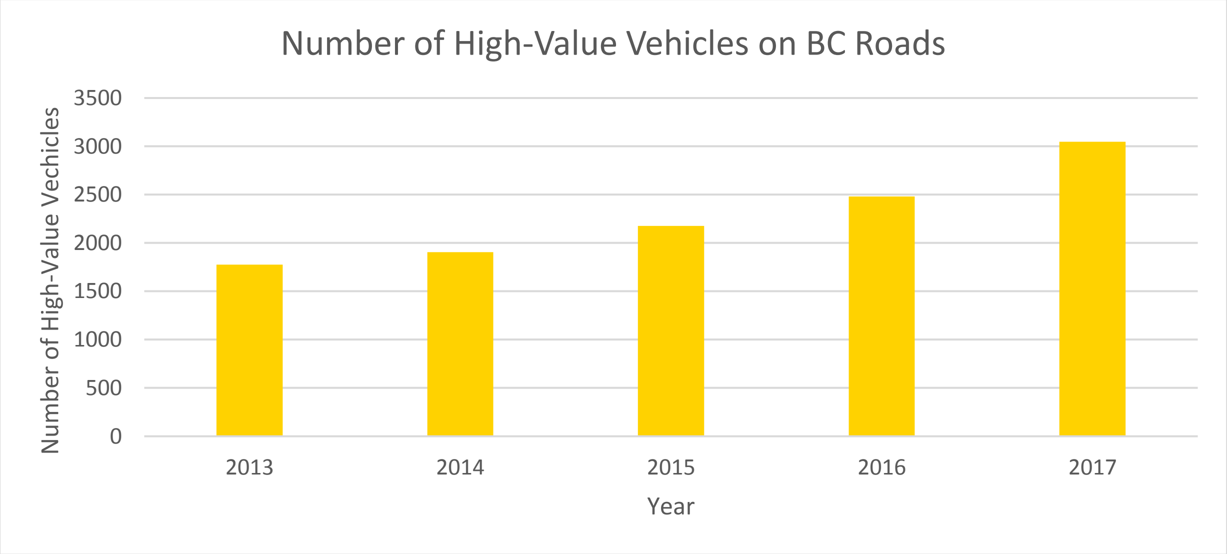
Note: ICBC operating expenses for Basic product compare favourably to the national average of Canadian property and casualty insurers

Issue 1: Accidents and claims are on the rise in BC

Despite decades of car and road safety enhancements and long-term improvements in the number of crashes on BC roads, data from both ICBC and Transport Canada reveals a recent upward swing in the number of road accidents. ICBC data shows that approximately 20,000 additional crashes per year have been taking place in BC since 2013 (a 23% increase between 2013 and 2016). Given the focus globally on road safety — including safer vehicles, safer road infrastructure and preventing high-risk driving behaviours — an increasing trend in crashes on BC roads is a serious issue. Our research indicates that there are other jurisdictions around the world that are recently experiencing the same trend.

Further, ICBC's vehicle repair costs have also increased by more than 30% in the past two years to a total of $1.5b in 2016. This is being driven by the increased number of crashes, rising labour costs, as well as the fact that vehicles today are more reliant on technology and expensive materials than ever before. In BC, there are approximately 70% more high-value vehicles (MSRP greater than $150,000) on the road today than there were four years ago.

Chart 2b: In BC, the number of high-value vehicles[5] is increasing annually[6]



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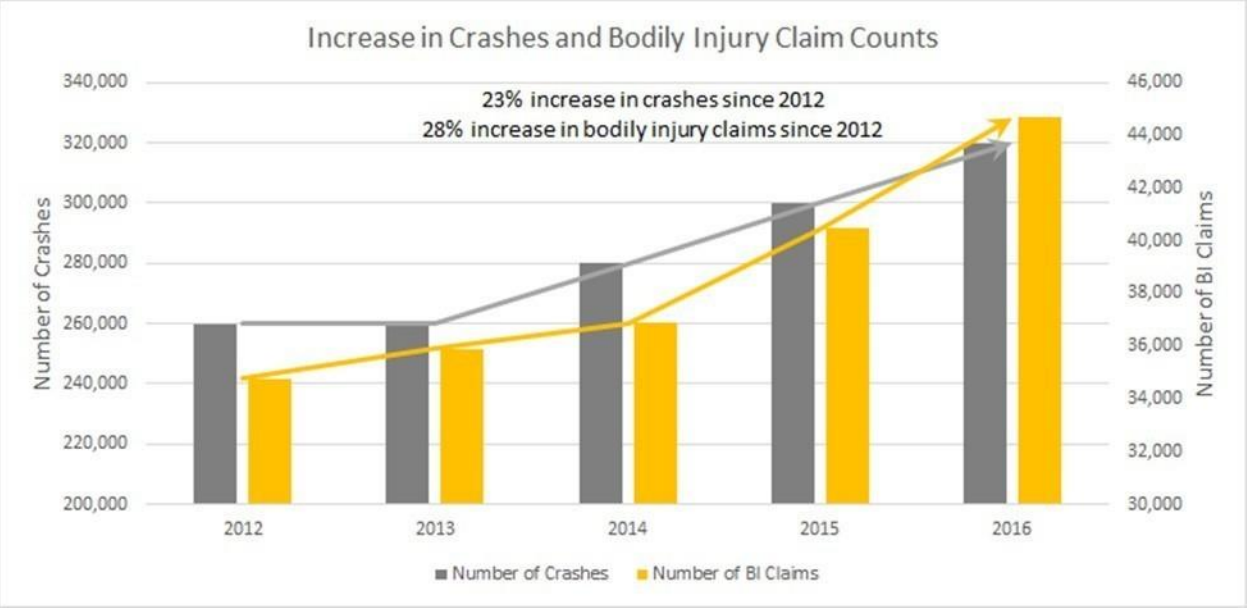
[5] Vehicles with a MSRP (Manufacturer's Suggested Retail Price) over $150,000

[6] Count represents the number of vehicles insured as of May 31 each year.

Issue 2: The number of claims being filed is going up faster than the number of accidents

It is not surprising that more road crashes would lead to a higher number of claims; however, in BC the rate of claims is significantly outpacing the rate of crashes. There are more claims per crash being filed, and this highlights a second issue.

Chart 3: In BC, the rate of claims is significantly outpacing the rate of crashes

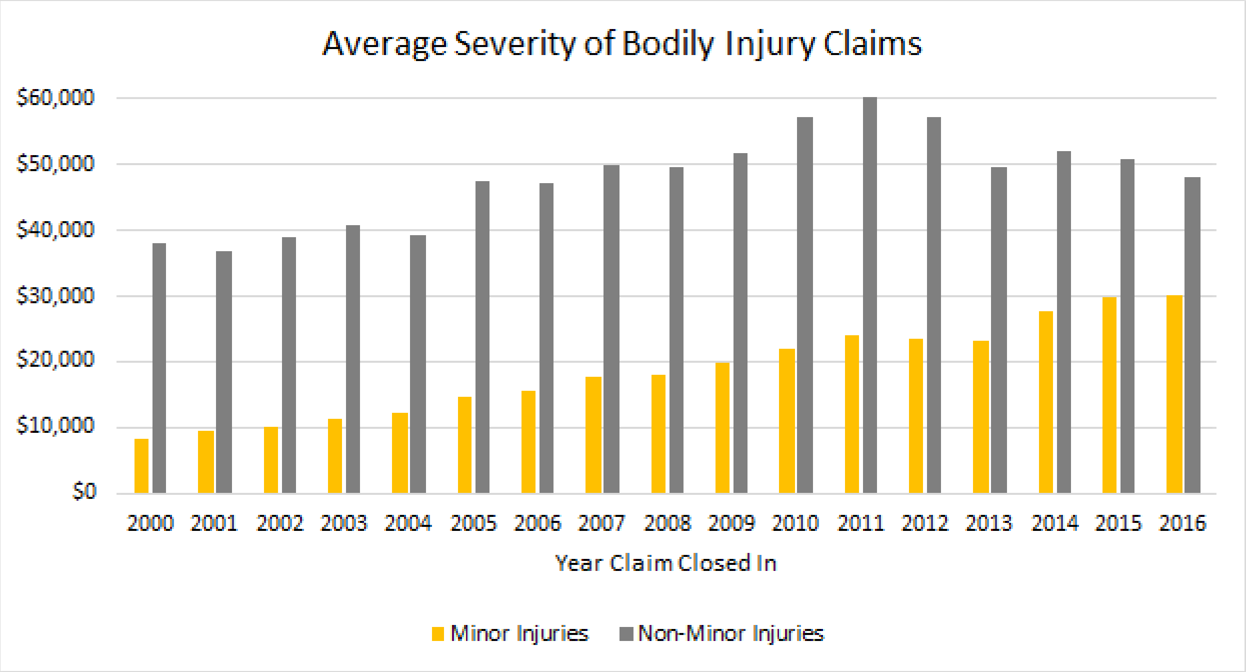


Issue 3: Increasing average settlements for minor injuries

The increase in the number of claims being filed is primarily driven by minor injury claims. The increasing number of minor injury claims has been further exacerbated by the higher cost of settling these claims, particularly for pain and suffering. An average bodily injury claim for a minor injury in the year 2000 paid out $8,220, compared to an average of just over $30,000 in 2016. See chart 4a and 4b below.

Chart 4a: Significant increase in the size of claims for minor injuries over the past 15 years

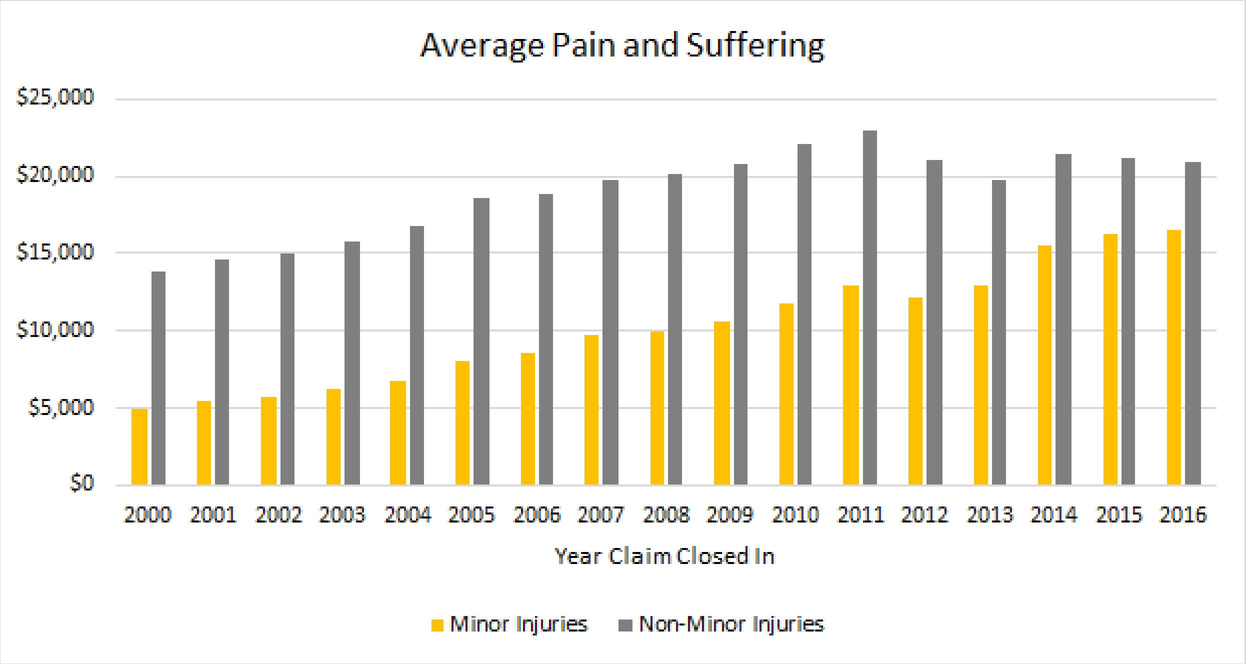
- The average paid out for bodily injury claims has increased almost four-fold for minor injuries, compared to an approximate 25% increase for serious and catastrophic injuries, with minor injuries approaching the average settlement amount received by more seriously injured claimants.
- The average claim paid out for minor bodily injuries has risen from $8,220 in 2000 to $30,038 in 2016, an increase of 365%.
- The average bodily injury claim paid out for a non-minor injury was $38,014 in 2000 and $48,078 in 2016, an increase of 26.5%.



*Note: Costs in chart 4a include all non-expense components of bodily injury claim costs (pain and suffering, wage loss, special damages, future care, costs and disbursements, and court order interest)

Chart 4b: Pain and suffering awards have risen significantly, driving increase in size of claims for minor injuries

- The average pain and suffering paid out for minor bodily injuries has risen from $5,004 in 2000 to $16,499 in 2016, an increase of 330%.
- The average pain and suffering paid out for a non-minor injury was $13,789 in 2000 and $20,954 in 2016, an increase of 52%.

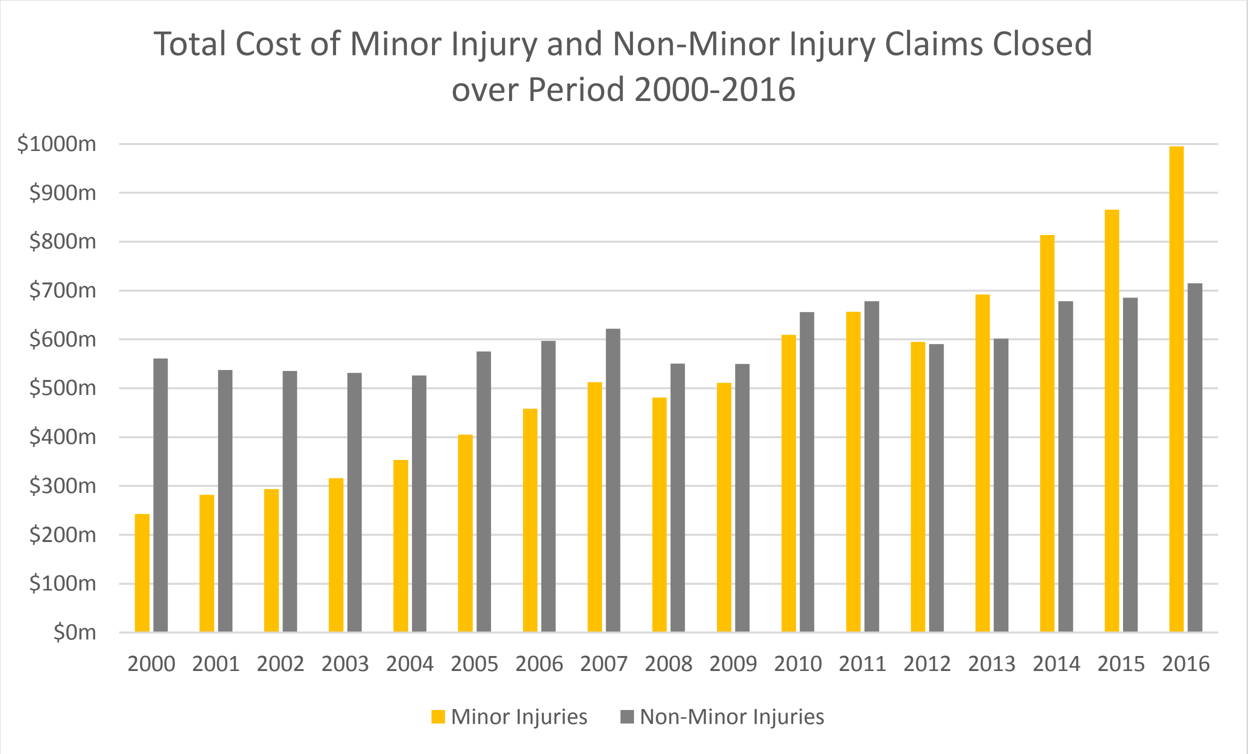


Issue 4: Claim costs for minor injuries have increased from 30% to almost 60% of total bodily injury claims costs since 2000

Since 2012, the total annual cost for minor injury claims has been greater than the total costs of serious and catastrophic injury claims. In 2000, minor injuries represented 30% of total bodily injury claim costs. In 2016, minor injury claim costs totaled $995 million compared to serious and catastrophic injuries costing approximately $715 million, meaning minor injuries represented 60% of total bodily injury claim costs. This imbalance in the costs of minor and non-minor injuries highlights a fourth issue.

Chart 5: Total annual claim costs for minor injuries are now greater than serious and catastrophic injuries

- Minor injury claims in 2016 cost in excess of $995 million, compared to serious and catastrophic injuries, which cost approximately $715 million.



Issue 5: Rising cost of auto insurance in British Columbia

Affordability is a fundamental principle of auto insurance in BC. Given that Basic auto insurance is compulsory, the Basic plan has been designed to be delivered at a price that drivers can afford and not to generate a profit for ICBC.

BC auto insurance premiums have been steadily increasing over the past six to seven years, in large part driven by the increasing number and average settlement of claims being generated. Over the period of 2011 to 2015, average premiums rose by $130, or 11%. Premiums have continued increasing to the point that today the average BC driver pays $1,550 per vehicle each year for auto insurance,[7] and they would be paying much more than this if the true costs were being borne by consumers instead of being subsidized by temporary financial measures. In addition, while Optional insurance profits have traditionally been used to offset losses on the Basic product, due to the trends outlined earlier, continued reliance on Optional insurance profits to manage Basic insurance rates is not a sustainable solution[8]. By the measure of affordability alone, BC's auto insurance system faces significant pressure. Premiums collected by ICBC today are the second highest in Canada, yet they are not high enough to cover the cost of paying claims.

Indeed, there is a significant and growing gap of $560m today[9] between the premiums collected under the Basic product and claims costs. With the trend of increasing crashes and claims costs in BC, this **gap is projected to increase to $1.1 billion annually by 2019 if it is not addressed.** See charts 6 and 7 below.

Recently, BC drivers have been protected from the currently required 15%—20% price increase only through government intervention and rate-smoothing mechanisms designed to avoid sudden material year over year changes to insurance rates. **This rate protection has eroded ICBC's financial situation to a point where such efforts are not sustainable. The average driver in BC may need to pay almost $2,000 annual total premiums for auto insurance by 2019, an increase of 30% over today's rates, assuming current trends persist, the objective is to have ICBC's rates cover its costs, and significant reform is not undertaken.**

This is the fifth issue.

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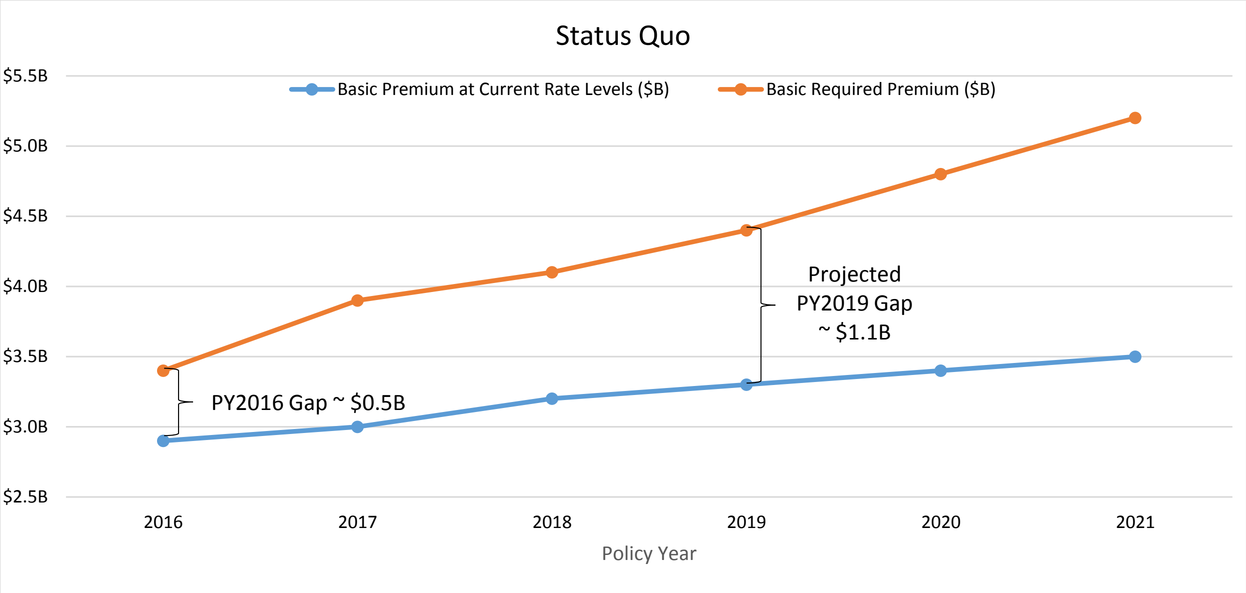
[7] $1,550 premium represents both Basic and Optional premiums, for a total consumer spend

[8] Optional insurance suffered a loss of $311m in fiscal 2016/17

[9] Assuming premium increases of 2%, in line with rate of inflation

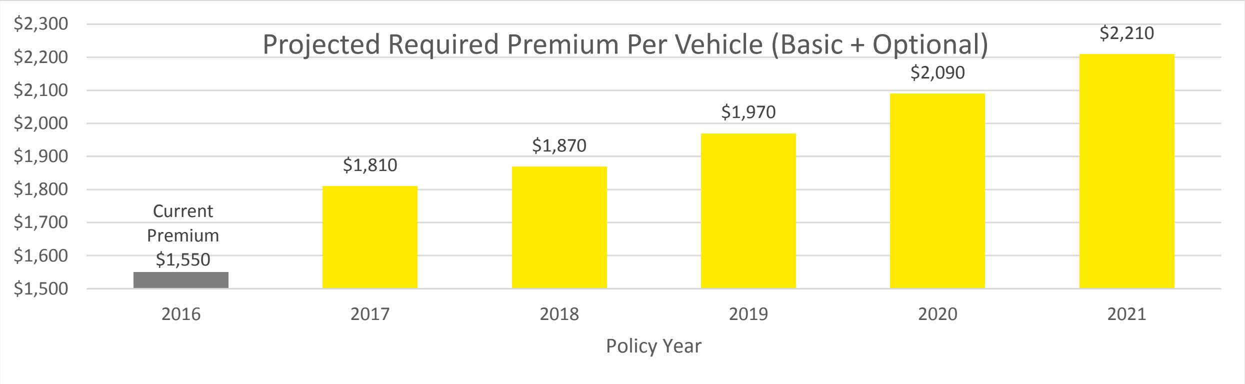
Charts 6 and 7: Projected required premiums by 2019

- Required premium is the premium that would need to be collected to sufficiently cover costs and expenses net of investment income and service fees.
- If premiums are kept at current rate levels, this would result in a rate gap of over $1.1 billion in 2019.



(Note: assumes 1.7% growth in policies sold year over year and 2% rate increases each year)

- Without significant action, the average driver in BC will need to pay $1,970 (almost $2,000) per year for auto insurance by 2019, an increase of almost 30% from current premium in order to prevent further financial losses by ICBC.



2.3 Summary of findings

BC's auto insurance system has significant structural problems and requires reform

The issues highlighted above point to a significant structural problem within the BC auto insurance system: the rising number and size of claims, larger cash settlements for minor injuries, and more claims costs going towards legal representation than to claimants, all of which has led to the unsustainability of the current model. **Fundamentally, auto insurance in BC has structural problems and requires major reform to resolve these issues.**

Very similar to the observations of the recent auto insurance system review in Ontario (Marshall Report, April 2017), these issues in BC have not materialized overnight. BC's public auto insurance system has been in place since 1973; while for the most part it has delivered a stable and affordable product to the citizens of BC, recent increases in the number of crashes and claims have highlighted a number of issues that need reform. There is no indication that the underlying issues will correct themselves. Reform will need to take a comprehensive view of a number of interrelated components that make up the system.

This review has identified a number of opportunities to address the current failings of the system. For simplicity, these opportunities have been presented as three priority initiatives as follows:

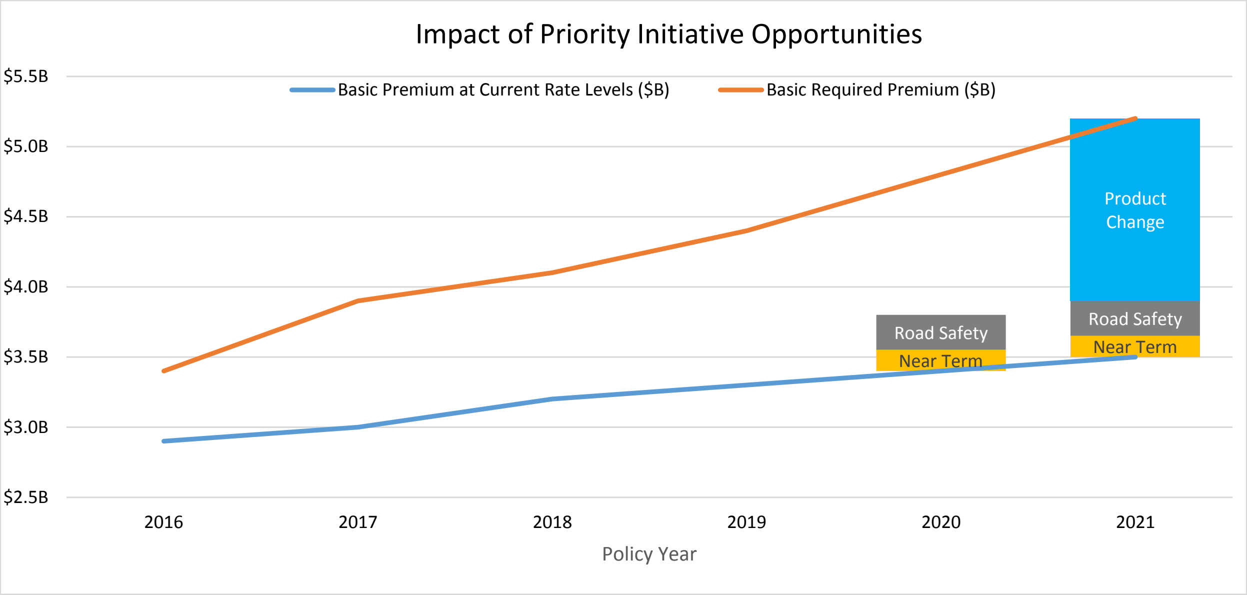
- Firstly, there is a need to increase the effectiveness of BC's road safety approach. Successfully changing high-risk driver behaviours will result in fewer accidents on BC's roads;
- Secondly, a re-design of the current insurance product is required. This is where the bulk of the savings will come from. Successful change will alter claimant behaviour, reward safer driving, increase fairness, and keep costs and premiums under control; and
- Thirdly, a set of additional interim measures should be initiated by ICBC in the near term (such as continued process and productivity improvements and changes to the risk rating model) that will have an incremental impact to the future performance of ICBC and BC's auto insurance system and lay a platform to enable successful reform.

This section presents a range of solution options for these three opportunity areas, targeted at the key drivers of cost and overall performance of the BC system.

The chart below shows how the three opportunity areas contribute towards addressing the projected rate gap and required premiums. This is illustrative in nature, shown as contributions to the rate gap by 2020/21, and does not account for implementation costs and timelines to achieve these savings over the period.

- Near-term interim measures could generate up to $150 million savings and revenues towards the rate gap.
- A focus on additional road safety initiatives could generate over $250 million savings.
- Neither of these two opportunities (even when combined) will have the needed impact to address the growing rate gap; only changes to the current Basic insurance product will address the affordability and long-term sustainability of BC auto insurance.

Chart 8: Potential impact of identified opportunities on the rate gap



(Note: assumes 1.7% growth in policies sold year over year and 2% annual rate increases)

Opportunity #1: Successful changes in high-risk driver behaviours will result in fewer accidents on BC's roads

Preventing accidents on BC's roads will reduce the tragic human consequences of injuries and loss of life, reduce the number of claims being filed, and save hundreds of millions of dollars.

This report recognizes that many road safety programs, enforcement technologies, laws and penalties have been successfully implemented in BC over the past decades, resulting in improvements in the number of accidents and fatalities occurring on BC roads. With its mandate for supporting road safety in BC, ICBC has played a pivotal role in many of these programs. The report also recognizes that BC's road safety strategy, led by RoadSafetyBC, has recently aligned with international best practices in road safety including adopting the globally recognized "Safe System Approach".

While the overall BC road accident trend over the past decade is positive, the recently observed 23% upswing in crash rates needs to be addressed. In BC, as in many other jurisdictions, the top contributing factors in accidents involving a death or serious injury are speeding in excess of posted limits, distractions and impairment — accounting for 84% of all road fatalities in BC in 2015.

An analysis of initiatives in global jurisdictions with leading road safety performance, such as Australia, New Zealand, the UK and other European countries, highlighted a number of road safety initiatives (some of which are already being deployed in BC today) that, within the next three to five years, could save the system up to $250m annually through reductions in the number and severity of accidents and additional revenue collections for high-risk driving behaviours.

It is further recognized that there is no one silver bullet in terms of road safety initiatives that will solve the problems on BC roads. It requires a systemic approach to address speeding, distracted driving and impairment. Experience around the world indicates that in order to make sustainable changes in driver behavior, the three pillars of education, enforcement and driver penalties must be aligned.

Table 1: Highlighted road safety initiatives could save the system over $250m annually within the next three to five years

- As well as a number of societal benefits, a $250 million annual road safety saving would equate to an approximate $75 premium saving per vehicle.

	Road safety initiative	Annual contribution
Speed	✓ Double the number of intersection cameras and increase activation to 100%* ✓ Automated speed enforcement cameras at high-risk sites ✓ Variable speed limits and point to point speed systems	~ $150m
Distracted	✓ Increase the number of Integrated Road Safety Unit (IRSU) officers by 100 FTEs ✓ "Safe Work" programs (corporate policy and practices) ✓ Technology solutions and innovations ✓ Road infrastructure countermeasures, e.g., rumble strips	~ $100m
Impaired	✓ Increase the number of IRSU officers by 100 FTEs (assign to distracted driving) ✓ Review current penalties to assess current effectiveness	~ $20m – $30m

** Note: Issuing speeding tickets at the 140 current locations to red light runners who exceed the speed limit by 10km/h or more is estimated to generate $7 million per year at 100% activation. (Source: ICBC)*

Section 8.1 of this report sets out these road safety initiatives in more detail, including a potential sequencing for implementation. They can be implemented in full for a higher impact on claim costs, or as a partial set, recognizing that the latter will require greater contribution from product reform and other initiatives to address the overall rate gap and trend.

Opportunity #2: Successful re-design of the insurance product will help change claimant behaviour and assist in keeping premiums under control

Along with *affordability*, the core guiding principles of *efficiency*, *sustainability*, *fairness* and *simplicity* were identified as an appropriate framework to underpin discussion on potential solution options to these structural issues. Consideration of these guiding principles led to a range of options for ICBC and the BC government's review.

Four key objectives supported by a range of solution options for government consideration are summarized below. These have been informed by a global jurisdictional review that considered the continuum of different insurance models in place in a number of Canadian and global jurisdictions, and the successes and lessons learned from the various schemes and their reform efforts over the years.

These options are represented across a **continuum of different types of insurance models**.

At the far left side of the continuum sit litigation- or adversarial-based models like the current system in BC. Claimant benefits are typically received through cash settlements via negotiations on a case-by-case basis. It can take many years until claims are settled as the matter winds its way through the court process. During this time, both sides attempt to build their respective cases — the focus by the claimant tends to be on maximizing the award as opposed to the effectiveness of treatment. There are no caps on benefits awarded by the courts. First-party accident benefits are typically low, leaving at-fault drivers with only these limited benefits to access.

Moving from this adversarial end of the continuum towards the centre (featuring hybrid models), one finds caps on certain benefits, such as pain and suffering, may be introduced to help control costs and ensure premiums remain affordable. These caps typically only apply to minor injuries, meaning seriously and catastrophically injured claimants are unaffected. Other changes that hybrid models may incorporate are to limit the benefits that can be accessed via lump sums, instead focusing payments on medical treatments and care.

From this intermediate step to the far right, comprehensive care models shift the focus completely from cash awards to care and treatment for injured claimants. Richer accident benefits are available allowing both at-fault and not-at-fault drivers to obtain care, providing them the best opportunity to return to their pre-accident condition. Benefits are available immediately after the accident, as required, enabling faster return to function. Negligent at-fault drivers (e.g., excessive speed, impairment or distraction) may only be able to access limited benefits. The burden on the provincial court system would be significantly reduced, freeing up those resources for more strategic uses. This model is still based on fault as unsafe drivers will pay more for their insurance while safer drivers will see significant reductions.

In addition to considering where on the continuum the reformed product should lie, a re-design of the product allows the opportunity to address other issues. ICBC accident benefits, including the maximum dollar caps for most medical and rehabilitation services, have not been increased since 1991 as the system could not afford it. Given inflation increases since that time, claimants are increasingly paying out of pocket for such services due to the inadequate level of accident benefits. For claimants who cannot access cash compensation from the litigation model, (e.g. at-fault drivers), these benefits do not adequately cover losses incurred by injured parties. Product reform provides an opportunity to address this issue in addition to solving for the financial problems facing ICBC. Applying restrictions to problematic cost areas would allow for some of those savings to be redistributed as more modern and adequate accident benefits, improving the fairness of the system. In Alberta, the constitutional challenge on minor injury benefit restrictions was overcome when assessed in light of the entire minor injury legislative scheme. Increased medical benefits under the new legislation were felt to outweigh any benefits removed for pain and suffering. The lesson from this is that the whole suite of benefits is important under product reform, and consideration has been given to this in the design of potential options.

Each option, described in more detail on the following pages and the body of the report, describes the product design changes that could be applied to the current BC product to achieve specified savings under each of four objectives. These options alternatively can achieve a reduction to the current rate gap, contain future increases in premium levels to 2% per year, freeze premiums for the next five years, or allow for an overall significant reduction in premium levels within the next two years.

The product designs below each illustrate one possible way that the required savings could be delivered. Under each objective, consideration could be given to alternate product designs that could also achieve the targeted premium savings, and these variations are documented in the body of the report. Choice in terms of being able to increase accident benefits or restore tort options through optional coverage would also be made available to customers, although experience in jurisdictions such as Saskatchewan shows that few people select these options.

The expected outcome of each product design option is also compared to the current model in BC, which without change will see the Basic rate gap grow to $1.1 billion in 2019 or require average vehicle premiums of $1,970 in order to prevent further financial losses by ICBC.

<table>
<tr><th colspan="4">Current state BC model</th></tr>
<tr><td colspan="2" rowspan="2">Key structural highlights of today’s BC model:
• No limits on pain and suffering awards; minor injury costs greater than serious and catastrophic
• Accident benefits[10]:
  ○ Weekly wage benefit – $300
  ○ Medical payments limit – $150k
  ○ Funeral benefit limit – $2,500
• System viewed as being quite inefficient — only 58% of premium dollars returned to policy holders through claimant benefits
• High costs and long wait times to reach results (on average over three years); process is focused on cash settlements rather than claimant’s care
  ○ Basic rate gap and trend gap of $785m</td><td colspan="2">Estimated rate gap and average premium by 2019:</td></tr>
<tr><td>Basic rate gap and trend gap of $785m today, estimated to grow to $1.1b without significant change</td><td>Vehicle premium will be
$1,970 by 2019 to eliminate rate gap</td></tr>
<tr><td colspan="4">Summary of key claim costs and expenses of BC’s current state model:</td></tr>
<tr><td>Minor injury costs
$718m</td><td>Non-minor injury costs
$612m</td><td>Accident benefits
$199m</td><td>Legal costs (ICBC & plaintiff)
$845m</td></tr>
</table>

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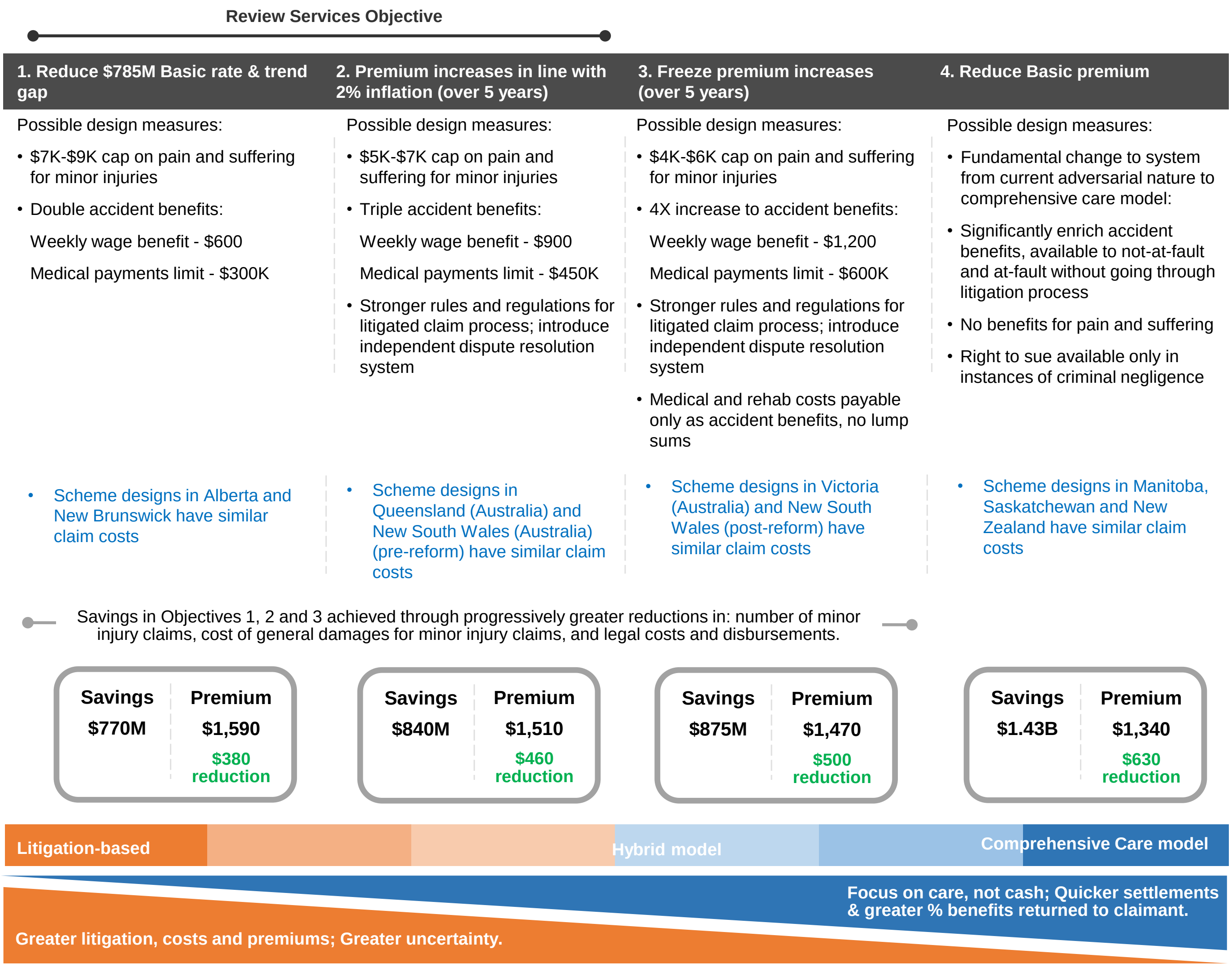
[10] Accident benefit limits have not been increased since 1991. We note that the Consumers Price Index (CPI) has increased in excess of 50% since that time. This negatively impacts the seriously injured that are unable to advance a claim against another person for their loss (e.g., at-fault drivers).

Chart 9: Four options represented across a continuum of different types of insurance models

- Estimated overall claims savings range from $770m to $1.43b per year.
- Re-design of the current scheme shows that annual vehicle premiums could be reduced by as much as $630 per year from projected 2019 levels (a 32% reduction) or by 14% from today's rates[11].



Review Services Objective

1. Reduce $785M Basic rate & trend gap	**2. Premium increases in line with 2% inflation (over 5 years)**	**3. Freeze premium increases (over 5 years)**	**4. Reduce Basic premium**
Possible design measures: • $7K-$9K cap on pain and suffering for minor injuries • Double accident benefits: Weekly wage benefit - $600 Medical payments limit - $300K	Possible design measures: • $5K-$7K cap on pain and suffering for minor injuries • Triple accident benefits: Weekly wage benefit - $900 Medical payments limit - $450K • Stronger rules and regulations for litigated claim process; introduce independent dispute resolution system	Possible design measures: • $4K-$6K cap on pain and suffering for minor injuries • 4X increase to accident benefits: Weekly wage benefit - $1,200 Medical payments limit - $600K • Stronger rules and regulations for litigated claim process; introduce independent dispute resolution system • Medical and rehab costs payable only as accident benefits, no lump sums	Possible design measures: • Fundamental change to system from current adversarial nature to comprehensive care model: • Significantly enrich accident benefits, available to not-at-fault and at-fault without going through litigation process • No benefits for pain and suffering • Right to sue available only in instances of criminal negligence
• Scheme designs in Alberta and New Brunswick have similar claim costs	• Scheme designs in Queensland (Australia) and New South Wales (Australia) (pre-reform) have similar claim costs	• Scheme designs in Victoria (Australia) and New South Wales (post-reform) have similar claim costs	• Scheme designs in Manitoba, Saskatchewan and New Zealand have similar claim costs

Savings in Objectives 1, 2 and 3 achieved through progressively greater reductions in: number of minor injury claims, cost of general damages for minor injury claims, and legal costs and disbursements.

Savings	**Premium**	**Savings**	**Premium**	**Savings**	**Premium**	**Savings**	**Premium**
$770M	**$1,590** **$380 reduction**	**$840M**	**$1,510** **$460 reduction**	**$875M**	**$1,470** **$500 reduction**	**$1.43B**	**$1,340** **$630 reduction**

Litigation-based **Hybrid model** **Comprehensive Care model**

Focus on care, not cash; Quicker settlements & greater % benefits returned to claimant.

Greater litigation, costs and premiums; Greater uncertainty.

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[11] Combined average premium for Basic and Optional is **$1,550** for rates in 2017.

Objective 1: Reduce the $785m gap between Basic rate premiums collected and amounts paid out in claim costs. (Rate increases in excess of 2% inflation are likely in following years.)

Key structural changes to achieve savings:

- $7k-$9k cap on pain and suffering settlements for minor injuries
- Double current weekly accident benefits allowance
  - Weekly wage benefit – $600
  - Medical payments limit – $300K

Estimated savings and average premium by 2019:

System savings	Vehicle premium
$770m	$1,590 $380 less than current forecast (and $40 or 2.5% more than today)

Key outcomes compared with current state:

- Improved balance between payments for minor injuries and non-minor injuries

Minor injury litigation claim costs	Non-minor injury litigation claim costs	Accident benefits	Legal costs (ICBC and plaintiff)
↓ 70%	↔ No change	↑ 38%	↓ 30%

Similar system designs in Alberta and New Brunswick

Objective 2: Reduce Basic premium increases to be in line with 2% rate of inflation for five years.

Key structural changes to achieve savings:

- $5k-$7k cap on pain and suffering settlements for minor injuries
- Triple current weekly accident benefits allowance
  - Weekly wage benefit – $900
  - Medical payments limit – $450K
  - Stronger rules and regulations for litigated claim process; introduce independent dispute resolution system to decrease reliance on courts

Estimated savings and average premium by 2019:

System savings	Vehicle premium
$840m	$1,510 $460 less than current forecast (and $40 or 2.5% less than today)

Key outcomes compared with current state:

- Further improvement to balance between payments for minor injuries and non-minor injuries

Minor injury litigation claim costs	Non-minor injury litigation claim costs	Accident benefits	Legal costs (ICBC and plaintiff)
↓ 84%	↔ No change	↑ 75%	↓ 35%

Similar system designs in New South Wales and Queensland (Australia)

Objective 3: Freeze Basic premium increases for five years.

Key structural changes to achieve savings:

- $4k-$6k cap on pain and suffering settlements for minor injuries
- 4x current weekly accident benefits allowance
    - Weekly wage benefit – $900
    - Medical payments limit – $450k
- Stronger rules and regulations for litigated claim process; introduce independent dispute resolution system to decrease reliance on courts
    - Medical and rehab costs payable only as accident benefits, no lump sums

Estimated savings and average premium by 2019:

System savings	Vehicle premium
$875m	$1,470 $500 less than current forecast (and $80, or 5%, less than today)

Key outcomes compared with current state:

- Focus begins to shift to claimant care and treatment rather than cash settlement

Minor injury litigation claim costs	Non-minor injury litigation claim costs	Accident benefits	Legal costs (ICBC and plaintiff)
↓ 93%	↔ No change	↑ 126%	↓ 40%

Similar system design to reformed New South Wales scheme and Victoria (Australia)

Objective 4: Reduce Basic premiums.

Key structural changes to achieve savings:

- Fundamental change to system from current adversarial nature to comprehensive care model:
  - Significantly enrich accident benefits, available to not-at-fault and at-fault without going through litigation process
  - No benefits for pain and suffering
  - Right to sue available only in instances of criminal negligence

Estimated savings and average premium by 2019:

System savings	Vehicle premium
$1.43b	$1,340 $630 less than current forecast (and $210, or 13.5%, less than today)

Key outcomes compared with current state:

- Focus shifts to claimants' care and treatment, available to claimants sooner for more effective results
- Savings achieved through substantial reduction in number of claims, costs of pain and suffering being removed from system, and significant reduction to legal costs and disbursements.
- Frees up the court system for other more strategic uses
- System remains fault-based as premium costs will be driven by driver actions

Minor injury litigation claim costs	Non-minor injury litigation claim costs	Accident benefits	Legal costs (ICBC and plaintiff)
⬇ 90+%	⬇ 90+%	⬆ 490+%	⬇ 90+%

Similar system designs in Manitoba, Saskatchewan and New Zealand

It should be noted that all the above product options will also result in a reduction in the premium for the bodily injury component of the Optional product. The reduction in premium will increase from option 1 to option 4 having the biggest reduction. We have not estimated the possible reduction in premium for the Optional product.

Policy considerations

Having analyzed the current BC scheme performance against the government's review objectives, this report sets out some of the policy issues that need to be considered in light of potential options for reform. Key policy considerations would include affordability of premiums, the best way to provide effective medical treatments to allow faster return to function, insurance model (litigation-based or care-based), amount of payments to minor injuries versus non-minor, impact on the court system, system abuse and fraud, and the need for a modern auto insurance system to anticipate and respond to the rapidly changing landscape brought about by the emergence of autonomous cars, ride sharing, etc.

Product choice

With specific reference to the product changes discussed above, an option that could be considered is to allow policyholders to purchase optional "top-up" coverage to replace the reduction in litigated claim benefits in all options. Similar provisions exist in other schemes in Canada (Saskatchewan) and in the US. The details of the design would need to be considered and various optional features explored. The "top-up" coverage will depend on the product design, and could be offered as part of ICBC's Optional product and could be open to competition.

Enhancements to road safety and product reform must be undertaken in order to materially impact claims costs and assist with achieving financial sustainability without requiring significant premium increases. However, these changes are not quick fixes — they will require thoughtful design and consultation with many critical stakeholders as well as legislative changes. The financial benefits would not be realized until implementation is complete in 18–24 months. In the meantime, we recommend that ICBC initiate a number of other interim measures that will have an incremental impact to the future performance of insurance and lay a platform to enable successful reform. See Opportunity 3 below.

Opportunity #3: Interim measures that will have an incremental impact to the future performance of insurance and lay a platform to enable successful reform

Over the years and with particular focus since 2012, ICBC has either completed, or is in the process of delivering against, a number of initiatives to reduce costs borne by the Basic insurance scheme. With direction from the Ministry of Transportation and Infrastructure, as well as ICBC board and management, costs have been reduced from a wide range of operational, staffing and technology initiatives across the organization and its partners. Such initiatives include reductions in management costs and operating budgets, significant productivity gains in claims management and handling initiatives, a quality assurance and fraud mitigation program.

The cost of material damage has been increasing due in part to foreign exchange pressures, as well as labour rate increases. The Provincial Government enacted an Order-in-Council in 2016 to facilitate a High-Value Vehicle pricing, which doubles the Basic rate for high-value vehicles to better reflect the true risk of repair costs[12].

In any other operating environment, the level of work completed and savings achieved (over $100m) would have been considered a significant management success. However, the growing premium rate gap caused by the recent increases in accident and claims trends in BC has readily consumed those savings and at the same time highlighted a much bigger series of cost pressures that internal productivity and efficiency gains cannot and will not address.

Nevertheless, there are a number of outstanding initiatives that have been identified that are still to be implemented. It is estimated that these interim measures could deliver in excess of $150 million in savings within a one-to-two-year period, which on their own will not achieve the objective of affordable insurance with low annual rate increases, but they are important and prudent steps to minimize ICBC losses in the short term. Some of these key initiatives are described below.

Driver risk premiums: Higher-risk drivers should pay for their choices and behaviours

ICBC's current insurance model does not adequately price driver behaviour and choices, undermining the principle of fairness. ICBC has not incorporated any significant Basic rate design changes since 2007, and as a result, a driver's individual Basic premium no longer reflects the risk and cost imposed on the Basic insurance system. The current system faces a number of challenges with regards to designing rates to reflect risk — including working with an outdated, inefficient rating framework, cumbersome regulatory oversight, as well as legislative restrictions.

ICBC has invested in significant system reform over the past five years with the replacement of its claims, insurance, and rating engine technology platforms, which provide the enabling infrastructure necessary to support rating reform. Fundamental changes to ICBC's rating scheme — targeted at increasing fairness in Basic rates, while also mitigating Basic cost pressures — will help reduce pressure on Basic insurance by promoting a cultural shift toward safer driving, increasing the portion of

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[12] We believe that there is an opportunity to even take this a step further through the introduction of a High-Value Vehicle sliding scale pricing model to better recognize differing vehicle values over $150,000.

premium revenues paid by high-risk drivers (including appropriately pricing premiums for those that choose to drive high-value luxury vehicles) and reducing claims costs.

Public consultation in 2012 (Basic Vehicle Insurance Rating System Consultation and Engagement) has informed a number of preferred strategies to better set premiums for Basic vehicle insurance coverage. Customers have told ICBC they think the system would be fairer if lower-risk drivers paid less for their vehicle insurance and higher-risk drivers paid more. Regardless of the current or future choice of product structure, ICBC needs to change its pricing and risk model to clearly identify and penalize higher-risk drivers and conversely improve the reward system for those who drive safely. ICBC has committed to its regulator, BC Utilities Commission, to move to a system that better recognizes driving records. It is estimated that a modernized pricing and risk model could generate up to $80m in incremental revenue per year. We recommend that detailed design on fair pricing and a modernized risk model commence immediately. Other initiatives are discussed later in the report.

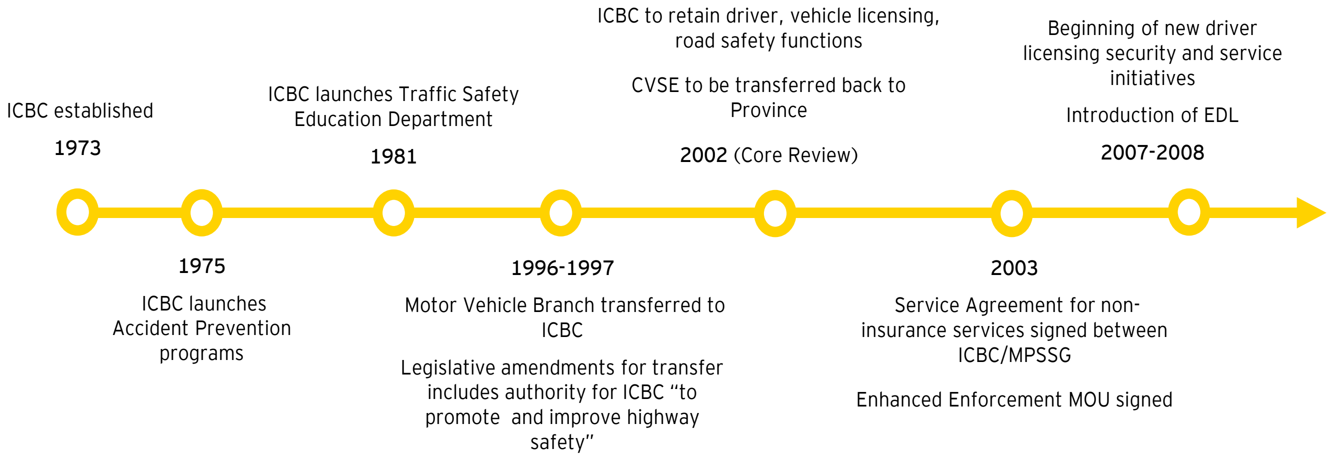
Improved governance and clarity on accountability and funding will yield greater results

Resources and capabilities: key elements for road safety success

In BC, road safety initiatives are defined, regulated and operated through a number of partner organizations and relevant laws. RoadSafetyBC (a branch within the Ministry of Public Safety and Solicitor General and overseen by the Superintendent of Motor Vehicles) develops road laws and policies to make roads safer. The Ministry of Transportation and Infrastructure is responsible for setting safe speeds and for safe road infrastructure on highways (as are municipalities on local roads). Police deliver road safety enforcement. ICBC is one of the key road safety agencies in BC, with a legislated mandate of promoting traffic safety, education and awareness, as well as programs that can reduce crashes and claims costs.

ICBC has had a significant role in introducing, supporting and funding new road safety and driver and vehicle licensing priorities since its inception in 1973. Notably, in 1996 and1997, the BC government merged the Motor Vehicle Branch into the ICBC organization to allow greater promotion and improvement of highway safety under a single administrative umbrella, leveraging the infrastructure and resources available within ICBC. Similar to today’s environment, at the time BC was experiencing an increase in both accident and fatality rates, and the merger served to align road safety funding to activities that deliver quantifiable improvements in terms of reduced accidents, death and injuries on BC roads.

Chart 10: Sample ICBC road safety initiatives since 1973 inception



The findings from a 2002 Core Review identified that the integration of driver licensing and vehicle licensing and registration activities, as well as road safety programs, had significant public policy benefits including cost savings due to economies of scale and supporting BC's low rate of uninsured drivers (one of the lowest in North America).

Roll forward to present day and the urgency to address the increasing crash and claim costs trends. This report recognizes the important roles of RoadSafetyBC and others in setting out and executing on BC's vision to have the safest roads in North America by 2020. What is not clear is the leadership mandate and most effective alignment of resources (including funding) to initiatives that will have the most impact on BC's system. In the context of a system-wide review in BC of opportunities to reduce the increasing crash rate in BC, now is an opportune time to take a close look at the accountability, measurement and funding models in place today.

Funding

In 2016, ICBC spent over $175 million delivering on agreed road safety responsibilities as set out under the Service Agreement with the Province of BC, and other non-insurance initiatives, including:

- $70 million on the administration of Driver Licensing and Testing services;
- $40 million on road safety initiatives, including Vehicle Registration & Licensing and Driver Training School Certification and Regulation; and
- $22 million for the Police Services Division responsible for the oversight for the Enhanced Traffic Enforcement Program.

This $175 million was funded through Basic insurance premiums, at an annual cost of approximately $50 per vehicle. This spending generated $577 million in revenues and fines in 2016, which were transferred in full to the Province (and then in part shared across BC's municipalities). None of those revenues were allocated back to Basic insurance, although many of these initiatives mitigate claims cost pressures by reducing the frequency and severity of crashes.

Going forward, with the potential for increased income from new and additional road safety and non-insurance initiatives (over $250m annually), it is recommended that the option of having ICBC retain at least a portion of additional revenues generated by such initiatives (i.e., intersection cameras) be considered. The additional revenues would help reduce pressure on Basic insurance premiums.

Regulatory oversight

ICBC is currently regulated by the BC Utilities Commission. The current system is based on a utility model that was not designed initially for regulating auto insurance. The future requirements of the organization will require a less expensive and less bureaucratic approach to competitive pricing with an enhanced ability to respond to customer requirements and changing market conditions.

Product Options 2 and 3 above will also require an independent body to regulate the modified litigation and alternate dispute processes, and Option 4 will require an independent body for assessing claimant disputes. Alternate regulation and governance models exist internationally for similar functions that can be considered for possible adoption here in BC.

Operational efficiency

EY conducted a high-level review of ICBC's current state claim operation and evaluated progress against recommendations from previous reviews over the past few years. ICBC has made significant progress and has implemented numerous initiatives aimed at reducing costs associated with claims handling, while also focusing on increased customer satisfaction. Included in these initiatives is ICBC's Operational Excellence program, which is intended to streamline claims operations.

Absent any product reform, two claims initiatives that are currently underway have the potential to achieve additional claim cost savings: successful implementation of leading Quality Assurance and Fraud Mitigation programs will generate approximately $30–$60 million in annual savings (between 1% and 2% of annual claim costs). We encourage the full implementation of these programs.

Further, ICBC undertook a review of its procurement activities and identified a number of strategic sourcing initiatives to reduce the cost of auto repair, as well as medical assessments and reports. Only a subset of these initiatives are currently approved for implementation. We would encourage the full suite of strategic sourcing initiatives be undertaken, which would provide an opportunity for ICBC to save over $150 million over the next five years by reducing the amount paid for goods and services.

Non-insurance revenue opportunities

There may be further opportunities to reduce costs or free up revenue through further examination of non-insurance services. For example, we would encourage the progression of analysis related to the viability and fit of services such as salvage operations. ICBC has significant real estate holdings, which may also represent potential unrealized value. Other jurisdictions have moved more assertively into the auction and sale of specialized license plates (vanity plates). Again, while these individual measure will not solve ICBC's fundamental financial issues, they may represent worthwhile opportunities for the corporation.

2.4 Implementation plan

The reform of BC's auto insurance system is not going to happen overnight, and a considered and measured approach is required. We recommend structuring the reform efforts in several parallel streams: those that require stakeholder consultation and the development of new policy and legislation (including road safety and product reform), and those interim measures that can be undertaken immediately to minimize ongoing losses and set the foundation for successful reform.

Experience shows there are a number of critical success factors that should underpin the reform approach and its implementation:

- Robust and inclusive stakeholder consultation results in better policy development and ultimately a stronger legislative framework. It is also critical for gaining support for the case for change. Key stakeholders include various levels of government; motorists and the general public; medical, allied health and legal professions; and other stakeholder representative groups;
- The program must be managed as an integrated portfolio. Given the many dependencies between the streams, the reforms must be seen as a total package; otherwise, unforeseen undesirable consequences are more likely to emerge;
- Investment in change management is essential — the impact on the system and supporting people and organizations (ICBC, brokers and lawyers, medical profession and other key stakeholders) and the nature of work they undertake cannot be underestimated;
- Progress and outcomes must be carefully monitored and value should be delivered throughout the implementation time frame;
- Dedicated and clear leadership and accountability, and bringing the right talent to the table, is critical — this includes strong governance;
- Momentum is important — reform needs to proceed at pace; and
- Reform is not a one-time effort — the overall system will require ongoing maintenance and must be designed to evolve over time.

Chart 11 describes an illustrative and high-level implementation approach, designed to deliver the reform outcomes within two years through a series of immediate initiatives and those that require ongoing and longer-term consultation and development. There would also be ongoing efforts of refinement and incremental improvement activities that would continue into the future. The key streams of activities are summarized as follows:

1. Policy and Legislative Framework Development;
2. Road Safety;
3. Product Reform; and
4. Interim Measures.

The entire implementation program would need to be supported by a strong governance model, clear accountabilities, program and risk management, and strategic stakeholder consultations.

This implementation plan is discussed in greater detail in Section 9 of this report.

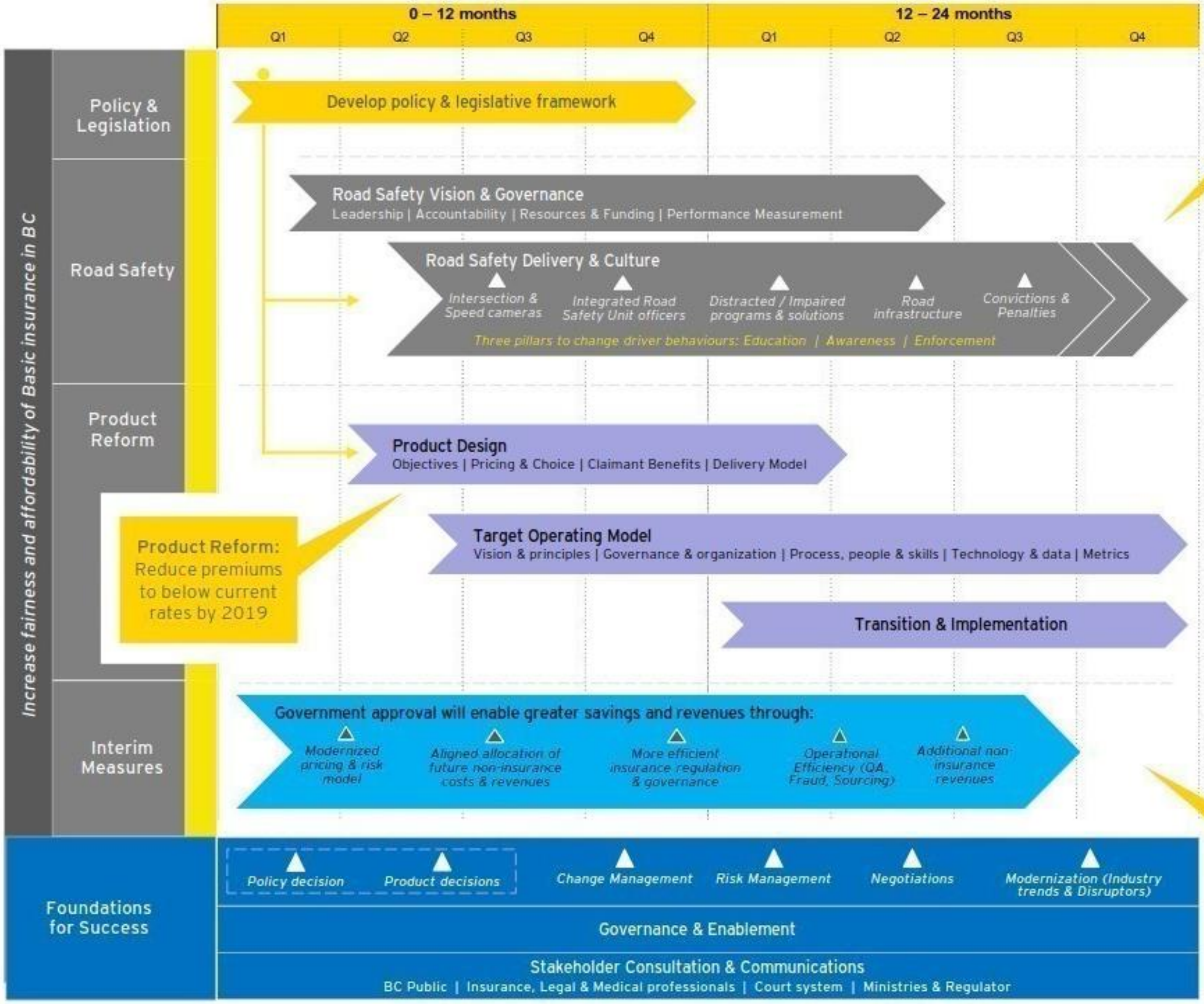
Chart 11: Illustrative High-level Implementation Plan

The need for change

Without significant and rapid change, the average BC driver may pay almost $2,000 annual total premium for auto insurance by 2019, an increase of 30% over today's rates

The key issues driving BC towards significantly higher insurance premiums:

1. More accidents on BC's roads are resulting in more claims
2. The number of claims being filed is going up faster than the number of accidents
3. Average settlements for minor injuries (such as minor soft-tissue) are increasing
4. Claim costs for minor injuries have increased from 30% to almost 60% of total bodily injury claims costs since 2000
5. Insurance premiums collected by ICBC do not cover claim costs



Increase fairness and affordability of Basic insurance in BC

0 – 12 months: Q1 Q2 Q3 Q4

12 – 24 months: Q1 Q2 Q3 Q4

Policy & Legislation

Develop policy & legislative framework

Road Safety

Road Safety Vision & Governance
Leadership | Accountability | Resources & Funding | Performance Measurement

Road Safety Delivery & Culture
- Intersection & Speed cameras
- Integrated Road Safety Unit officers
- Distracted / Impaired programs & solutions
- Road infrastructure
- Convictions & Penalties

Three pillars to change driver behaviours: Education | Awareness | Enforcement

Product Reform

Product Design
Objectives | Pricing & Choice | Claimant Benefits | Delivery Model

Target Operating Model
Vision & principles | Governance & organization | Process, people & skills | Technology & data | Metrics

Transition & Implementation

Product Reform: Reduce premiums to below current rates by 2019

Interim Measures

Government approval will enable greater savings and revenues through:
- Modernized pricing & risk model
- Aligned allocation of future non-insurance costs & revenues
- More efficient insurance regulation & governance
- Operational Efficiency (QA, Fraud, Sourcing)
- Additional non-insurance revenues

Foundations for Success

Policy decision | Product decisions | Change Management | Risk Management | Negotiations | Modernization (Industry trends & Disruptors)

Governance & Enablement

Stakeholder Consultation & Communications
BC Public | Insurance, Legal & Medical professionals | Court system | Ministries & Regulator

Road Safety: $250m annual savings within 3-5 years

Key outcomes of reform:

- ✓ Fewer accidents on BC's roads
- ✓ Fewer minor bodily injury claims
- ✓ Reduced claim costs for minor injury (pain and suffering)
- ✓ Significant reduction to legal costs and disbursements
- ✓ Greater accident benefits and shift from cash to care; treatment available to claimants sooner
- ✓ Premiums more affordable and sustainable in the long-term

Interim Measures: $150m annual savings over 1-2 years

3. Auto insurance in BC and the role of ICBC

3.1 Auto insurance in BC

ICBC is a provincial Crown corporation created in 1973 to provide universal public auto insurance to drivers in BC through a government owned and operated system. Any vehicle registered for driving in British Columbia must, by law, be covered by ICBC's Basic insurance package (called "Basic Autoplan"), which includes protection from third-party legal liability, under-insured motorist protection, accident benefits, hit-and-run protection and inverse liability (coverage in parts of Canada or the US where local laws can affect a claim). ICBC is the sole provider of this mandatory Basic insurance in BC.

Drivers also have the ability to buy optional insurance for additional coverage such as extended liability, collision and comprehensive plans. Optional insurance can be purchased from ICBC ("Autoplan Optional") or from a number of private insurance firms.

Table 2: ICBC Basic Autoplan Insurance

Coverage	Description
Third Party Liability – Protection if you're responsible for a crash	Coverage for when a driver is at fault in a crash and another motorist makes a claim against them. Basic Autoplan covers up to $200,000 of claimant's injury costs and vehicle damage ($1,000,000 coverage for commercial vehicles).
Autoplan Accident Benefits – Medical costs, wage loss and more (see table below for more on Accident Benefits)	Accident Benefits provide wage loss benefits and up to $150,000 in medical and rehabilitation costs to drivers, passengers and members of an insured's household if injured in a motor vehicle crash, even if the driver is at fault.
Underinsured Motorist Protection – If the other driver doesn't have enough insurance	Provides coverage where the person who's responsible for a crash doesn't have enough insurance to pay for a claim.
Hit-and-run damage and injuries	Available to every BC resident, even if they don't own or insure a vehicle. Up to $200,000 is available to anyone whose property is damaged, or who is injured or killed in a crash on a roadway in BC.
Inverse liability protection – Protection where local laws can affect your claim	Coverage in parts of Canada or the US where local laws don't allow a claim against the person who caused a crash. Vehicle repair costs are covered up to 100%.

Table 3: ICBC Accident Benefits

Accident Benefits	Purpose	Limit
Medical and Rehabilitation	Provide reimbursement for reasonable and necessary expenses for medical and rehabilitation services	$150,000 overall cap on total amount payable by ICBC. Max cap on individual services
Wage Loss	Available to an employed person who is unable to work because of a total disability caused by a motor vehicle crash	75% of injured person's average gross weekly earnings, up to $300 per week. Wage loss payments from other disability benefit sources such as work/private insurance plans or employment insurance (EI) are deducted from the benefits payable under Basic Autoplan, i.e., ICBC is the second payer
Funeral	Provide reimbursement for burial and funeral expenses if an insured person is killed in a motor vehicle crash	$2,500
Death	Payable to the deceased's spouse and/or dependents	Benefit levels vary according to the position of the deceased in the household (head of household, spouse/partner, child, other)

These accident benefits include most medical and rehabilitation services (physiotherapy, massage therapy, etc.)

3.2 Role and mandate of ICBC

As a public insurer, ICBC has a responsibility to keep Basic automobile insurance prices consistently affordable for British Columbians. Rates are approved through a rate filing process governed by the BC Utilities Commission. Uniquely, ICBC's role and value in BC has expanded over the years to support the government with some of its non-insurance requirements through funding and delivering additional functions, such as new road safety programs, vehicle registration and licensing initiatives, driver testing and licensing, fine collection and the BC Services Card initiative. These services originally fell outside of ICBC's core mandate, but various governments have asked the organization to perform these services and to bear the associated costs within Basic insurance rates.

Currently, there are four public auto insurance schemes in Canada: ICBC, Saskatchewan Government Insurance (SGI), Manitoba Public Insurance (MPI), and Société de l'assurance automobile du Québec (SAAQ). Ontario, Alberta and the Atlantic provinces run private insurance systems. The role of public insurers as compared to a privatized system can be summarized as follows:

- **Stable and affordable premiums:** Auto insurance costs are a significant household cost. The primary value of a public insurer is to provide stable and affordable premiums for provincial residents for a considerable time period.
- **Different risk assessments:** Like any insurer, ICBC matches insurance costs to driver and vehicle risk. However, unique to a public insurer, ICBC assesses drivers based on driving and claims history, in comparison to private insurers whose risk assessment methodology considers demographic (e.g., age) and geographic factors (e.g., home address), which gives rise to potential discriminatory premium assessments. Under a privatized system, certain driver groups, such as young males, will incur significantly higher premiums in comparison to public insurers.
- **Additional service offerings:** Public insurers have the ability to provide additional services such as handling driver license and vehicle registrations, road safety implementation and collecting driving fines. These are services that were originally outside their mandates but were transitioned to enhance public policy benefits including cost savings due to economies of scale and maintaining low rates of uninsured drivers.
- **Job creation:** Public insurers provide a significant number of jobs in their provinces. ICBC, for example, has approximately 5,000 employees and partners with a significant network of insurance brokers and auto body shops in British Columbia.

4. What does an effective auto insurance system look like for BC?

BC's public auto insurance system has been in place since 1973; for the most part, it has delivered a stable and affordable product to the citizens of BC. However, recent increases in the number of crashes and significantly increased claims costs have highlighted some very real concerns over its future affordability and financial sustainability, driven by some fundamental structural problems leading to overall claim costs and expenses becoming greater than current insurance premiums collected. Various public consultations have also demonstrated interest in a system that is considered to be fairer, whereby lower-risk drivers pay less for vehicle insurance and higher-risk drivers pay more.

This Review is intended to provide options for ICBC and the government's consideration that would avoid significant increases to Basic rates, while ensuring fair and reasonable benefit coverage. As such, it is necessary to consider a set of guiding principles to underpin an effective BC auto insurance model. In this way, we can begin to develop reform options that are tailored to meeting these principles and identify metrics to measure the performance of the current and future model options. Based on the goals of this Review and analysis of similar frameworks in other jurisdictions, the following guiding principles were identified as an appropriate framework to underpin discussion on potential solution options.

Table 4: Guiding principles

Guiding principles for BC auto insurance reform	Performance metrics
Affordability: The system should minimize the level of insurance premiums required from drivers; premiums should be reasonably affordable for the majority of drivers.	▸ Ability for BC citizens to afford Basic and Optional insurance products, by comparing average vehicle premiums to average wage levels.
Efficiency: The system should maximize the amount of premium dollars paid to claimants by minimizing the amount of premium dollars paid to administer and manage the system and to service providers (i.e., lawyers and insurers) in delivering benefits to claimants.	▸ Proportion of premiums paid to claimants. ▸ Payments received by claimants refer to loss of wages, medical, rehabilitation, care and pain and suffering payments, but exclude insurance and non-insurance operating expenses (e.g., ICBC expenses) and legal and related costs.

Guiding principles for BC auto insurance reform	Performance metrics
Sustainability: Over the long term, future claims costs and expenses should be predictable and in line with inflation.	▸ Future claims costs are relatively predictable with reasonable certainty over the long term. ▸ Claims cost and premium increases over time are close to price inflation (i.e., Consumer Price Index). Schemes where costs increase significantly above price inflation eventually become unsustainable. ▸ If scheme costs are sustainable, the insurance entity will be financially viable over the long term, with appropriately strong financial results.
Fairness: There are four perspectives to fairness: 1. There is a finite premium pool available to pay people injured people in auto accidents (based on the principle of premiums remaining affordable). As a public policy, the proportion of claims costs paid to seriously injured claimants compared to minor injured claimants needs to be fair. 2. Lower-risk auto owners should pay less for their vehicle insurance, and higher-risk auto owners should pay more reflecting the difference in the cost of accidents depending on the owner's vehicle. 3. Accident Benefit limits in BC have not increased since 1991, meaning claimants are incurring more out-of-pocket expenses due to inflationary increases in the costs of treatment services. This is a fairness issue as some claimants will feel this impact more than others. 4. Premiums paid by drivers should cover the full cost of insurance without being subsidized by the taxpayer.	▸ Perspective A: One measure is the proportion of claims cost paid to minor injury claims as a percentage of total claims costs. Schemes where the proportion of total claims costs paid to minor claims exceeds around 40% or more are not considered to be as fair as schemes where the ratio is less than 40%. ▸ Perspective B: Premiums for a cohort of like auto owners with similar characteristics (e.g., age of vehicle) should reflect their underlying claims experience. Drivers with good claims experience should not be compensating drivers with poor claims experience. ▸ Perspective C: Accident benefits should be in line with the prevailing cost of treatment services.

Guiding principles for BC auto insurance reform	Performance metrics
Simplicity: The claims process should be as simple as possible for claimants to navigate and the insurance product offering (Basic and Optional) should be easy for ICBC to maintain, and easily understood by brokers, customers and scheme providers such as medical practitioners.	▸ Claimant and vehicle owner satisfaction ▸ Number and cost of claims disputes ▸ Relatively short time frames to resolve a claim ▸ Stable claim costs over time

The above principles are not mutually exclusive and to some extent can be conflicting. For example, fairness in premium setting might result in some policyholders paying very high premiums reflecting their higher accident rates (e.g., young owners), which would be considered to be unaffordable for them. As a consequence, the application of these guiding principles requires a decision on which ones have a higher priority than others. In the example above, the current BC government has made a public policy decision that affordable premiums are a higher priority than “fair” premiums (this is also a common approach in Australia but not in the UK or US).

Consideration of these guiding principles led to developing a range of options for ICBC and the BC government’s review. In line with the principle of simplicity, the model that achieves the government’s objectives in the most straightforward way should be adopted.

5. Jurisdictional comparison

5.1 Introduction

Trends observed in BC in terms of road accident numbers and rate pressures are not unique. Many other jurisdictions in Canada and around the world have experienced similar cost pressures at different periods. An objective of this independent review was to compare ICBC against other relevant jurisdictions across Canada and elsewhere in the areas of road safety, operational and financial performance, investment management, governance and product design. We have conducted a global jurisdictional scan with the purpose of reviewing trends, identifying common drivers of deteriorating claims costs, assessing opportunities and reviewing other useful metrics (e.g., affordability, efficiency and benefit mix) to guide our recommendations and options. Full details are contained in Appendix 1.

This section draws on the most relevant elements we have seen in particular jurisdictions that represent opportunities for reducing road accident rates and reforming the Basic insurance product.

5.2 Road safety

ICBC tracks and reports on the total number of crashes on BC roads annually. ICBC-reported data suggests that an approximate 20,000 additional crashes per year have been taking place in BC since 2013 (a 23% increase from 2013 to 2016). The following paragraphs below provide a comparison to other jurisdictions in Canada and internationally.

5.2.1 Accident rates

The table below shows BC accident rates compared with 22 other global jurisdictions, including Canadian provinces and territories, and selected states in the US and Australia. Accident rates are presented based on comparative ranking over the 2005–2014 average and based on 2014 results.

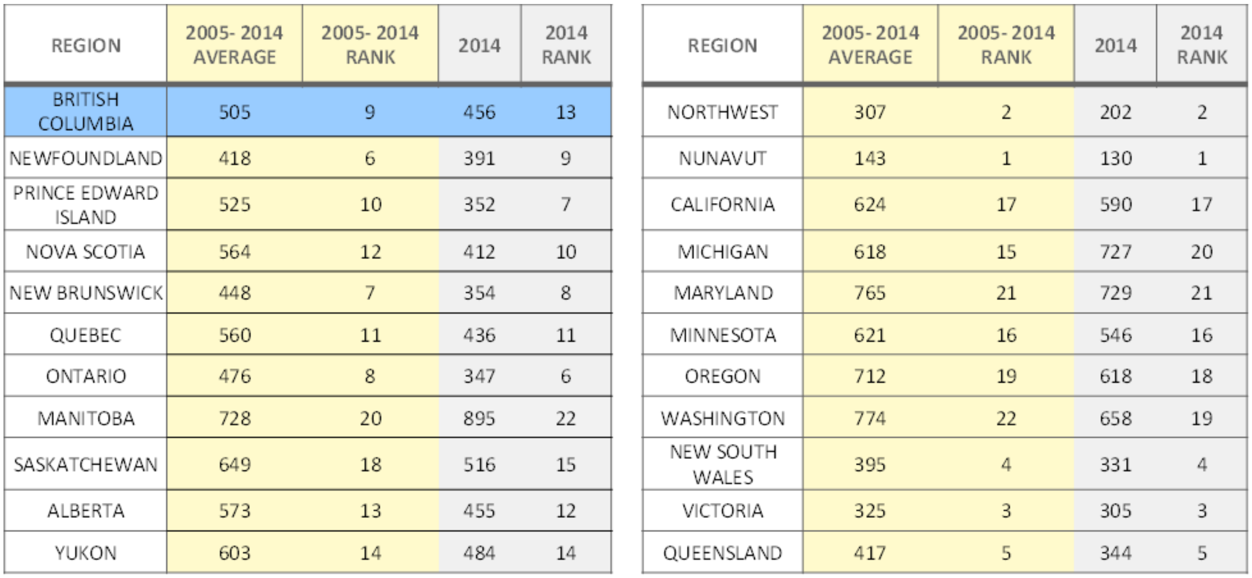
Of note is the following from a BC context:

- BC ranked 9th out of 22 jurisdictions on average accident rates over the 2005–2014 period.

From a global perspective, it is important to note:

- Australian states (Victoria, New South Wales and Queensland) ranked amongst the highest performing jurisdictions, and the US amongst the lowest.

Table 5: Summary of provincial and state accident rate comparisons (accidents per 100,000 people)



REGION	2005- 2014 AVERAGE	2005- 2014 RANK	2014	2014 RANK
BRITISH COLUMBIA	505	9	456	13
NEWFOUNDLAND	418	6	391	9
PRINCE EDWARD ISLAND	525	10	352	7
NOVA SCOTIA	564	12	412	10
NEW BRUNSWICK	448	7	354	8
QUEBEC	560	11	436	11
ONTARIO	476	8	347	6
MANITOBA	728	20	895	22
SASKATCHEWAN	649	18	516	15
ALBERTA	573	13	455	12
YUKON	603	14	484	14

REGION	2005- 2014 AVERAGE	2005- 2014 RANK	2014	2014 RANK
NORTHWEST	307	2	202	2
NUNAVUT	143	1	130	1
CALIFORNIA	624	17	590	17
MICHIGAN	618	15	727	20
MARYLAND	765	21	729	21
MINNESOTA	621	16	546	16
OREGON	712	19	618	18
WASHINGTON	774	22	658	19
NEW SOUTH WALES	395	4	331	4
VICTORIA	325	3	305	3
QUEENSLAND	417	5	344	5

In short, there exists a significant opportunity for BC to improve in comparison from both a Canadian perspective and global perspective.

5.2.2 Fatality rates

The table below shows BC fatality rates compared with 22 other global jurisdictions, including Canadian provinces and territories, and selected states in the US and Australia. Fatality rates are presented based on comparative ranking over the 2005–2014 average and based on 2014 results.

Of note is the following from a BC context:

- BC ranked 11th out of 22 jurisdictions on average fatality rates over the 2005–2014 period.

From a global perspective, it is important to note:

- Australian states (Victoria, New South Wales and Queensland) ranked amongst the highest performing jurisdictions, and the US amongst the lowest.

Table 6: Summary of provincial and state fatality rate comparisons fatalities per 100,000 population

REGION	2005- 2014 AVERAGE	2005- 2014 RANK	2014	2014 RANK
BRITISH COLUMBIA	7.9	11	6.3	10
NEWFOUNDLAND	5.9	5	5.5	8
PRINCE EDWARD ISLAND	7.9	16	3.4	1
NOVA SCOTIA	8.7	12	5.8	9
NEW BRUNSWICK	11.0	19	7.7	14
QUEBEC	5.0	6	4.1	3
ONTARIO	3.1	1	3.5	2
MANITOBA	7.43	10	5.3	7
SASKATCHEWAN	16.4	21	11.6	22
ALBERTA	12.4	20	9	17
YUKON	14.6	22	10.8	20

REGION	2005- 2014 AVERAGE	2005- 2014 RANK	2014	2014 RANK
NORTHWEST	9.1	8	9.1	19
NUNAVUT	9.0	4	11.1	21
CALIFORNIA	9.9	14	8	15
MICHIGAN	11.4	17	8.8	16
MARYLAND	9.8	15	7.4	13
MINNESOTA	8.6	13	6.6	12
OREGON	11.7	18	9	17
WASHINGTON	7.8	9	6.5	11
NEW SOUTH WALES	4.4	3	4.1	3
VICTORIA	4.4	2	4.2	5
QUEENSLAND	5.8	7	4.7	6

Overall, within the context of the BC comparison (Canada, US, Australia) at 2014, BC ranked as 10th out of 22 states/provinces surveyed for road fatality rates. Comparatively, Ontario was placed 2nd.

5.2.3 Road safety initiatives that are delivering enhanced results

As described in Section 6.1 (Road safety current state assessment), the main factors affecting BC roads today are speed, impairment and distracted driving. The following related and leading road safety practices have been identified and compared with BC from our global jurisdiction scan. These are summarized below:

Table 7: Sample leading global road safety initiatives

	Road safety Initiative	BC context	Leading practice	Effectiveness
Speed	✓ Automated speed enforcement (intersection cameras)	140 ISC cameras	UK (2000-2004)	✓ 42% reduction in deaths or seriously injured at camera sites ✓ 100 lives saved per year ✓ 4,230 fewer personal injury collisions
	✓ Automated speed enforcement at high risk sites	Currently no automated "speed on green" technology	Victoria, Australia	✓ 26% reduction in casualty crashes, minor injury crashes and fatal collisions ✓ 39 fewer minor injuries per year ✓ 17 lives saved per year
	✓ Point to point systems	Not currently implemented	UK	✓ 36% reduction in fatal and serious collisions ✓ 16% reduction in personal injury collisions
Distracted	✓ Road infrastructure countermeasures, e.g., rumble strips	Not currently implemented	US	✓ 50% reduction in single vehicle run off road injury crashes ✓ 91% reduction in crashes on urban two-lane roads
Impaired	✓ Increase in enforcement	140 FT IRSU officers	New Zealand (2010-2011)	✓ 40% decrease in road deaths (52 lives saved)

The above effectiveness scan has been considered in making the following reform recommendations outlined in Section 8.2 of this report.

5.3 Insurance model

5.3.1 Introduction

Almost every province in Canada, with the exception of BC, has taken deliberate action in recent decades to mitigate pressures on insurance premium rates by moving away from unrestricted litigation-based insurance systems. Internationally it is a similar story, with reform activity on personal injury schemes in the UK, Europe, Australia and the US over the past few decades in the face of rising claim costs, affordability concerns and consumer backlash. There is much BC can learn from the experience of these jurisdictions in developing a robust product solution that best meets the needs of British Columbians.

5.3.2 Experience of other Canadian provinces

There is a mixture of both private and public auto insurers across Canada, and several different insurance models in place. The province of BC has a litigation-based insurance model, which allows not-at-fault drivers and passengers to sue at-fault drivers for both economic loss and pain and suffering. BC, Alberta and the Atlantic provinces are the only provinces in the country that still have this adversarial model (and BC is the only province still operating with an unrestricted model). The care-based model, as in place in Manitoba and Saskatchewan, provides comprehensive benefits for those injured in accidents, and the right to sue for excess economic loss and pain and suffering is allowed only in limited circumstances. Certain hybrid models (designed to bring benefits from both models) typically use financial or verbal thresholds to determine the right to sue.

Every Canadian jurisdiction that has moved away from unrestricted litigation-based models has done so in an effort to control escalating minor bodily injury costs. Affordability issues and consumer backlash forced the other provinces to undertake major reforms to their insurance products. The scene being set in BC is no different — claims costs are escalating beyond the point that can be managed by rate-smoothing mechanisms, and assuming this trend continues, BC consumers will be experiencing a dramatic rise in rates, provoking a backlash.

Table 8: Insurance reforms by Canadian jurisdiction

Province	Model	Year	Pre-reform	Post-reform
Alberta	Private	2004	Unrestricted litigation-based model	Cap on pain & suffering for minor injuries
Saskatchewan	Public	2003		Hybrid[13]: mix of litigation and care-based
Manitoba	Public	1993		Pure care-based
Ontario	Private	1990		Hybrid: Threshold care-based
New Brunswick	Private	2003		Cap on pain & suffering for minor injuries
Nova Scotia	Private	2003		Cap on pain & suffering for minor injuries
Quebec	Public/private	1978		Pure care-based
Newfoundland	Private	2004		Deductible on pain & suffering for minor injuries
British Columbia	Public	n/a		n/a

Product reform has been largely effective across Canada, and the universal result has been a reduction in claims costs and, subsequently, insurance rates.

Two provinces in particular from which BC can learn are as follows:

- Alberta introduced a cap on pain and suffering for minor injuries in 2004[14]. This restriction was challenged as a constitutional violation in Morrow v. Zhang. In 2009, the Alberta Court of Appeal ruled in favour of the province, overturning a lower court decision and concluding that the minor injury cap held up to constitutional scrutiny when assessed in light of the entire minor injury legislative scheme. The ruling was based on the fact that increased medical benefits are available to claimants under the new legislation and that these benefits outweigh the damages for pain and suffering. Any proposed product reforms in BC would be well-advised to consider this ruling and consider the whole package of reforms to ensure the legislation meets the needs and circumstances of claimants without discrimination.
- Ontario has one of the least effective insurance systems in Canada. It is filled with disputes and inefficiencies, and a very high percentage of premiums is going to experts and lawyers rather than directly to claimants. The Marshall report ("Fair Benefits Fairly Delivered", April 2017) contains many useful learnings for BC in terms of opportunities for creating a better and more efficient system.

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[13] Saskatchewan operates a choice model where residents can elect to participate in the litigation-based model instead of the care-based model. The vast majority of insureds (approximately 98%) remain in the care-based system.

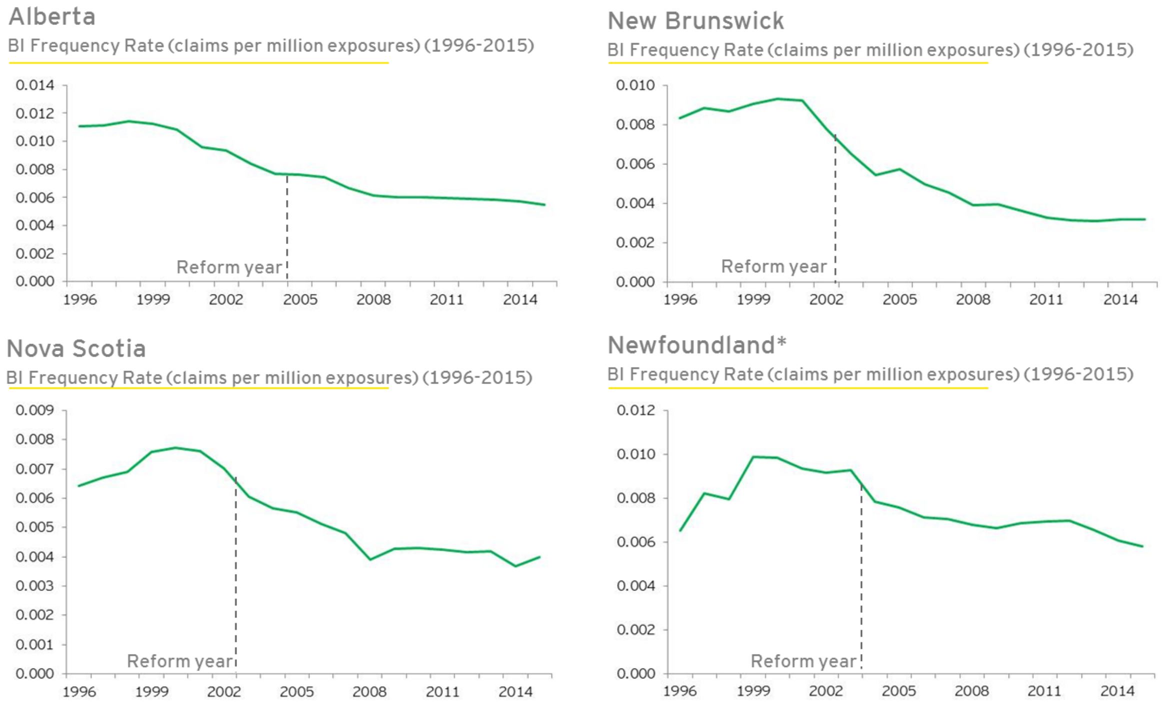
[14] The Alberta government is currently conducting a targeted stakeholder consultation to inform potential changes to their auto insurance system.

5.3.2.1 Pain and suffering awards for minor injury claims

Product reforms in other Canadian provinces addressed similar cost drivers to what we are seeing in BC today – in particular, escalating costs for pain and suffering for minor injuries driven in part by increasing legal representation. This particular cost driver has been addressed in provinces such as Alberta, New Brunswick and Nova Scotia by the introduction of a cap on pain and suffering awards for minor injury claims (non-minor injury claims are unaffected). This measure has effectively curbed deteriorating trends in pain and suffering awards and has produced meaningful savings as follows:

- Bodily injury loss costs in these provinces continue to be lower than levels in 2000 with decreases ranging from 10% to as much as nearly 60% in one of the provinces. By comparison, BC's bodily injury loss costs have increased nearly 85% over the same period.
- There was a noticeable decrease in the frequency of bodily injury (BI) claims post-reform in these provinces (see chart 12 below). It is likely that the cap on pain and suffering for minor injuries acted as a disincentive in certain cases; hence, some claimants and/or lawyers decided not to pursue a claim.
- Meaningful savings were realized in each province and in certain cases exceeded those savings predicted by consulting actuaries, who estimated material reductions in claims costs but did not fully anticipate the reduction in claim numbers.

Chart 12: Frequency of bodily injury (BI) claims post-reform



Alberta
BI Frequency Rate (claims per million exposures) (1996-2015)

New Brunswick
BI Frequency Rate (claims per million exposures) (1996-2015)

Nova Scotia
BI Frequency Rate (claims per million exposures) (1996-2015)

Newfoundland*
BI Frequency Rate (claims per million exposures) (1996-2015)

*Newfoundland imposed a deductible on pain and suffering awards rather than a cap

5.3.2.2 Accident benefits

Another key component of scheme reform in most provinces is an increase in claimant accident benefits for medical treatment, wage replacement and other benefits. This can be interpreted as a move towards a more care-based rather than cash-based system — approaching the fully care-based model schemes in place in Saskatchewan and Manitoba.

Accident benefits in BC are low compared to modern medical and rehabilitation costs in the care-based schemes in Canada and internationally. With such modest accident benefits in BC, reducing damages for litigation would result in many claimants possibly paying significantly out of pocket for medical and wage loss. This result can be addressed by increasing accident benefits as part of any product reform option considered.

5.3.2.3 Learnings for BC

Key learnings BC can take from reforms in other Canadian provinces are as follows:

- Caps on pain and suffering awards for minor injury claims have been effective at reducing overall loss costs, partly driven by a reduction in the overall number of claims made.
- Effective design is imperative. Careful consideration must be given to the definition of minor injury to ensure that it is clear, precise and acceptable in order to increase the efficacy of the reforms. Court challenges have been a reality in most jurisdictions where minor injuries are defined. Some injury definitions have been successfully challenged, which has led to an erosion of financial benefits over time. The lesson that can be learned from Alberta's experience is that a package of reforms intended to reduce costs may need to be coupled by offsetting improvements such as enhanced accident benefits and diagnostic and treatment protocols. Effective reforms apply restrictions to areas of cost blow-outs while increasing benefits elsewhere in order to get the right balance for claimants.
- The more complicated the reform, the more difficult the interpretation of intent becomes and the risk of challenge increases. Keep it simple and easy for consumers to understand. Ontario did not experience the same level of financial savings post reform as other jurisdictions, due to a number of factors including their multi-stage implementation, complexity of product, which resulted in interpretation issues, and a parallel spike in fraudulent activity.
- Consumers value choice — even if they do not exercise it. For example, in Saskatchewan, the introduction of choice related to the option of selecting a litigation or care-based product has resulted in the vast majority (98%) of auto owners remaining in the care-based product.

5.3.3 Experience of scheme reforms worldwide

Personal injury schemes worldwide have been experiencing deteriorating claims experience and significant rate pressures in recent decades. In almost all jurisdictions studied, scheme reforms have been driven by similar issues to those currently being experienced in BC, in particular rapidly escalating costs for minor injury claims, increased litigation and fraud.

5.3.3.1 Escalating costs for minor injury claims

The UK: The insurance industry in the UK has been attempting to tackle rising numbers and costs of minor injury claims (e.g., soft-tissue (whiplash)) for the past decade. An estimated 75% of personal injury claims in the UK are for whiplash or soft-tissue injuries, costing the industry about £2 billion annually. Average awards for pain and suffering for whiplash claimants are reportedly in the range of £2,000–£3,000.

The Jackson report (2009) investigated the cost of civil litigation in the country and found that the current compensation system is failing as it is too slow, too expensive and fails genuine claimants who have a right to access fair, proper and timely compensation. Reforms to tackle the costs associated with civil litigation were introduced in 2013, and further measures to tackle fraud, to fix the cost of initial whiplash medical reports and to improve the independence and quality of medical evidence were introduced in 2014 and 2015.

In 2016, the UK government announced a major whiplash reform program, building on earlier reforms. Some of the proposed measures include:

- Removing compensation for pain, suffering and loss of amenity for minor whiplash claims;
- Raising the small claims limit for personal injury claims to £5,000 — up from £1,000; and
- A prohibition on settling whiplash claims without medical evidence from an accredited medical expert.

The effectiveness of such significant measures remains to be seen. However, it is clear that minor claims such as whiplash are creating severe cost pressures on insurers in the UK, similar to the recent BC experience.

France: Compensation for whiplash claims in French jurisdictions is subject to prescribed regulation, including the requirement for specific medical experts to produce a report on the injuries sustained. Rules such as this have helped to keep whiplash claims significantly lower in France compared to the UK (around 3% compared to 75%), but this number has risen significantly in recent years. Claims are being more rigorously contended in court, and legal involvement is a key contributor in rising claim awards for minor whiplash claims.

Ireland: Legal fees and whiplash awards in Ireland are purportedly three times higher than the amounts awarded in comparable cases in the UK, according to Insurance Ireland in 2016. A series of reforms is being proposed, including measures to curb these disproportionate claim costs.

New South Wales (NSW), Australia: The compulsory third party (CTP) motor insurance scheme in NSW passed a major reform in 2017 after several attempts to bring about change in recent years. Key drivers were significant rises in the numbers of minor claims and increased legal involvement in such claims driving costs upward and putting pressure on premiums. Fraud and exaggeration of claims were other key drivers for change.

New legislation was successfully passed in March 2017, with the new scheme scheduled to commence in December 2017. A key feature of the new scheme design is a restriction on benefits for minor injury claims (where a minor injury is defined as a soft-tissue or psychiatric or psychological injury only, as defined in the new legislative Act) and a significant move towards a comprehensive care model.

5.3.4 Increased legal representation and associated costs

In almost every jurisdiction where cost pressures arise, increased legal representation and higher legal fees are typically quoted as key drivers in pushing the cost of minor injury claim settlements upward. For example, in the UK, the Association of British Insurers (ABI) surveyed over 50,000 low-value motor accident claims in 2009 and 2010 and found that for every pound paid in compensation, 87p was paid in legal costs. One insurer has provided data to the Ministry of Justice showing that by 2010, average claimant legal costs represented 142% of the sums received by the injured victims.

Scheme reforms typically target legal fees and lawyer representation as a measure to reduce the overall cost of claims. Examples can be seen in NSW and Queensland in Australia — claim costs were down 25% in NSW following tighter restrictions on legal fees in 2016. In Ireland, motor insurance premiums fell by 16% in the two years after civil reforms were implemented, where measures included speeding up compensation payments and reducing claimants' costs.

5.3.5 Fraud and exaggerated claims

Reducing and deterring fraud is a priority for insurers globally. This is a particular problem in the UK, where fraud is estimated to cost the insurance industry about £1.3b a year, mostly in relation to bogus claims, with an estimated 350 frauds a day (Annual Fraud Indicator study, 2016). These include thousands of dishonest motor insurance claims that total about £835m. Industry initiatives to combat fraud include a not-for-profit organization focused on fraud prevention and detection (Insurance Fraud Bureau), a specialist police unit dedicated to prosecuting insurance fraudsters and an industry-wide database of known insurance fraudsters.

NSW in Australia established a fraud taskforce in 2016 in the wake of rising fraudulent activity in motor insurance claims. In recent months, the police fraud taskforce has made a number of highly public arrests and had successful prosecutions with operations ongoing. The taskforce has targeted claimants, lawyers and medical practitioners.

5.3.6 Replacing lump-sum settlements with a care-based approach

The NSW scheme experienced sharp increases in the costs of future care being awarded in the years 2012–2016. Similar buffers appeared in medical treatment awards, which were also rising. This is in stark contrast to schemes that provide medical treatment and rehabilitation benefits for life on a "reasonable and necessary" basis, such as Victoria in Australia. Such schemes experience low, stable costs for medical and rehabilitation. The 2017 reforms removed the provision of medical treatment and care as a lump-sum benefit for litigated claims, instead providing lifetime benefits to claimants on an as-needed basis. Such measures are expected to significantly cut claim costs to levels similar to Victoria, Manitoba and Saskatchewan, by removing the incentive of a lump-sum payout.

5.3.7 Regulation and dispute resolution

There are many different regulatory models in Canadian and international auto and worker's compensation schemes that address claims dispute resolution and pricing of products. The common feature of all the models is the setting up of an independent government body separate from the insurer whether in a government monopoly or private insurer model. The models vary as follows:

- Alternate dispute resolution body is multi-purpose (i.e., deals with non-personal injury claim matters);
- Others bodies are solely set up to deal with alternate dispute resolution for bodily injury claims; or
- A dedicated regulator is established for the insurance product, covering dispute resolution, premium rates and general regulation and management of the scheme.

In all models, the court process is retained for litigated damages at some stage in the claims process. Some examples of auto scheme models are briefly described in the following table.

Table 9: Examples of regulatory models

Jurisdiction	Description
Ontario The Financial Services Commission of Ontario (FSCO), an arm's-length agency of the Ministry of Finance, regulates the insurance sector as well as other financial service sectors in Ontario.	‣ Disputes between consumers and insurers involving statutory accident benefits were previously handled by the FSCO. Recently, the responsibility was moved to Ministry of the Attorney General's Licence Appeal Tribunal. The first stage of the resolution process is mediation, which both the insurer and claimant are able to apply for. This occurs fairly commonly, given that in one out of three cases, the claimant and insurer are unable to agree on what constitutes fair compensation for the injury. Mediation of disputes is mandatory in Ontario before the dispute can proceed to arbitration or court. If mediation is unsuccessful in resolving the dispute, the claimant can either apply for arbitration with the FSCO or file a lawsuit.

Jurisdiction	Description
	▸ Insurer premium rates are assessed by the FSCO under a prior approval system.
Saskatchewan SGI Auto Fund is the monopoly government insurer.	▸ The Automobile Injury Appeal Commission is an independent tribunal responsible for hearing no-fault benefit appeals in Saskatchewan. The Commission has the authority to set aside, confirm or vary benefits decisions made by SGI. Its decisions are binding on the appellant, and SGI and parties have 30 days from the date of the decision to appeal to the Court of Appeal on a question of the law. ▸ The Saskatchewan Rate Review Panel advises the Government of Saskatchewan on rate applications proposed by SGI Auto Fund. The Panel reviews each application and provides an independent public report stating its opinion about the fairness and reasonableness of the rate change, while balancing the interests of the customer, the Crown corporation and the public.
Victoria, Australia The Transport Accident Commission is the monopoly government insurer.	▸ The initial step for accident benefit disputes is an internal review within the monopoly insurer (no legal representation is required), which is conducted by an area independent of the management of the claims. A high proportion of disputes are resolved at this stage. The second step is an application to the Victorian administrative appeal tribunal, which is a multi-purpose tribunal (i.e., not just for auto claims). Very few claims proceed to a court process. Limits are imposed for legal fees per dispute, which are quite low. ▸ Litigated benefits are limited to serious injuries (about 10% of claims) and to loss of wages and pain and suffering. Internal dispute resolution followed by a normal court process are the two steps. ▸ Pricing increases are assessed by the government and in practice are limited to inflation increases (there is no independent body assessing filings).
NSW, Australia – 2017 legislation The State Insurance Regulatory Authority (SIRA) is the regulator for auto and workers compensation insurance, which includes dispute	▸ The 2017 legislation builds on the previous dispute resolution system. The move from litigated damages to care benefits has resulted in a separate dispute process for care benefits: ▸ The initial step for care benefit disputes is an internal review within the insurer (no legal representation is required), which is conducted by an area independent of the management of the claims. A high proportion of disputes are expected to be resolved at this stage based on a similar process for workers compensation, which is viewed as a success.

Jurisdiction	Description
resolution and premium rates. Auto insurance in NSW is a private insurer scheme. Icare is the monopoly workers' compensation insurer	▸ The second step is a Merit review conducted by an independent area of the regulator (similar to the workers' compensation scheme). The reviewer may refer matters to the Medical Assessment Service for review or request further information or examinations be conducted. Limits are imposed for legal fees per dispute (likely to be about $2,000 to $3,000). Importantly, lawyers are not advocates for claimants but are advisors. ▸ The regulator is setting up a Claims Advisory Service to assist claimants through the claims process in the absence of lawyers assisting claimants. The assistance starts from the date of the accident. The service is not an advocate for claimants. ▸ For litigated benefits, the dispute process is the same as in the scheme that operated from 1999. It comprises: ▸ A Medical Assessment Service that deals with disputes in relation to medical and care treatment plus assessment of whole person impairment (the threshold for access to pain and suffering); and ▸ A claims Conciliation and Resolution Service (CARS), which is an alternate dispute (i.e., not court based) process to speed up resolution of claims at a lower cost. Parties can request an exemption from CARS for complex matters and other specified cases (e.g., infant claims). ▸ Parties can then proceed to a court process. ▸ Insurer premium rates (including the monopoly workers' compensation insurer) are assessed by SIRA under a file and write system.

5.3.8 Learnings for BC

Some key learnings BC can take from scheme performance and resulting reforms around the world are as follows:

- The main driver of deterioration in schemes' financials is almost universally an escalation of minor injury claim costs to disproportionate levels. Systems that are performing well tend to have claim costs split roughly one-third minor injury compared to two-third non-minor injury claim costs. In BC today, minor injury claim costs are exceeding the cost of non-minor claim costs.
- Minor injury benefit restrictions can be subject to rigorous contest and potential manipulation by claimants and will likely need to be modified over time. For example:

  - Alberta: A particular type of jaw injury (i.e., temporomandibular joint disorder) was ruled as outside of the "minor injury" definition. The incidence of such injury types has since escalated.

  - New Jersey, US: Since the introduction of thresholds, claims have become more complex. For example, disc herniation is now reported in 40% of whiplash claims, compared to 1%–2% elsewhere.

- Escalating claim costs are almost always associated with increased legal involvement and/or excessive legal fees. Limiting compensation for minor claims or taking explicit measures to regulate or restrict such costs is necessary to effect reductions in litigated claim costs. The proportion of premiums being returned to claimants is a good metric for assessing the efficiency of a scheme. In BC today, claimants receive less than 60% of their premium as benefits, with the remainder going to scheme costs including legal costs and disbursements. Best-in-class schemes around the world return approximately 80% of premiums as benefits to claimants. For example:
  - Victoria (Australia): 80% of premiums returned as benefits
  - Saskatchewan: 83% of premiums returned as benefits
  - Manitoba: 104% of premiums returned as benefits
- Provision of benefits such as medical treatments on a regular basis as necessary can be a very effective way of keeping such costs low and stable. However, if not implemented properly and with appropriate controls and limits, these structures can also cause escalating costs. Examples include:
  - South Australia: Extremely generous benefits acted as disincentives for claimants to return to their pre-accident lives. Scheme reforms changed this benefit structure in 2016.
  - Ontario: Generous and complex benefits are being taken advantage of by claimants and service providers alike, resulting in claim costs increasing rather than decreasing.
- BC can learn from other jurisdictions in how to resolve claims speedily and how to reduce the number and cost of disputes. There are also different regulatory models in use by other schemes that include regulation of premiums and general regulation of schemes that BC could consider.

Major scheme reform does not happen overnight. Engagement and consultation with stakeholders, strong political leadership and carefully considered scheme design are crucial to successful implementation allowing affordable and sustainable claim costs and premiums.

6. How is the current system performing?

BC's auto insurance system is facing unprecedented challenges. Premiums collected by ICBC today are the second highest in Canada, yet they are not high enough to cover the true cost of paying claims. More accidents are occurring on BC's roads, and the number and size of claims is increasing. Only recent government intervention has protected BC drivers from an otherwise required 15%–20% price increase. This rate protection has eroded ICBC's financial situation to a point where it is not sustainable, and **unless something significant is done, and quickly, the average driver in BC will need to pay almost $2,000 annual premium (Basic and Optional) for auto insurance by 2019, an increase of 30% over today's rates in order to return ICBC to financial health.**

The overall performance of the current BC system is detailed below, including discussion on road safety structure and trends, the current state of the insurance product, and ICBC's recent financial performance, along with observations on ICBC's approach to investment and capital management.

6.1 Road safety

In BC, road safety initiatives are defined, regulated and operated through a number of partner organizations and relevant laws and statutes. RoadSafetyBC (a branch within the Ministry of Public Safety and Solicitor General and overseen by the Superintendent of Motor Vehicles) develops road laws and policies to make roads as safe as possible. The Ministry of Transportation and Infrastructure (and municipalities) are responsible for setting safe speeds and for safe road infrastructure, while the police deliver road safety enforcement, specifically targeting the top contributing factors that lead to fatalities and serious injuries. ICBC is one of the key road safety agencies in British Columbia, with a legislated mandate of promoting traffic safety, education and awareness, as well as programs that can reduce crashes and claims costs. A number of additional partner agencies include the BC Coroner, WorkSafeBC and the Provincial Health Officer.

The governance structure[15] and shared responsibilities within the BC road safety partners group are described below. The steering committee includes representatives from partner agencies to advise on road safety matters and help move the provincial strategy forward, each with its own distinct legislative accountabilities, organizational accountabilities, mandates and ministerial reporting structures. RoadSafetyBC has taken a leadership role in bringing this strategy and structure together.

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[15] Source: British Columbia Road Safety Strategy 2015 and Beyond

6.1.1 Towards Zero: Road Safety Strategies

Led by RoadSafetyBC, British Columbia road safety partners have aligned with Canada's Road Safety Strategy 2015, which promotes the long-term vision of making Canada's roads the safest in the world. British Columbia's goal is to have the safest roads in North America by 2020, measured in terms of having the lowest rates of fatalities and serious injuries per 100,000. In fact, in line with the Vision Zero movement, the ultimate goal is to eliminate motor vehicle crash fatalities and serious injuries altogether in BC.

A number of principles key to the success of Canada's Road Safety Strategy 2015 have been aligned with international best practices in road safety, including adopting the globally recognized "Safe System Approach", which enables greater progress towards safety by treating the road system as a product of a number of components:

Canada's Road Safety Strategy 2025's vision, "Towards Zero: The safest roads in the world" is based on an international best practice first adopted by Sweden in 1997, and has since been adopted by many of the world's other leading road safety jurisdictions, including the UK, New Zealand and Australia. Along with Sweden, these countries have the lowest rates of motor vehicle crash fatalities in the world.

- **Safe road users** who are well-trained and aware of driving challenges and risks and respect towards traffic rules;
- **Safe vehicles**, which are equipped with proven and effective safety designs and features;
- **Safe roadways**, road designs and land-use planning that reduce the risk of crashes, fatalities and serious injuries; and
- **Safe speeds**, including setting and enforcing safe speed limits.

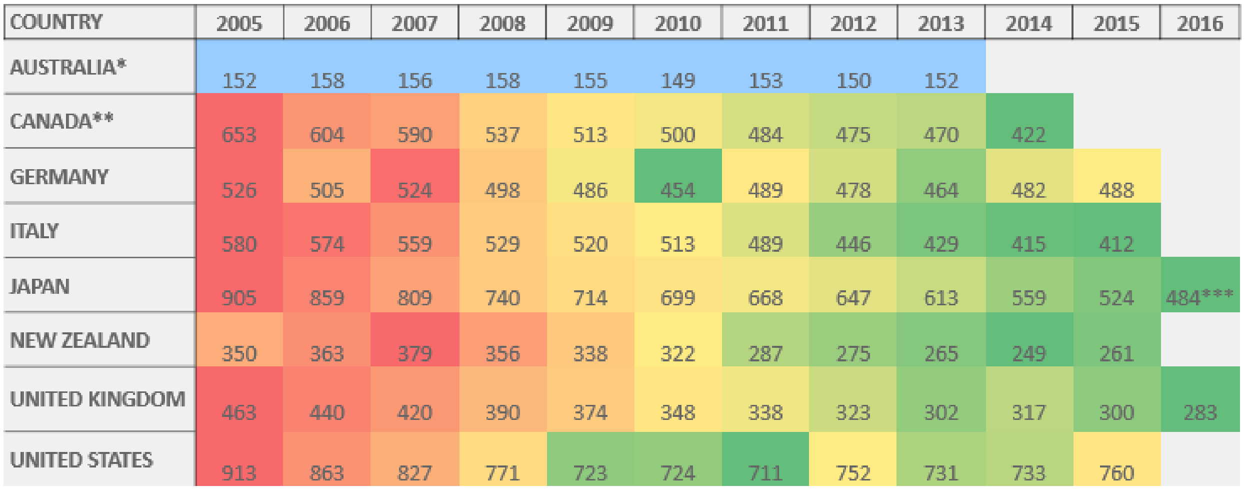
RoadSafetyBC has also taken a leadership role in defining the targets and measurement for road safety effectiveness in BC, measured by:

- The number of traffic fatalities and serious injuries; and
- The rate of traffic fatalities and serious injuries involving high-risk driving behaviours.

6.1.2 Road safety programs and initiatives: reduction in accident and fatality rates

Many road safety programs, enforcement technologies, laws and penalties have been implemented in BC over the past decades. Examples include intersection safety cameras, variable speed limits and speed campaigns, driver information systems, Graduated Licensing Program, and tougher penalties for impaired and distracted driving. Combined with improvements in vehicle and highway design, this has resulted in a significant decrease in the number of accidents and fatalities occurring on BC roads. BC's road accident rate, for example, fell by over 30% from 2005 to 2014 (from 676 to 456 accidents per 100,000 population) and for the most part is better than the Canadian national average over the period. While the BC road accident trend is positive, it compares less favourably with some of the better-performing jurisdictions around the world, such as the UK, which achieved road accident rate decreases of 39% over the same period (the UK, New Zealand and certain parts of Australia show recent road accident rates below 300 per 100,000 population).

Table 10: Global road accident rates comparison (per 100,000 population)



COUNTRY	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AUSTRALIA*	152	158	156	158	155	149	153	150	152			
CANADA**	653	604	590	537	513	500	484	475	470	422		
GERMANY	526	505	524	498	486	454	489	478	464	482	488	
ITALY	580	574	559	529	520	513	489	446	429	415	412	
JAPAN	905	859	809	740	714	699	668	647	613	559	524	484***
NEW ZEALAND	350	363	379	356	338	322	287	275	265	249	261	
UNITED KINGDOM	463	440	420	390	374	348	338	323	302	317	300	283
UNITED STATES	913	863	827	771	723	724	711	752	731	733	760	

Reference: OECD (2017), Road accidents (indicator). doi: 10.1787/2fe1b899-en (Accessed on 04 April 2017

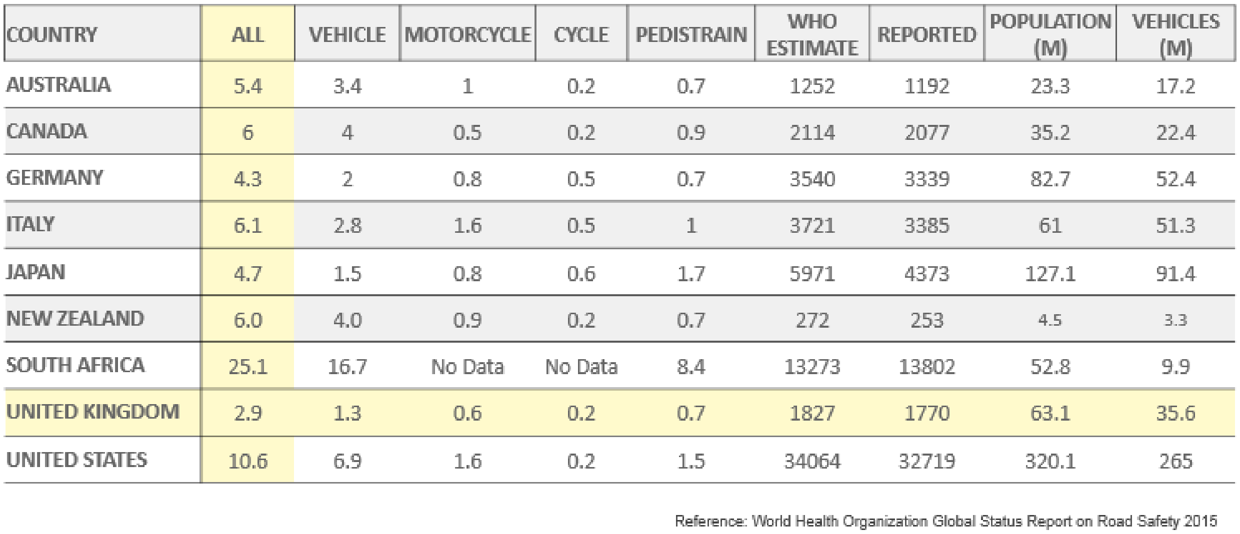
*Australia reports lack of reliable, nationally consistent, source of non-fatal crash data

**Transport Canada data

***2016 Japan injury data is only through November. We averaged out injury data through November (50,652/month) and added that amount in for December

There is a similar trend with fatality rates on BC roads, which showed a 42% decline from 2005 to 2014 (reduction from 10.8 fatalities per 100,000 in 2005 to 6.3 in 2014). Fatality rates in BC, however, are above the Canadian national average and significantly higher than other leading jurisdictions, including the UK by comparison, with a fatality rate of just 2.9 per 100,000 in 2015. In 2014, BC reported 56.8 serious injuries per 100,000.

Table 11: Global road fatality rates comparison (per 100,000 population)



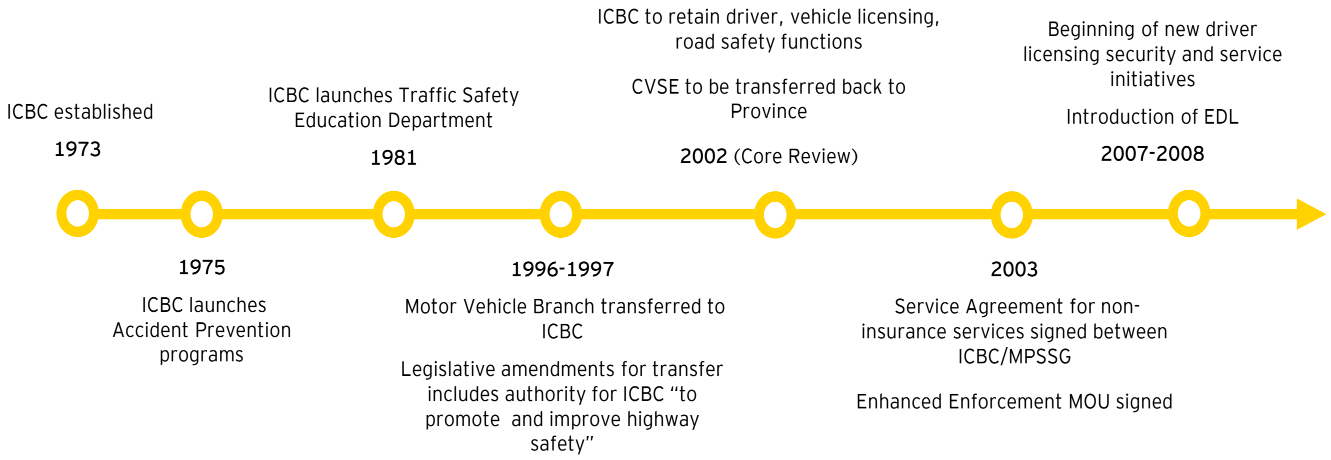
COUNTRY	ALL	VEHICLE	MOTORCYCLE	CYCLE	PEDISTRAIN	WHO ESTIMATE	REPORTED	POPULATION (M)	VEHICLES (M)
AUSTRALIA	5.4	3.4	1	0.2	0.7	1252	1192	23.3	17.2
CANADA	6	4	0.5	0.2	0.9	2114	2077	35.2	22.4
GERMANY	4.3	2	0.8	0.5	0.7	3540	3339	82.7	52.4
ITALY	6.1	2.8	1.6	0.5	1	3721	3385	61	51.3
JAPAN	4.7	1.5	0.8	0.6	1.7	5971	4373	127.1	91.4
NEW ZEALAND	6.0	4.0	0.9	0.2	0.7	272	253	4.5	3.3
SOUTH AFRICA	25.1	16.7	No Data	No Data	8.4	13273	13802	52.8	9.9
UNITED KINGDOM	2.9	1.3	0.6	0.2	0.7	1827	1770	63.1	35.6
UNITED STATES	10.6	6.9	1.6	0.2	1.5	34064	32719	320.1	265

Reference: World Health Organization Global Status Report on Road Safety 2015

6.1.3 ICBC's role in promoting road safety

ICBC has had a significant role in introducing, supporting and funding new road safety and driver and vehicle licensing priorities since its inception in 1973. Notably, in 1996–1997, the BC government merged the Motor Vehicle Branch into the ICBC organization to allow greater promotion and improvement of highway safety under a single administrative umbrella, leveraging the infrastructure and resources available within ICBC to support major new initiatives into the BC system and ICBC's track record of successfully doing so. Similar to today's environment, at the time BC was experiencing an increase in both accident and fatality rates, and the merger served to align road safety funding to activities that deliver quantifiable improvements in terms of reduced accidents, death and injuries on BC roads.

Chart 13: Sample ICBC road safety initiatives since 1973 inception



The findings from a 2002 Core Review identified that the integration of driver licensing and vehicle licensing and registration activities, as well as road safety programs, had significant public policy benefits including cost savings due to economies of scale and supporting BC's low rate of uninsured drivers (one of the lowest in North America).

6.1.4 Road safety funding

In 2016, ICBC spent over $175 million delivering on agreed road safety responsibilities as set out under the Service Agreement with the Province of BC, and other non-insurance initiatives, including:

- $70 million spent on the administration of Driver Licensing and Testing services;
- $40 million spent on road safety initiatives, including Vehicle Registration & Licensing and Driver Training School Certification and Regulation; and
- $22 million provided as funding for the Police Services Division responsible for the oversight for the Enhanced Traffic Enforcement Program.

This $175 million of spend was funded through Basic insurance premiums, at an annual cost of approximately $50 per vehicle. This spend generated $577 million in revenues and fines, which were transferred in full to the Province (in part shared across BC's municipalities); none of those revenues were allocated back to Basic insurance.

Table 12: In 2016, ICBC spent over $175 million delivering on agreed road safety responsibilities and other non-insurance initiatives

ICBC service	Funding through Basic insurance
Driver-related service	$70 million spent on the administration of driver licensing and testing services.
- Driver licensing (standard setting, testing and issuing)	
- Driver training school certification and regulation	$105 million on road safety and other vehicle and driver delivery and administrative initiatives, including: • $40 million spent on road safety initiatives, including vehicle registration and licensing and driver training school certification and regulation; and • $22 million provided as funding for the Police Services Division responsible for the oversight for the Enhanced Traffic Enforcement Program.
- Support to OSMV (administrative driver prohibitions, vehicle impoundment program, driver improvement programs, driver fitness program, record keeping)	
Vehicle-related service	
- Vehicle registration	
- Vehicle licensing	
- Compliance operations	
Violation tickets	
- Violation ticket administration and fines collection	
- Collection of fines/levies unrelated to road use	
- Intersection safety cameras	
Other services	
- Database maintenance and information sharing	
- Social services tax collection	

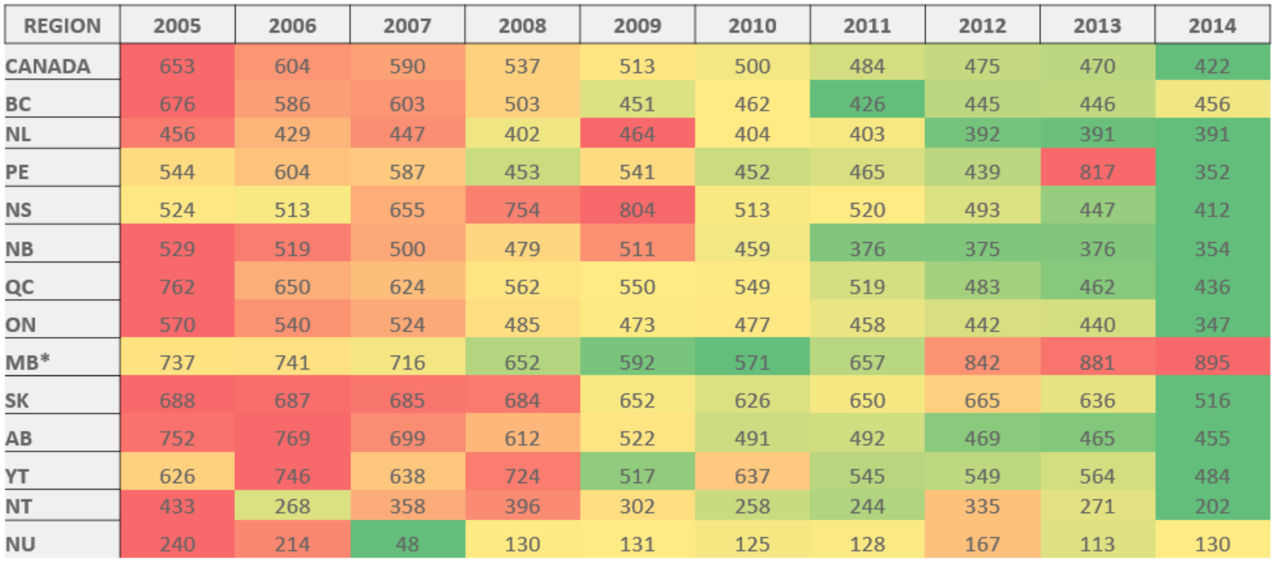
6.1.5 Increasing road accidents in BC

Despite decades of enhancements and long-term improvements in the accident trend in BC, data available from both ICBC and Transport Canada indicates an upward swing in the number of road accidents in the past few years.

ICBC tracks and reports on the total number of crashes on BC roads annually. ICBC-reported data suggests that an approximate 20,000 additional crashes per year have been taking place in BC since 2013 (a 23% increase from 2013 to 2016). Sixty percent of these accidents happen at intersections.

Separately reported Transport Canada data for BC also indicates an upward trend in the number of road accidents from 2011 onwards. As shown in table 13 below, Transport Canada data shows that BC accident rates were at their lowest in 2011 (426 per 100,000) and have increased year-on-year to a rate of 456 in 2014 (greater than the rate in 2009). BC accident rates were also below the national average from 2008 to 2013, but climbed above the national average in 2014.

Table 13: BC accident rates compared with Canadian average and other jurisdictions (shown as the number of accidents per 100,000 population)



REGION	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
CANADA	653	604	590	537	513	500	484	475	470	422
BC	676	586	603	503	451	462	426	445	446	456
NL	456	429	447	402	464	404	403	392	391	391
PE	544	604	587	453	541	452	465	439	817	352
NS	524	513	655	754	804	513	520	493	447	412
NB	529	519	500	479	511	459	376	375	376	354
QC	762	650	624	562	550	549	519	483	462	436
ON	570	540	524	485	473	477	458	442	440	347
MB*	737	741	716	652	592	571	657	842	881	895
SK	688	687	685	684	652	626	650	665	636	516
AB	752	769	699	612	522	491	492	469	465	455
YT	626	746	638	724	517	637	545	549	564	484
NT	433	268	358	396	302	258	244	335	271	202
NU	240	214	48	130	131	125	128	167	113	130

Transport Canada data

*Manitoba changed traffic accident reporting in 2011 which resulted in an increased number of injuries of minimal nature being captured

The recent accident rate increase in BC is unique compared with most other Canadian provinces or territories, which continue to show a downward trend to 2014.

When the comparison to BC is expanded to include jurisdictions outside of Canada, we see both similar and conflicting trends. This Review also undertook to compare BC accident rate trends with other global jurisdictions, including selected states in the US and Australia.

- Similar to BC, 2014–2015 US data indicates an increase in road accident rates for the states where the data is available.

- In contrast to BC, each Australian state continues to show a decline in road accident rates.

US road accident rates (selected states) 2005-2015

The table below shows the declining road accident trend for selected US states from 2005 to 2015 (shown as the number of accidents per 100,000 population). Similar to BC, 2014-2015 data indicates an increase in road accident rates for a number of states where the data is available.

Table 14: US road accident rates (per 100,000 population, selected states) 2005-2015

COUNTRY/ STATE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
UNITED STATES	913	863	827	771	723	724	711	752	731	733	760
CALIFORNIA	822	773	741	667	638	623	606	603	590		
MARYLAND	998	966	932	865	841	779	772	762	727		
MICHIGAN	905	822	811	756	720	723	736	723	727	729	757
MINNESOTA	745	687	689	648	598	596	575	552	573	546	554
OREGON	810	816	760	718	746	804	625	635	592	618	721
WASHINGTON	1,070	995	856	766	727	699	668	665	635	658	664

*Accident data secured from state specific Department of Transportations and Department of Public Safety

Australia road accident rates (selected states) 2005-2016

Table 15 below shows the declining road accident trend for selected Australian states from 2005 to 2016 (shown as the number of accidents per 100,000 population). In contrast to BC, each state continues to show a decline in road accident rates.

Table 15: Australia road accident rates (per 100,000 population, selected states) 2005–2016

STATE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
NEW SOUTH WALES	434	433	436	399	400	390	393	375	354	331	306	
VICTORIA		350	345	346	330	323	320	308	302	305	301	283
QUEENSLAND	462	457	482	475	436	404	376	370	361	344	325	

Reference: Data from the relevant state roads and transport authority on casualty numbers 2015

Given the focus globally on road safety – including safer vehicles, safer road infrastructure and preventing high-risk driving behaviours – an increasing trend in crashes on BC roads is clearly a problem, while leading jurisdictions on road safety (certain parts of the US aside) are experiencing decreased crash frequency.

Currently, in BC, as in many other jurisdictions, the top contributing factors in accidents involving a death or serious injury are speed, distractions and alcohol – accounting for 84% of all road fatalities in BC.

Table 16: Causes of crash fatalities in BC

Distracted driving	Speed	Impaired driving
Currently, distracted driving is responsible for **more than one quarter** (30%) of all car crash fatalities in BC	Speeding is the leading cause of car crash fatalities in BC and is currently responsible for **more than thirty percent** (31%) of all car crash fatalities in BC	Impaired driving is currently responsible for **more than twenty percent** (23%) of all car crash fatalities in BC, of which **over a quarter** (28%) are 16–25 year olds
= 84% of all crash fatalities in BC		

Data reviewed suggests that rising frequency of accidents from 2014 to date has added approximately $550m to ICBC's claims costs. This figure is close to the current gap in premiums (i.e., the difference between the estimated cost and premiums being charged) of $560m.

The significance of an effective road safety program is instrumental in order to reduce the number of accidents currently occurring on BC roads. There is an immediate need to increase the effectiveness of BC's road safety approach to reduce the upswing in accidents currently experienced across BC. By targeting the leading contributing factors highlighted above and implementing solutions that successfully change risky driver behaviours, BC should see fewer accidents on BC's roads, reducing the tragic human consequences of injuries and loss of life. The number of claims being filed would also be reduced, leading to significant claims savings and reduced burden on the BC health system.

6.2 Financial performance

As a public auto insurer, ICBC is committed to both affordable insurance premiums (money coming in), and providing drivers with the protection they require in the event of a claim (money going out). As such, the organization must maintain sufficient capital and assets to be able to pay valid claims as they arise and importantly to provide for any significant losses due to unforeseen events such as natural catastrophes or asset fluctuations.

A review was undertaken to determine the financial performance of ICBC over recent years to determine the organization's ability to meet required ongoing funding commitments, and the efficiency of its business operations in doing so. As described in greater detail below, the review of ICBC's financial performance comprised comparison to relevant industry standards and performance of other property and casualty insurers across North America, including a number of components of ICBC's Basic and optional products as follows:

- Claims services costs (the costs of administering Basic claims presented to ICBC)
- Premium taxes and broker commissions paid (the distribution costs of the Basic product)
- Insurance operating costs (non-claims, non-distribution related expenses required to run ICBC)
- Road safety and loss management costs
- Income generated through investment and other activities

Note that all figures presented in this section (Section 6) are in nominal values, i.e., have not been adjusted for inflation to current dollars.

6.2.1 Recent financial results

ICBC's recent financial results are summarized in the table below. The results are shown separately for Basic insurance, optional insurance, and in total for each of the last three years ending December 31[16].

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[16] The December 31, 2016 results are unaudited since ICBC is changing its year-end to March 31. The latest set of financial statements will be for 15 months ending March 31, 2017 – audited versions of these were not yet available for this review.

Table 17: Summary of ICBC's recent financial results

			2014			2015			2016	
	($m)	Basic	Optional	Total	Basic	Optional	Total	Basic	Optional	Total
1.	Earned premium + service fees	2,508	1,739	4,247	2,713	1,829	4,542	2,956	1,997	4,953
2.	Claim costs	2,395	1,165	3,560	2,858	1,184	4,042	2,961	1,697	4,658
3.	Claims related and operating expenses	463	582	1,045	569	597	1,166	490	729	1,219
4.	Underwriting income [= 1 - 2 - 3]	(350)	(8)	(358)	(741)	75	(666)	(495)	(429)	(924)
5.	Investment income	559	293	852	608	312	920	343	176	519
6.	Insurance income/(loss) [= 4 + 5]	208	285	494	(134)	387	254	(152)	(253)	(405)
7.	Non-insurance operating costs	121	0	121	123	0	123	128	0	128
8.	Net income/(loss) before income transfer [= 6 - 7]	87	285	372	(257)	387	131	(280)	(253)	(533)
9.	Income transfer	0	0	0	0	0	0	201	(201)	0
10.	Net income/(loss) after income transfer [= 8 + 9]	87	285	372	(257)	387	131	(79)	(454)	(533)

Net income (row 8 in the table) shows that ICBC incurred total losses of approximately $533 million in 2016, comprising a $280 million loss in the Basic insurance product and a $253 million loss in the Optional product. The $280 million loss in the Basic product during 2016 was preceded by a loss of $257 million during 2015 for a combined two-year loss of $537 million in the Basic product. This is despite the fact that earned premiums increased in 2015 and 2016, due to additional vehicles being insured as well as rate increases. The significant loss for the Optional insurance product in 2016 of $253 million is in stark contrast to the two previous years, where total profits were about $670 million.

Loss ratios are a standard insurance industry metric used to express the percentage of premiums collected that are paid out in claim costs. For example, a loss ratio of 50% would imply 50% of premiums collected went towards paying claim costs. The target loss ratio[17] can be considered the breakeven point – that is, if claims cost as a percentage of premiums collected is equal to the target loss ratio, the insurer would break even with the remaining portion of premiums collected covering all expenses and a cost of capital to support growth, net of expected investment income. The table below

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[17] The target loss ratio can be considered a "break even" loss ratio. It is the proportion of premium available to pay claims after all expenses, including a cost of capital to support growth, net of expected investment income.

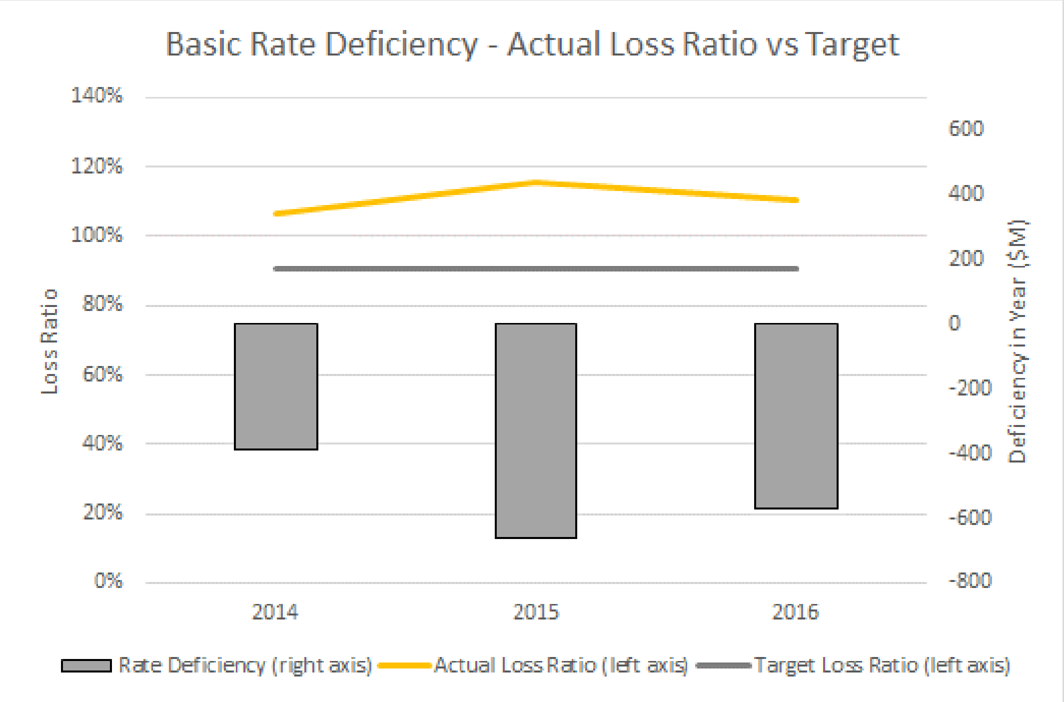
compares the actual loss ratios for the Basic insurance product from the three most recent years compared to the target loss ratio.

Table 18: ICBC target and actual loss ratios for the Basic insurance product

	2014	2015	2016
ICBC actual loss ratio	106.5%	115.6%	110.3%
ICBC target loss ratio	90.7%	90.7%	90.7%

When the difference between these two ratios is multiplied by the current year earned premiums, we are provided with an indication of the amount of the deficit in the current premium rates. As illustrated below, for ICBC, this indicates that current rates were deficient each of the past three years,[18] with the deficiency growing to well over $500 million in both 2015 and 2016. The data also shows an indicated deficiency of $567 million, or 22%, at December 31, 2016.

Chart 14: Basic product premium rate deficiency



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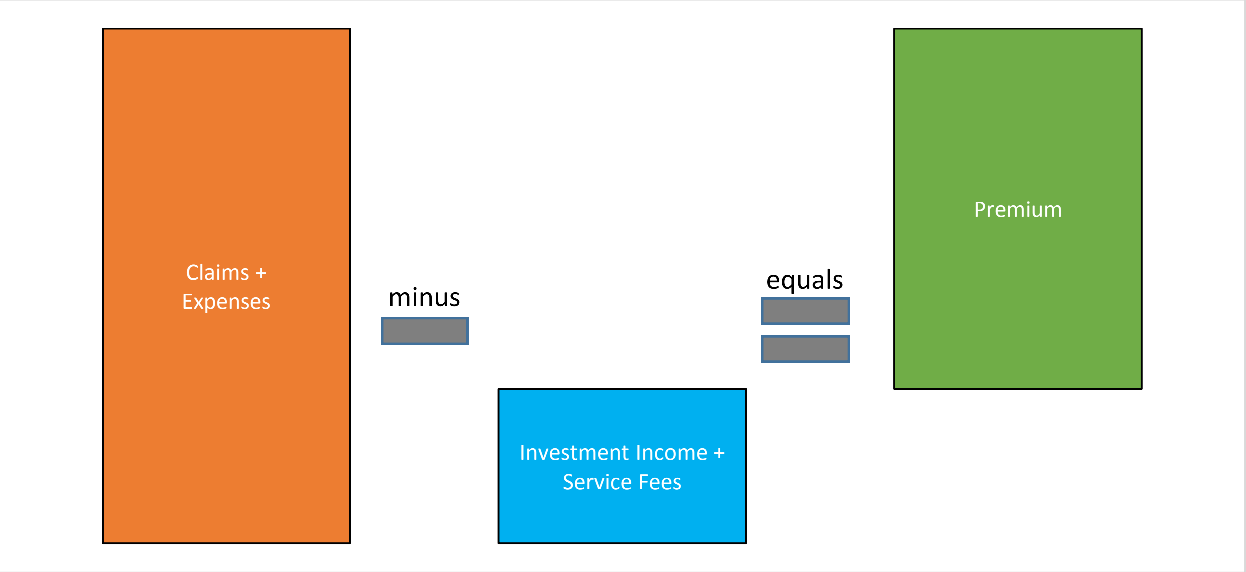
[18] The deficits calculated in the foregoing will differ somewhat from those shown in the financial statements since these figures exclude the impact of adjustments from prior year claims and include a capital maintenance charge.

6.2.2 ICBC's operational costs

In simple terms, the Basic premium should be set at the amount required to pay for expenses and claims, less revenues generated from investment income and service fees. ICBC has incurred significant losses on the Basic product over the last three years, and current Basic premiums are materially insufficient to cover expenses and claims incurred.

Chart 15: Components of Basic product premium



Expenses

ICBC's expenses are summarized in the table below for Basic and Optional over the last three years. The total expenses incurred by ICBC in the Basic product represented 21% of earned premiums, which at a high level compares favourably to the national average of Canadian property and casualty insurers (33%).

More detailed comparisons reveal that commissions paid to brokers on the Basic product are less than those paid in the private auto insurance market, and hence full comparisons cannot be made at the total expense level. For that reason, we further break down a number of sub-categories that make up ICBC's expenses to include claims services costs, premium taxes and broker commissions, and insurance operating costs.

Table 19: ICBC expenses

	2014			2015			2016 (Unaudited)		
($m)	Basic	Optional	Total	Basic	Optional	Total	Basic	Optional	Total
Claims services costs	173	110	284	166	106	271	183	117	299
Road safety and loss management costs	49	3	51	47	3	50	45	3	49
Insurance operating costs	114	128	242	115	130	244	117	135	253
Premium tax and commissions	127	341	468	241	359	601	145	474	619
Subtotal – claims-related and operating expenses	463	582	1,045	569	597	1,166	490	729	1,219
Non-insurance operating costs	121	0	121	123	0	123	128	0	128
Total	584	582	1,166	692	597	1,290	618	729	1,347

Premium tax rates vary by province. In BC, the premium tax rate is 4.4%, which is among the higher rates for property and casualty policies in Canada. However, it is not controllable by ICBC and hence we have not considered this item further in our review. ICBC insurance brokers' commissions are substantially all based on a per-policy fee, which represents a very small proportion of the overall premium costs and reflects the efficient nature of the Basic policy administration process. Premium taxes and broker commissions do not have a significant impact on ICBC's financial performance.

As a public insurer, ICBC would pay more in road safety and loss management costs than insurers in provinces with private markets, thus these expenses need to be excluded to perform like-comparisons of expenses to industry averages. This leaves claims services costs and insurance operating costs as the key expense items to be compared to the industry.

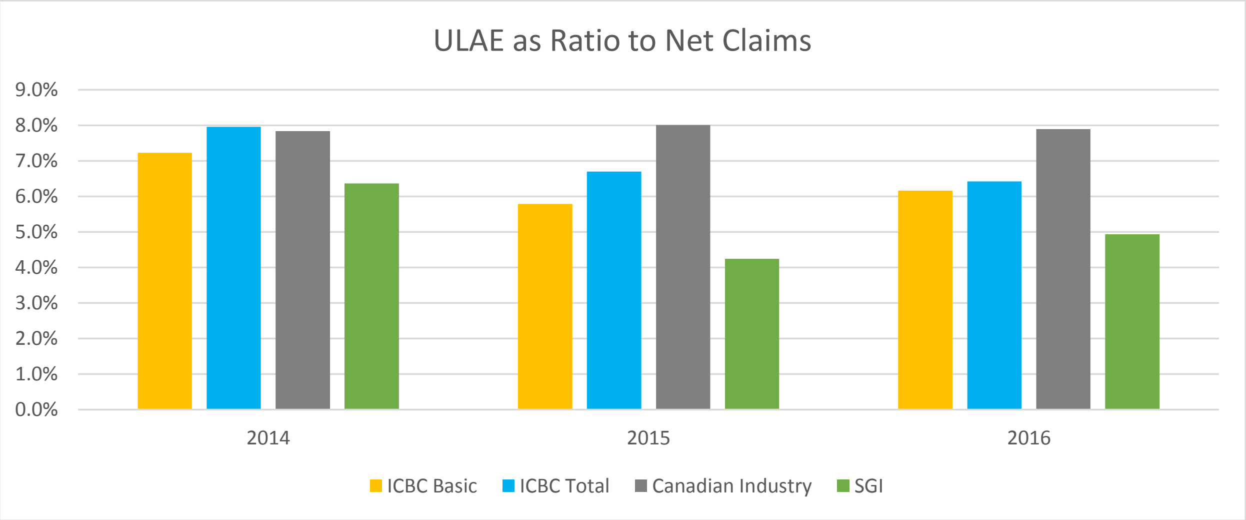
Claims services costs – the costs of administering the Basic claims presented to ICBC

Claims services costs represent the costs of servicing claims that are not allocated to specific files (unallocated loss adjustment expenses, or ULAE). Examples of expenses included in ULAE include:

- Salaries and benefits for claims staff;
- Occupancy costs for claims functions;
- IT costs associated with claims operations; and
- Other overhead associated with claims operations.

The regulatory financial statements[19] of Canadian property and casualty insurance companies require ULAE expenses to be explicitly reported. The following chart compares ICBC's ULAE expense ratio (as a ratio to net claims) for Basic and overall to the Canadian industry average and to another Canadian government insurer (SGI).

Chart 16: Unallocated loss adjustment expense ratio to net claims



Broadly, ICBC claims services costs are slightly below Canadian industry averages. In comparison to SGI, ICBC's claims services costs are a higher percentage of net claims, though it is worth noting that SGI's claims are not litigated claims since it has a comprehensive care scheme (i.e., no rights to sue).

Insurance operating costs

Insurance operating costs provide for compensation and benefits for personnel not involved directly in claims, such as information technology, human resources, management, as well as investments in technology, buildings and depreciation of other assets.

We have compared ICBC's insurance operating costs to Canadian insurers and SGI as reported in their P&C-1s in the following chart.

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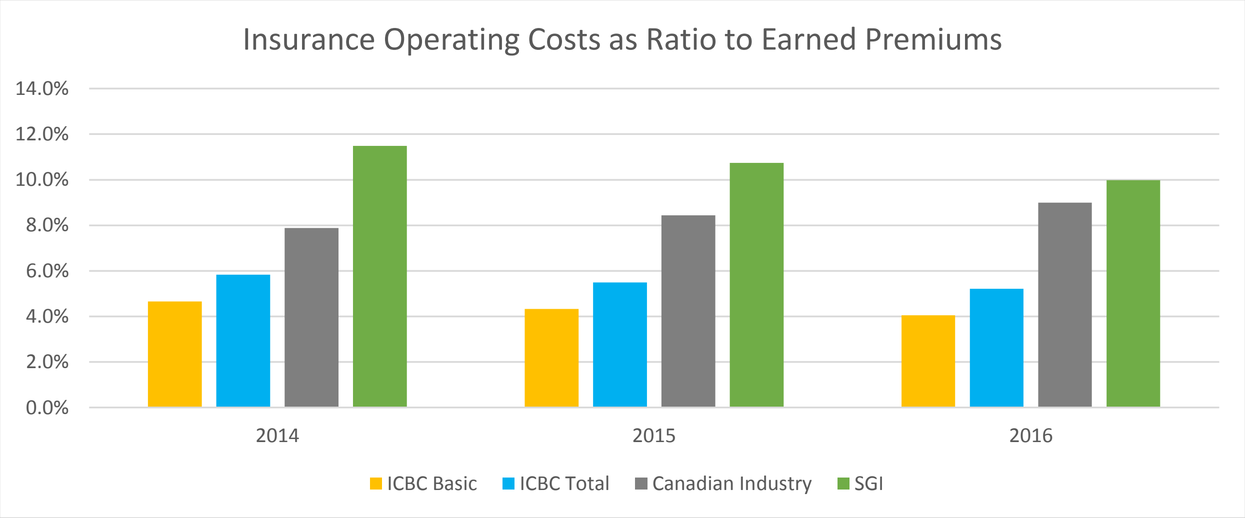
[19] Canadian property and casualty insurers annually complete a P&C-1, which is a regulatory financial statement with a defined reporting framework. ICBC also completes a P&C-1 under the same framework and hence this facilitates comparisons of ICBC to the Canadian industry. Information from Canadian P&C-1s is available to us through MSA Research Inc. (MSA) tools, which is licensed by EY.

Chart 17: Insurance operating costs as a ratio to earned premiums



ICBC's insurance operating costs compare very favourably to the Canadian industry and to SGI.

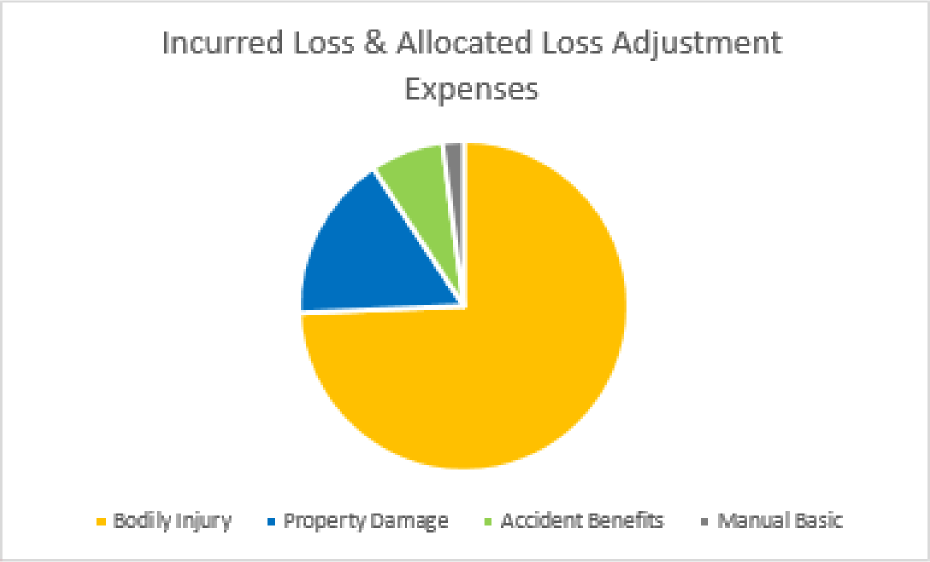
As detailed above, the increasing number and cost of claims is leading to a need for significantly higher Basic premiums in BC than are being charged today. The outcomes from the financial review find that due to the high levels of claims, ICBC's near- and long-term financial condition is being seriously compromised, having experienced financial losses in excess of $500 million during the 2016 year. The financial review also showed that costs associated with ICBC's operation of the Basic product do not contribute in a significant way to the recent poor financial performance.

6.3 Product

Up until recently, the litigation-based model operating in BC had for the most part delivered a stable and affordable product to the citizens of BC. However, a number of troubling trends have emerged in recent years, with no indication that the underlying issues will correct themselves.

While we reviewed all aspects of the Basic product, bodily injury litigated claims[20] comprise approximately 74% of total Basic claims costs, so it is imperative these costs be controlled in order to manage overall Basic premium rates.

Chart 18: Bodily injury claims comprise approximately 74% of total Basic claims costs



The current state of the Basic product is being challenged by a combination of a number of factors in relation to the bodily injury component as discussed in the following paragraphs and charts. The number of bodily injury claims being filed is going up faster than the number of accidents. Naturally, having more crashes will lead to an increase in the number of claims. However, in BC, the rate of claims has been outpacing the rate of crashes, suggesting the possibility of changes in claimant and possibly lawyer behaviour.

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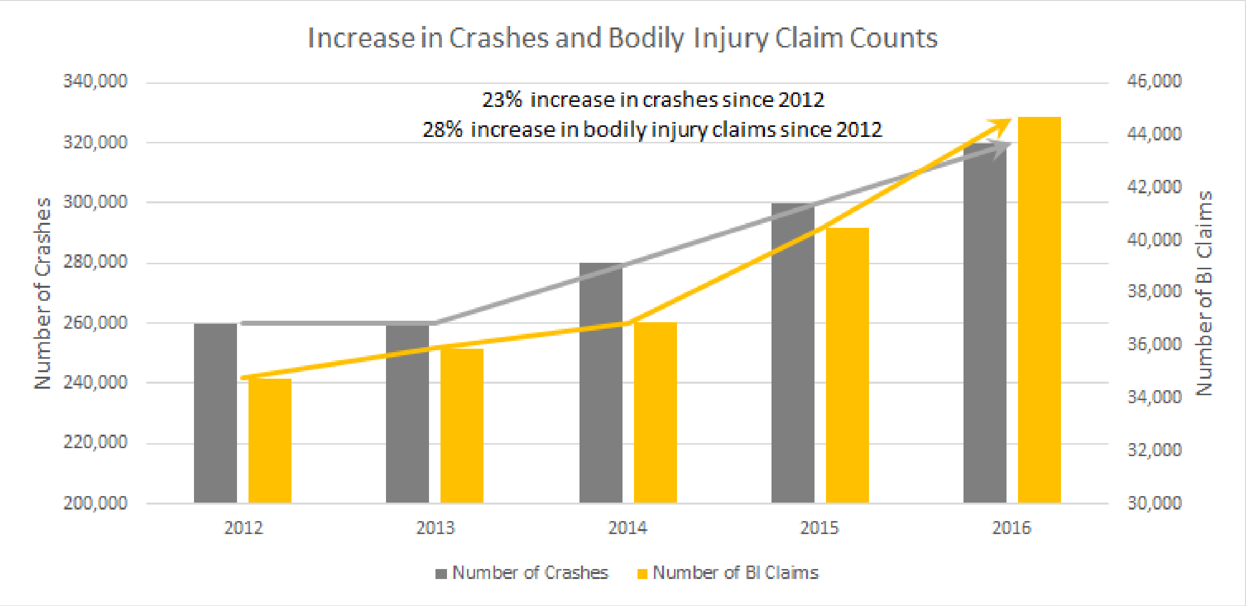
[20] Bodily injury claim costs, which comprise 74% of total Basic claims costs, include the costs of litigated minor and non-minor injury claims plus the legal and related costs for both the claimant and defendant.

Chart 19: Crashes and bodily injury claims since 2012



The number of crashes has increased significantly in a relatively short number of years – that is, by 23% in four years – while the number of reported bodily injury claims has increased by 28% over the same period.

6.3.1 Increasing cash settlements for minor injuries

People injured in auto accidents rightly expect to be reimbursed for out-of-pocket medical costs, lost wages and for pain and suffering as a result of injuries from auto accidents. The entitlement to recover these costs is not in question. The question that must be considered is the fairness of asking Basic policyholders – all BC drivers – to pay more and more in premiums to allow the small portion of people who suffer minor soft-tissue injuries to receive ever-increasing awards, of which pain and suffering is by far the biggest component. The average cost of such awards has increased by nearly 8% per annum since 2000, which is almost four times price inflation, a rate of increase that is simply not sustainable without unrealistic increases to Basic premiums. The increase in the total cost of minor claims since 2012 has exceeded 14% per annum, which is roughly seven times price inflation.

In order to better understand the cost drivers of bodily injury claims, we undertook to review the costs of closed claims over the period 2000 to 2016 in more detail. Claims were subdivided into minor injury[21] and non-minor injury claims (moderate, serious and catastrophic claims). The numbers of

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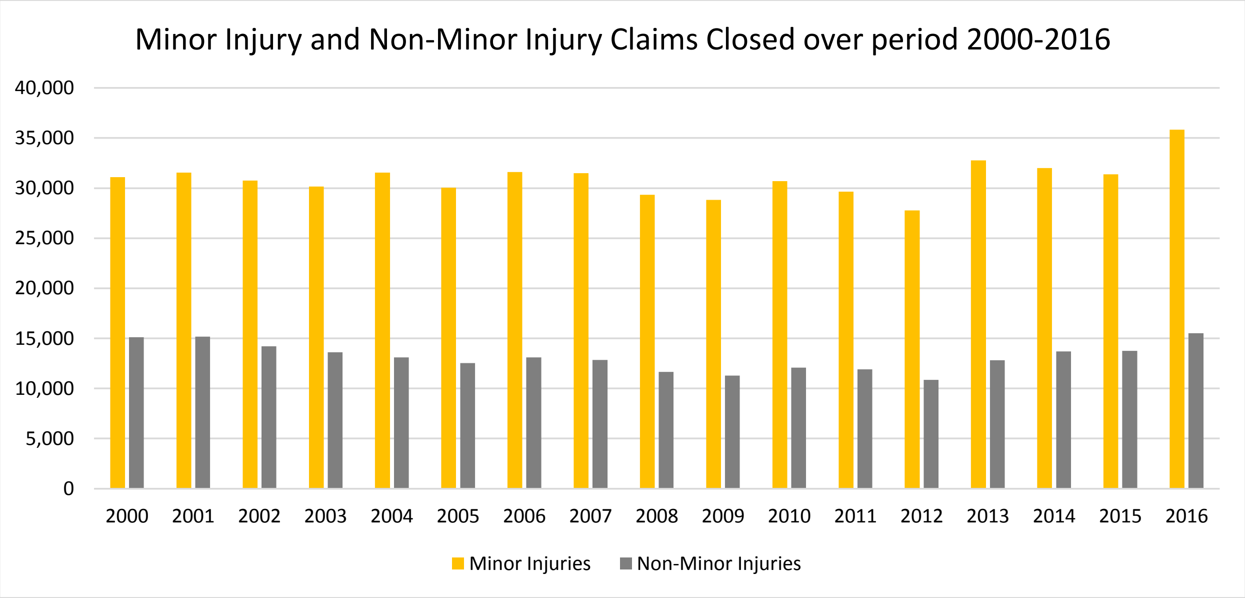
[21] We have used the Alberta definition of minor injury, which considers an injury minor if it is a sprain, strain or a whiplash-associated injury other than a neurological disorder or a fracture or dislocation of the spine. Other schemes have similar definitions of minor injury.

minor and non-minor injury claims closed each year from 2000 to 2016 are shown in chart 20 below. As can be seen, there are over two minor injury claims to every one non-minor injury claim.

The chart shows that the number of minor injury claims closed has been relatively stable around 30,000 per annum but in recent years has increased to 35,000 in 2016. We expect the number of minor injury claims in 2017 and later years will increase above 35,000 as the significant increase in reported claims in the last few years are settled.

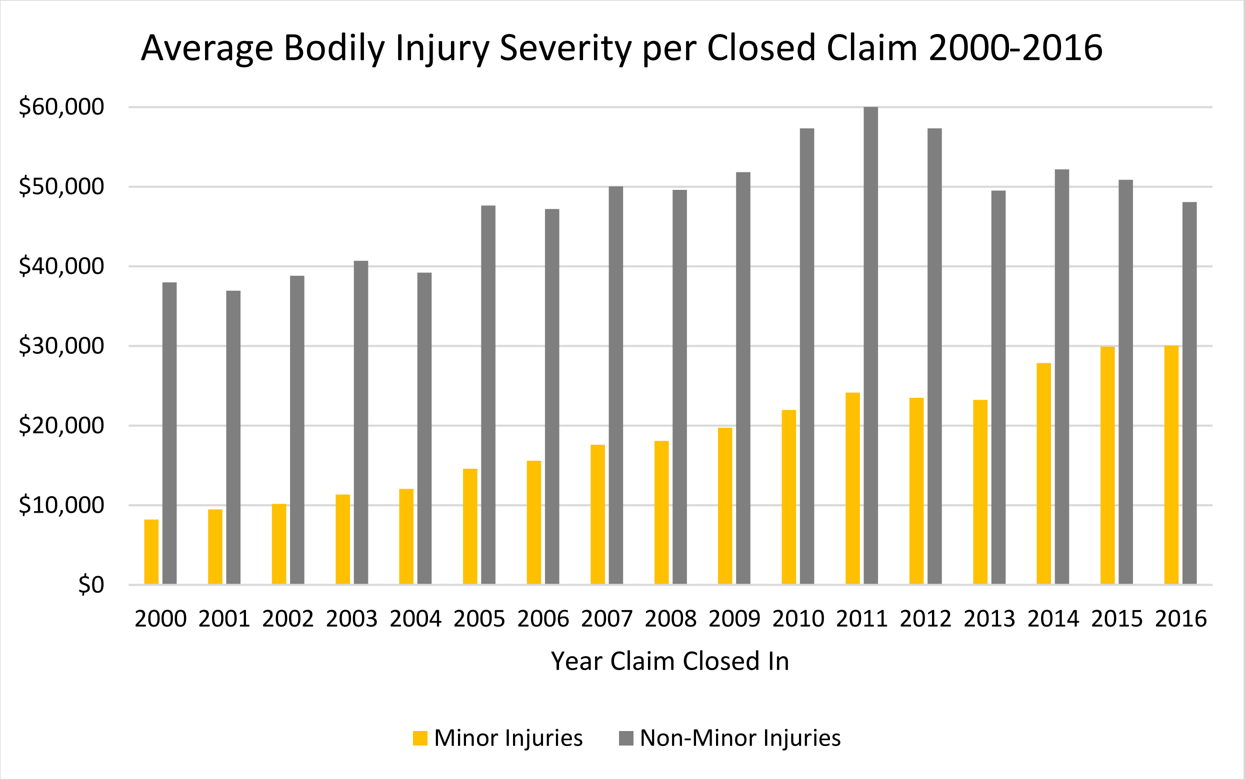
Non-minor claims show a decreasing trend from 2000 to 2012 but have since increased each year, reflecting the increasing crash rates. As with minor injury claims, we expect the number of non-minor injury claims in 2017 and later years will continue to increase well above 15,000 as the significant increase in reported claims in the last few years are settled.

Chart 20: Number of minor and non-minor injury claims closed from 2000–2016



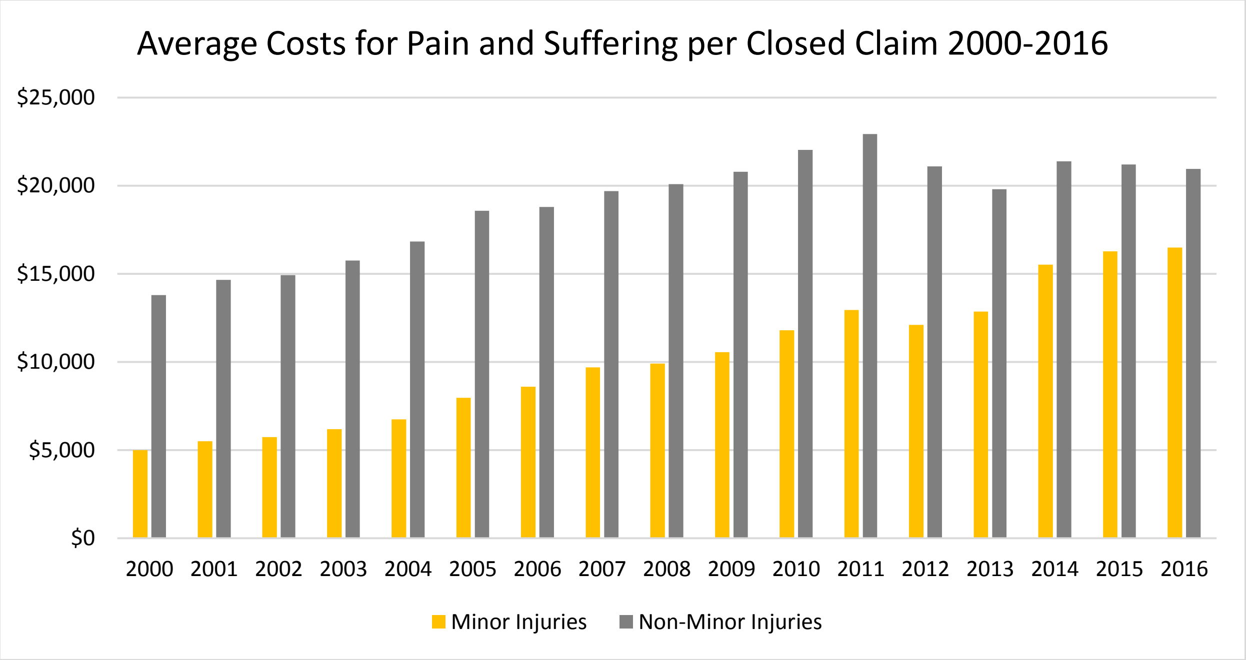
The review found that the average paid out for bodily injury closed claims is increasing more rapidly for minor injuries than non-minor injuries, with minor injuries now approaching the average amount more seriously injured claimants receive. In 2000, the average size of closed minor claims was about $8,000, which increased to about $30,000 in 2016, an increase of nearly four times or an annual increase of over 8% per annum, more than four times price inflation. In comparison, the increase for non-minor injuries was only 26%, which is about 1.4% per annum, or less than price inflation.

Chart 21: Average bodily injury severity per closed claim 2000–2016



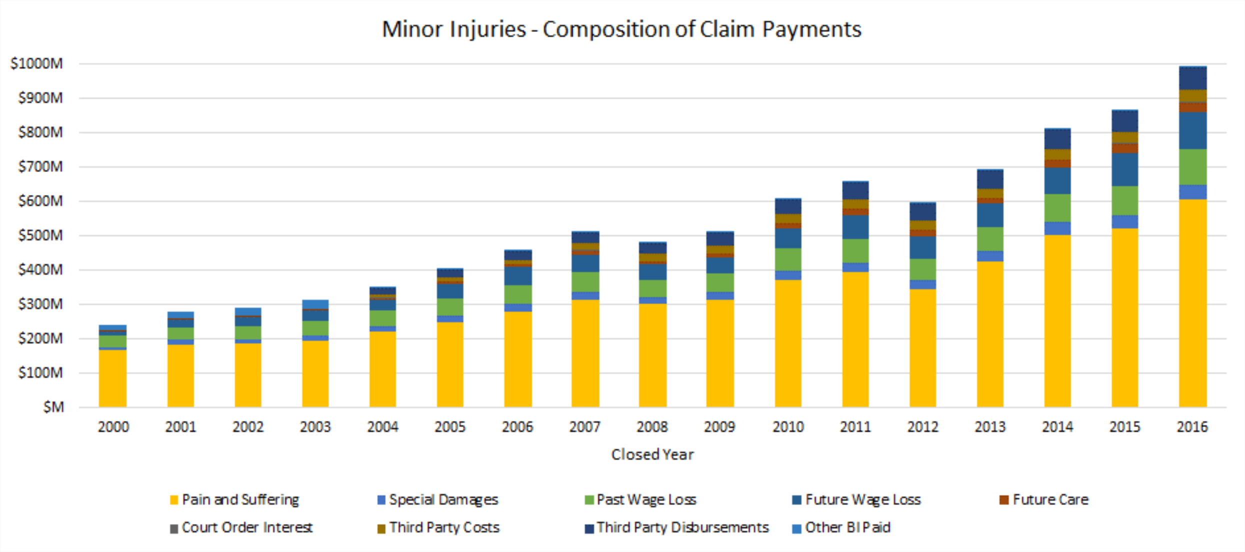
Looking deeper at the underlying components of bodily injury claims, the trend in minor injury claim severity is mainly driven by pain and suffering awards. The average costs for pain and suffering for minor injuries have been increasing at unsustainable rates having more than tripled since the early 2000s. By comparison, the average pain and suffering awards for non-minor injuries have increased by 46% over the same period, a rate much closer to the rate of price inflation. As a result, the average award for minor injuries is approaching the average amount received by non-minor injuries claimants.

Chart 22: Average costs for pain and suffering per closed claim 2000–2016



When considered as a total cost, these awards present a significant burden on Basic auto insurance rates, as pain and suffering awards for minor injuries alone accounted for over $600 million for claims closed in 2016, or about two-thirds of the total cost of these claims.

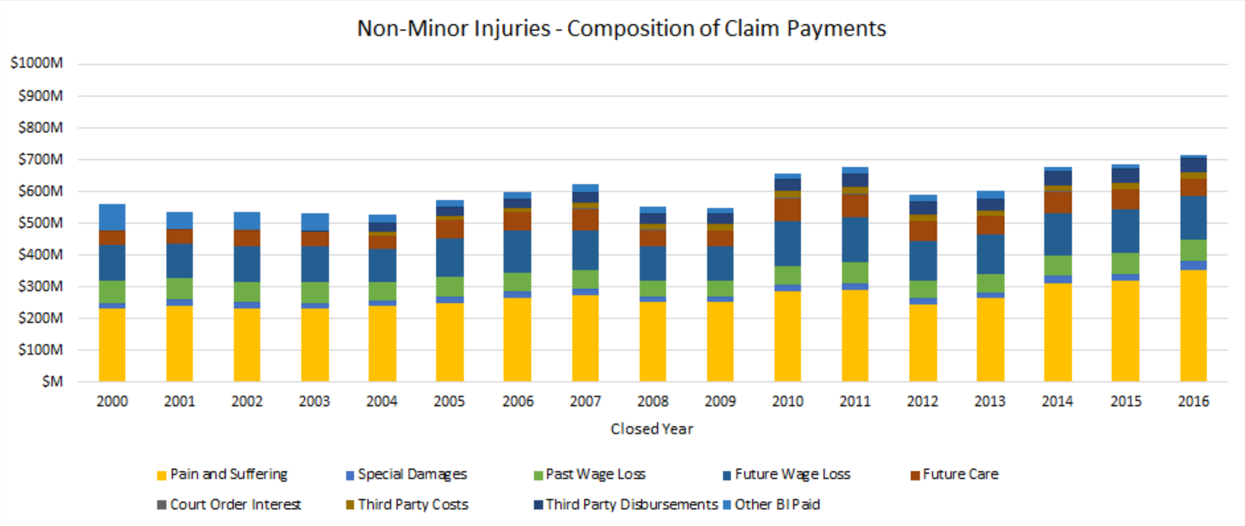
Chart 23: Minor injuries – composition of claim payments



Compared to the total costs for non-minor injuries, pain and suffering costs for minor injuries have increased much more significantly over the period and are a greater cost to the system despite their less serious nature.

In contrast, pain and suffering costs for non-minor injuries have remained fairly stable.

Chart 24: Non-minor injuries – composition of claim payments

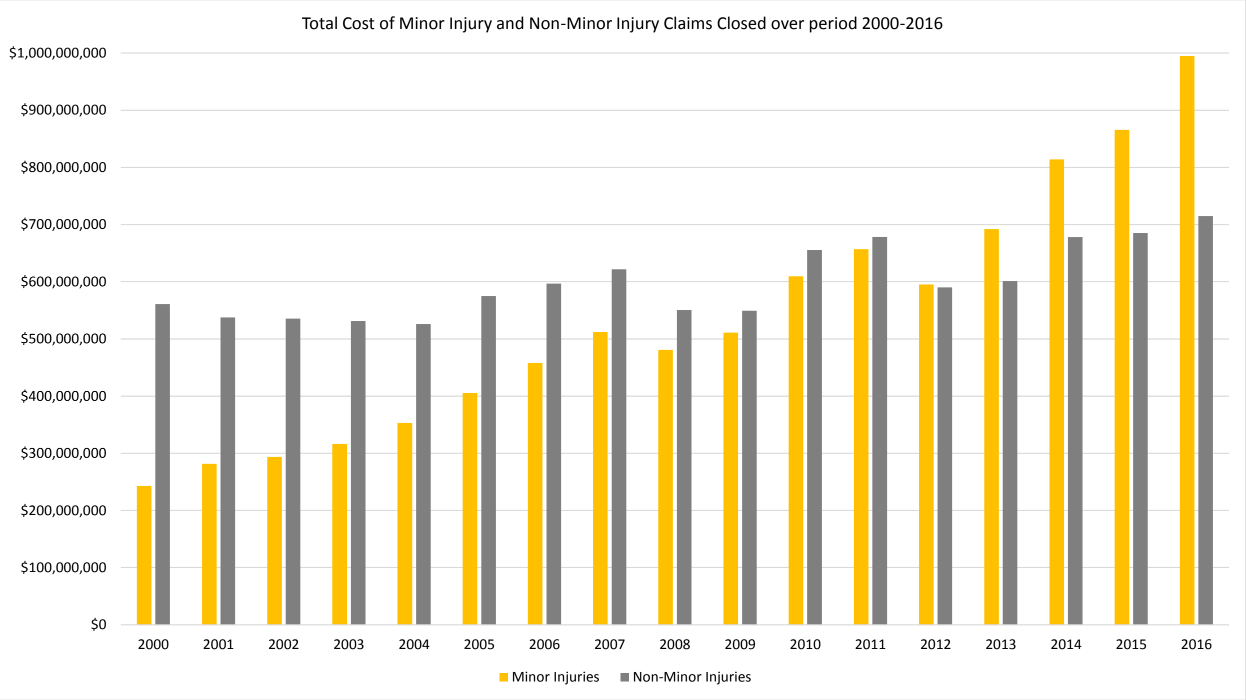


Claim costs for minor injuries have increased from 30% to almost 60% of total bodily injury claims costs since 2000.

The increasing number of minor injury claims has been exacerbated by the higher cost of settling these claims. This has led to minor injury claims costs[22] now amounting to 60% of total bodily injury claims costs compared to only 30% of costs in 2000. In contrast, minor injury claims in other jurisdictions that have more stable claims costs account for a portion of total costs closer to that of the BC scheme in 2000 (examples include Australian schemes).

Since 2012, the total annual cost for minor injury claims has been greater than the total costs of non-minor injury claims, with minor injury claims in 2016 costing $995 million compared to non-minor injuries costing approximately $715 million. This is significantly different to most Canadian and international schemes with stable claims costs and relatively low premiums.

Chart 25: Total annual claim costs for minor injuries are now greater than non-minor injuries



In addition to the claim costs, bodily injury litigated claims incur significant legal costs. Claimants pay a portion of their settlement or award to lawyers through contingency fees, which can be as high as 33%. ICBC is also required to pay legal costs for its defense of the claims, and both sides incur expenses for completing medical and other expert reports to help strengthen their respective cases. As a result, the system is viewed as being quite inefficient – that is to say that only 58% of premium dollars are returned to policyholders through claim payments.

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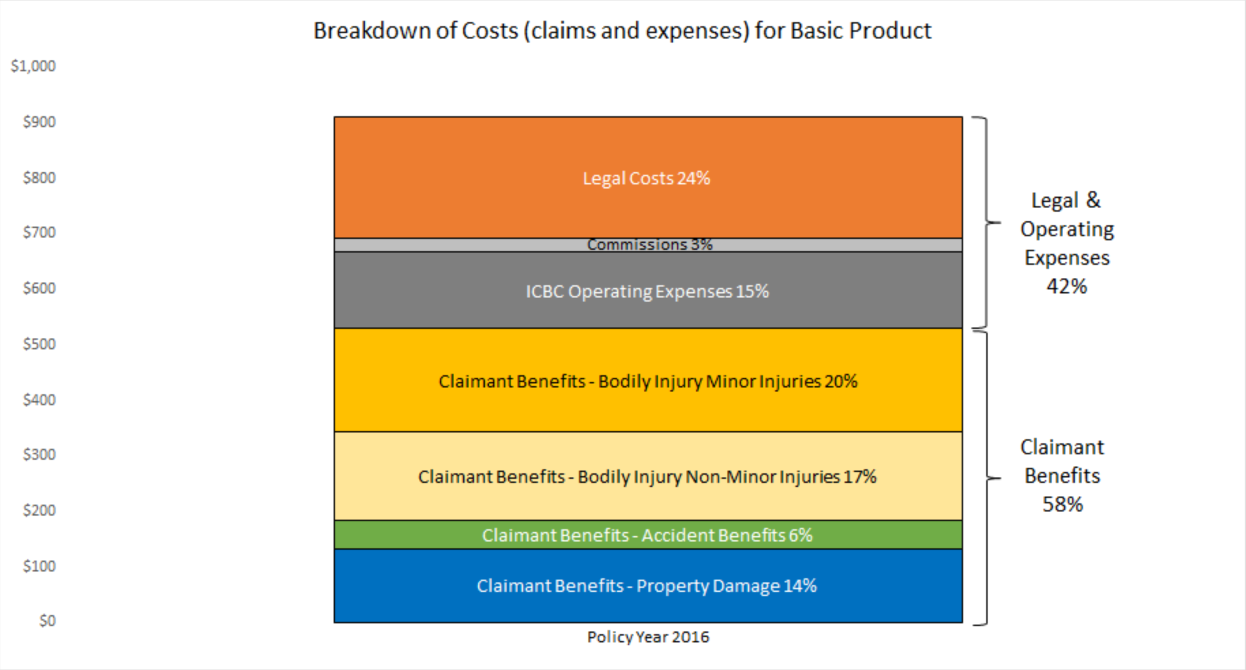
[22] Cost of claim payouts only (i.e., not including associated legal and other claim expense costs)

Chart 26 below shows the breakdown of claims costs and expenses in 2016 incurred against BC's Basic insurance product. Of particular note, minor injuries account for more annual cost than non-minor injuries, and legal costs are higher than either of these costs.

Chart 26: Breakdown of claim costs shows how little is returned to the claimant



Minor injuries account for 20% of the total annual cost, while non-minor injuries account for less at 17%. In Canadian and international jurisdictions with stable claims costs and relatively low premiums, minor soft-tissue injury costs are roughly half those of non-minor injuries.

Legal costs account for 24% of total annual costs, greater than the cost to run ICBC, and benefits received by either minor injuries or non-minor injuries.

The figures in chart 26 above are based on ICBC's most recent revenue requirement application. ICBC expenses include claims related and operating expenses; premium tax and non-insurance expenses are excluded.

Legal costs include the following:

- Legal fees and disbursements – ICBC's defense costs and costs for medical examiner or other such expert reports obtained in their defense of claims;
- Third-party costs and disbursements – portion of claimants' legal costs and medical examiner or other expert reports obtained by the claimant and their counsel, which are later reimbursed by ICBC; and

- Estimated lawyer contingency fees (assumed at 25%) – the portion of claimants' award owed to their lawyers.

Claimant benefits (most in the form of lump-sum settlement proceeds) are the portion of claims paid out that go directly to claimants. This includes payments for such things as claimants' medical expenses and loss of wages. Expenses associated with claims such as legal costs are not included within claimant benefits.

The most recent revenue requirement application was used to estimate the claimant benefits by removing estimated adjustment expenses and legal costs from the projected claim and expense payments. The portion of bodily injury claim benefits for minor and non-minor injuries was estimated using the closed claim analysis, specifically the portions of losses from claims closed in years 2013 to 2015, using Alberta's minor injury definition to categorize claims as either minor or non-minor.

6.3.2 Court claim costs are disproportionately high and the Court Rules process is inefficient

Litigated claims, including those that settle before trial, are costing ICBC significant amounts in costs, disbursements and legal fees — in 2015 this amounted to over $150m for claims that resolved for less than $100,000. Moreover, half of those actions resolved for less than $50,000. Processes and procedures for court actions are provided by the BC Supreme Court Civil Rules ("Rules of Court"). Significant changes to the Rules of Court were implemented in 2010 — a key component was to embed the concept of proportionality into the application of all Rules, in particular via a "fast track" litigation process. However, based on ICBC data since 2010, there is no indication that the costliness or timeliness of claims has been improved. Conversely, there are elements of the process that can hinder ICBC's defense of the claim, such as little incentive to provide early disclosure of evidence and medical reports. This process could be made far more efficient and fair for all parties with proper regulation and duties for both parties such as mandatory early disclosure of documents, sharing of medical evidence, and application of the concept of proportionality to restrict the unnecessary use of expert evidence and limit excessive claims for recovery of costs and disbursements incurred when advancing a minor injury claim.

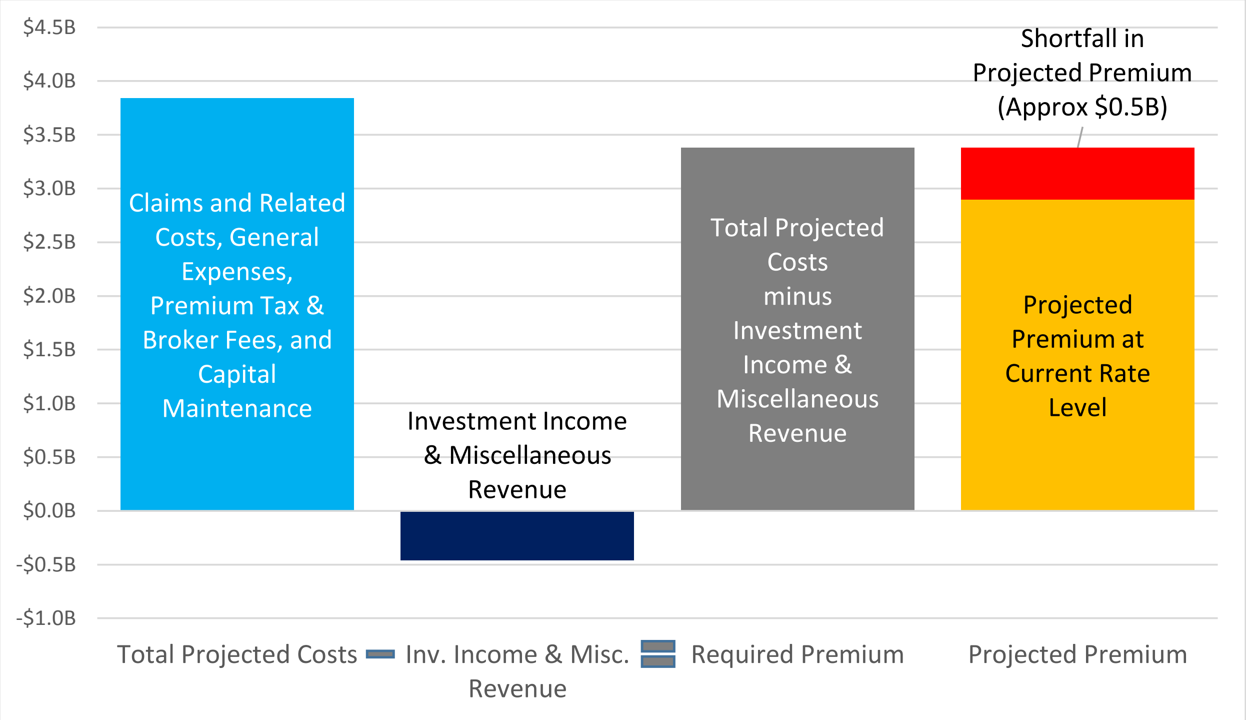
6.3.3 BC's accident benefits are outdated

In addition to the very significant total payments for injuries made by ICBC on behalf of at-fault drivers, Basic insurance also provides accident benefits to all insureds regardless of fault. These accident benefits are particularly important to those injured as a result of their own actions. Most of the accident benefits provided through the Basic product have not been updated since 1991, and as a result most observers would consider them to be inadequate as they leave those claimants receiving only accident benefits significantly out of pocket. To illustrate, consider the difference in the maximum weekly wage loss benefit of $300 and the 75% of gross weekly wages criteria. In 2016, the average gross weekly wage in British Columbia was roughly $920. Applying 75% to this amount would result in weekly wage loss benefits of $690 if not for the $300 cap, which goes to show its inadequacy. Likewise for the other benefits, with no changes to the benefit limits in the last 25 plus years, inflation has eroded their value, which leaves claimants paying costs out of pocket, providing more reason to seek recourse through the litigation process. The inadequacy of the benefits has a more severe impact on

the most seriously injured at-fault claimants, who have no opportunity to recover amounts beyond the current limits.

6.3.4 Insurance is becoming more expensive for British Columbians

With appropriate changes to the product design, it would be possible to improve the efficiency of the system – return more of every premium dollar to claimants – and decrease the total costs of the system to rein in rate increases. Without change, however, Basic rates will continue to be deficient as seen in the most recent revenue requirement application (prior to transfer from optional), where projected costs net of investment income and miscellaneous revenue were nearly $500 million higher than projected premiums to be collected in the next policy year.



Since the last revenue requirement application, this shortfall has continued to increase and is estimated to now be closer to $560 million[23].

Affordability is a fundamental principle of auto insurance in BC. Given that Basic auto insurance is compulsory, the Basic plan has been designed to be delivered at a price that auto owners can afford. Recently, BC drivers have been protected from an otherwise required 15% to 20% price increase only through government intervention and rate-smoothing mechanisms. This rate protection has eroded ICBC's financial situation to a point where it is no longer a sustainable method to manage future insurance rates. The average driver in BC may need to pay almost $2,000 annual total premium for

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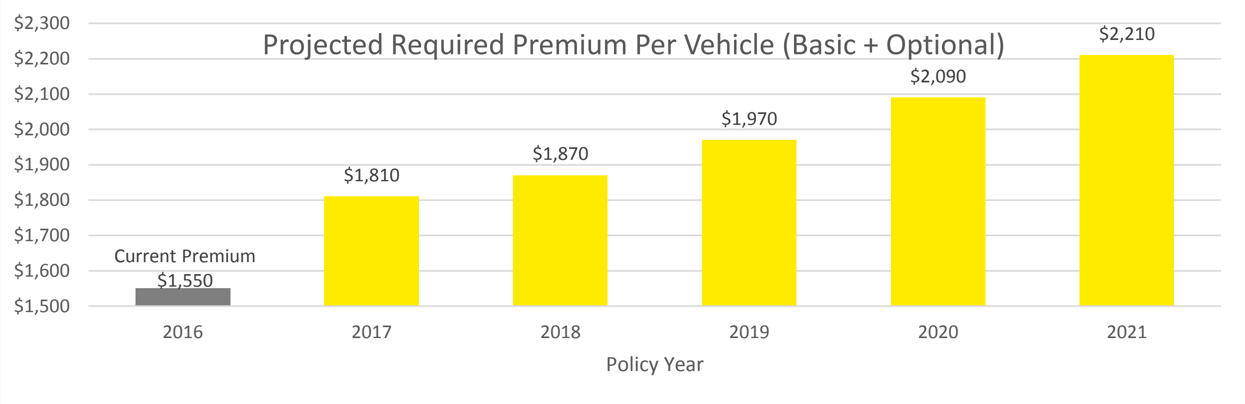
[23] Assuming premium increases of 2% – in line with rate of inflation

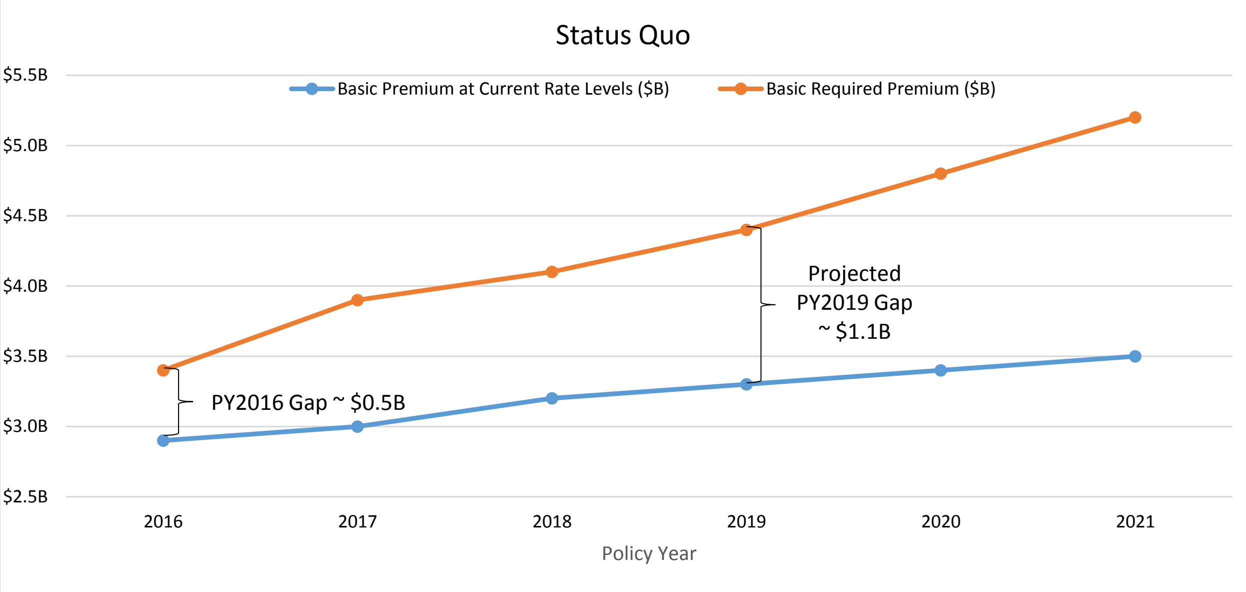
auto insurance by 2019, an increase of 30% over today's rates, assuming current trends persist, the objective is to have ICBC's rates cover its costs, and significant reform is not undertaken.

Chart 27: Projected required premiums 2019 and beyond



Indeed, there is a huge gap of $560m today between the premiums collected under the Basic product and claims costs. With the trend of increasing crashes and claims costs in BC, this gap is projected to increase to $1.1 billion by 2019 if it is not addressed.

Chart 28: Projected rate gap 2019 and beyond



Our projections in the above charts do not assume that the recent adverse experience, which is much worse than the average experience since 2000, continues unabated into the future. Instead, we have struck a balance between the more moderate historical long-term cost trends and the higher trends observed more recently.

The required premium in the above chart is the premium that would need to be collected to sufficiently cover costs and expenses net of investment income and service fees. If premiums are kept at current rate levels, with only inflationary increases and growth in the number of vehicles in line with recent averages, we estimate this will result in a rate gap of over $1.1 billion in 2019.

The above results from our analysis make it clear that a re-design of the current Basic insurance product is required as the system is not performing well against any of the guiding principles. The adversarial nature of the system means claims take a long time to travel through the litigation process and a great deal of complexity is involved in claimants receiving benefits or treatment. Many additional costs are incurred through this process, resulting in an inefficient system that returns a low percentage of premiums to claimants as benefits. Minor injuries are being paid out at amounts nearing those received by non-minor injured claimants, particularly for pain and suffering, which is not only unfair to the non-minor injured claimants but to all drivers who are required to pay higher premiums to fund these growing payouts. Premiums are already on average the second highest among the Canadian provinces; further increases in the magnitude required will make premiums even more expensive. Together, these issues result in an unsustainable product that requires change.

6.4 Investment

ICBC's primary investment objectives are to maintain sufficient assets to support its current and future insurance obligations and deliver an investment return to minimize insurance costs to customers. These two objectives are innately in conflict with one another and must be balanced when creating a portfolio investment strategy. In accordance with these objectives, ICBC manages a portfolio with a substantial weighting to high-quality fixed income assets, consistent with established risk tolerances and smaller allocations to equity, real estate, mortgages and high-yield bond investments to generate target investment returns.

Currently, ICBC's asset base primarily consists of customer-paid insurance premiums, which are invested to offset future claims liabilities and generate an additional investment return to reduce customer insurance rates. ICBC also invests the capital that it holds in case it does not collect enough premium to cover costs. ICBC manages the Basic and Optional business assets on a combined basis due to the similarity of the businesses' claims liabilities.

6.4.1 Impact on Basic premium rates

ICBC's investment income impacts the Basic product premium rate through its impact on the Basic business's net income and consequently its capital. For example, a shift in allocation from low yielding investment grade bond to a higher yielding asset class may potentially increase investment income but may also require additional capital to support the higher investment risk.

It should be noted that for all property and casualty insurers there are two sources of investment income associated with Basic product premiums:

(i) Investment income on Basic capital supporting the business
(ii) Investment income on policyholder supplied funds (i.e., premium paid).

Investment income on Basic product capital can be estimated based on the return expectations of the assets held by ICBC. While the investment income on policyholder supplied funds is estimated by assuming an investment mix consistent with *ICBC's Statement of Investment Policy and Procedures* and a forecasted expected yield, above risk-free, based on the risk premium generated by each asset class.

In order to conduct a review of ICBC's investment performance relative to other major Canadian and American insurers, EY reviewed data obtained by MSA Research Inc. (MSA) and from the National Association of Insurance Commissioners (NAIC) financial statement data. MSA's database contains a significant amount of financial data related to insurers' invested assets and historical yields, and we have used this data to compare ICBC's historical performance against the average of the Canadian property and casualty industry as well as selected leading Canadian insurers. The NAIC data was used to complete a similar analysis against American insurers — specifically, comparisons of investment income, investment return (including changes in accumulated other comprehensive income), risk-adjusted investment performance, and capital required to support invested assets.

Lastly, a high-level review of ICBC's investment management structure and processes was completed against approaches used by leading insurers. A comprehensive summary of this work can be found in Appendix 2.

The key observations from our review with suggested actions are as follows:

- Management and the board have in place a process to periodically review the investment asset mix and generally consider assets that are appropriate for an insurer such as ICBC given its liability profile.
- Over the previous five years (2012–2016), ICBC generated approximately $3.4 billion of investment income, but lost approximately $2.2 billion through its underwriting activities. Investment income, therefore, is an important element in controlling insurance rates.
- ICBC outperformed the total property and casualty industry average and ranked 3rd on investment performance over the 2012–2016 period.
- ICBC ranked 6th on the Sharpe Ratio (which measures risk-adjusted return) over the 2012–2016 period. This reflects the higher-than-average risk profile associated with the ICBC portfolio.
- The MCT required capital for market and credit risk associated with ICBC's investment portfolio is significant.

In summary, ICBC holds one of the most well-diversified investment portfolios among the peer group and has been ahead of its peers in growing its allocation to commercial mortgages, real estate and high-yield bonds to combat steadily declining bond yields. We believe that ICBC's investment management process as currently structured and formalized could be further improved by increasing in-house capabilities in optimizing the strategic asset allocation, modelling investment risks and managing investment performance. However, it is important to note that the implementation of these initiatives is unlikely to generate material differences that would lessen the current gap in Basic premiums.

Management should review whether the current asset mix is appropriate given that ICBC's current capital is below its target.

6.5 Capital

ICBC has set internal capital targets for managing both its Basic and Optional products, and as at December 31, 2016, targets are not being met. The capital deficiency in the Basic product is in excess of $400 million, and as a result of the growing rate deficiency explained earlier in this section, funds have been transferred from ICBC's Optional product to increase the capital position of the Basic product. In the Optional product, the deficiency is just over $700 million, for a combined deficiency in excess of $1.1 billion.

6.5.1 Capital targets – Basic

The Basic Capital Management Plan (Basic CMP) is designed to achieve stability in rates while maintaining the stable financial condition of the Basic insurance product. ICBC is required by the BC Utilities Commission (BCUC) to maintain capital in excess of that required to achieve a 100% Minimum Capital Test[24] (MCT) ratio. ICBC's target MCT ratio is 145%.

Regulatory capital standards as set by OSFI's MCT guideline are intended to provide policyholders with assurance, at a reasonably high level, that their insurance provider will be able to pay their claims as they come due. As such, insurers who follow these standards are holding assets significantly in excess of liabilities to provide for unexpected risks; as an example, insurers who invest in equities must hold capital equal to 30% of the value of those equities, at the 100% MCT level (if operating at a 200% MCT level, the capital would be 60% of the value of equities).

Other auto monopoly government schemes in Canada have a target MCT ratio of 100% (i.e., Manitoba and Saskatchewan), while similar schemes in Australia for auto and workers' compensation have targets that are no higher than an MCT of 100% (e.g., Victoria, South Australia, NSW). ICBC's capital target is high relative to these schemes.

As a government-owned monopoly insurer of the Basic product, ICBC is not required to adhere to OSFI's MCT guidelines. Reasons government-owned monopoly insurers would consider having lower capital target levels than would be required for private insurers include the following:

- Capital surplus above target levels may be put to better use by the government for the broader benefit of the Province rather than being tied-up in investment assets of the insurer.
- Whereas a sole private insurer would face bankruptcy in the event of insufficient capital, leaving policyholders and claimants at risk of not being fully indemnified for their losses, a government insurer is implicitly backed by the government, meaning this risk is minimal in comparison.
- Increased capital levels require higher premiums auto owners need to pay, and it can be argued that in light of the above two points there is no need to have higher premiums.

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[24] The MCT ratio is set by the Office of the Superintendent of Financial Institutions (OSFI) and is equal to the ratio of capital available to capital required. Capital required is estimated using a series of factors applied to certain risk elements associated with the business, such as underwriting risk, market risk or operational risk.

As at December 31, 2016, ICBC's Basic MCT ratio was 114.1%, which, as illustrated below, represents a gap of approximately $435 million against its target ratio of 145%.

Table 20: Basic product capital current capital position

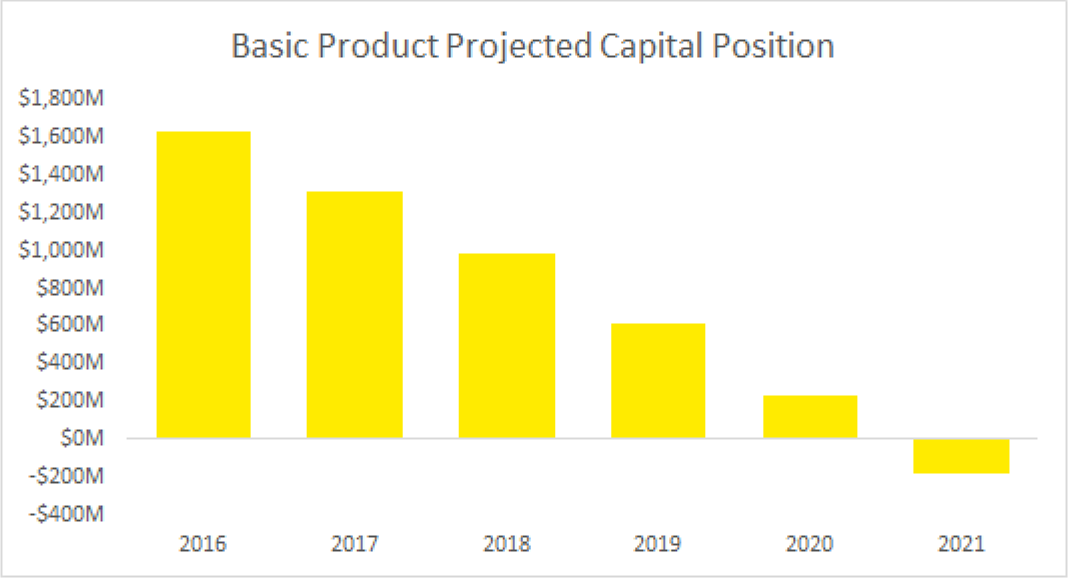
($m)	Basic product	Dec 31, 2016
(1)	Capital available	1,607
(2)	Capital required	1,409
(3) = (1) / (2)	Minimum capital ratio	114%
(4)	Target capital ratio	145%
(5) = (2) x (4)	Capital required implied by target	2,043
(6) = (1) – (5)	Estimated capital surplus/(deficiency) to target	(435)

In light of the above discussion, ICBC, in conjunction with the government, should consider a lower target capital position for the Basic product more in line with other jurisdictions. Consideration should also be given to whether the OSFI MCT ratio is the appropriate framework for setting capital for the Basic product.

6.5.2 Projected capital position of ICBC's Basic product

The following chart projects the capital position of ICBC's Basic product over the next five years. The projection is consistent with the projection of the required premium set out earlier in this section; that is, it assumes premium rate increases at CPI inflation (i.e., 2% per annum), increase in number of autos insured consistent with recent trends and claims cost increases consistent with the adopted trends for required premium rate assessment.

Chart 29: Projected capital position of ICBC's Basic product



The above chart shows that the capital position for the Basic product deteriorates each year, and in 2021, it is projected than ICBC's Basic product will have a negative capital position (i.e., total liabilities will exceed assets). In the above projection, we have assumed no further transfer of retained earnings from the Optional product given this product is now well below its capital targets (see next section) and needs to retain future profits to restore its capital position.

6.5.3 Capital targets – optional

ICBC competes with private insurers, who are predominantly regulated by OSFI, for the provision of optional products to BC consumers, and maintaining a level playing field with private insurer's legislation requires ICBC to maintain a minimum level of capital. An OSFI-based MCT capital framework, therefore, is appropriate for determining required capital levels for ICBC's participation in this competitive market.

ICBC's target MCT ratio is 250% for optional business. As at December 31, 2016, ICBC's Optional MCT ratio was 133.1%, which, as illustrated below, represents a gap of approximately $715 million against its target ratio of 250%.

Table 21: Optional product current capital position

($m)	Optional product	Dec 31, 2016
(1)	Capital available	814
(2)	Capital required	611
(3) = (1) / (2)	Minimum capital ratio	133%
(4)	Target capital ratio	250%
(5) = (2) x (4)	Capital required Implied by target	1,528
(6) = (1) – (5)	Estimated capital surplus/(deficiency) to target	(715)

Illustrated below are the historical transfer of retained earnings from the Optional product to the Basic product and the dividends paid from the Optional product to the province.

Table 22: Transfer of retained earnings from Optional to Basic product and excess Optional capital transfers to province (the "dividends").

($m)	Net income/(loss) for the year before income transfer			Transfer of retained earnings from Optional to Basic[25]	Excess Optional capital transfer to province
Year	Basic	Optional	Total		
2006	$138	$212	$350	$100	$-
2007	$290	$352	$642	$-	$-
2008	$176	$322	$497	$-	$-
2009	$175	$387	$563	$-	$-
2010	$56	$316	$372	$-	$576
2011	($188)	$328	$140	$-	$101
2012	($133)	$362	$229	$373	$-
2013	$3	$365	$368	$113	$237
2014	$87	$285	$372	$-	$139
2015	($257)	$387	$131	$-	$138
2016[26]	($280)	($253)	($533)	$622	$-
Total	$66	$3,066	$3,132	$1,208	$1,191

The Optional product has been profitable historically. It has been able to i) make transfers to Basic to increase Basic's capital position and ii) transfer funds (commonly referred to as the "dividend") to the province while meeting its capital targets. However, the optional product fell materially below target in 2016 and incurred a loss of $253m. The availability of optional capital in the future to offset losses from Basic insurance will be dependent on a return to profitability for the Optional product.

While ICBC's Basic target capital level may warrant review, the corporation is currently in a state of significant capital deficiency relative to its target levels, showing overall capital deficiency in excess of $1.1 billion in total for both products.

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[25] Prior to 2006, there were transfers from Optional to Basic in excess of $500m, resulting in life-to-date transfers of approximately $1.7b.

[26] 2016 financial results not yet released.

7. Some policy considerations

Having analyzed the current BC scheme performance against the government's review objectives and set some guiding principles for assessing various different product options, we have outlined below some of the specific public policy issues that need to be considered by the BC government in light of potential reform options. We set out below some of the key public policy considerations.

There are some public policy matters that the BC government has already determined, namely that the BC government intends to maintain public ownership of ICBC and to work within the current model in order to keep Basic automotive insurance as affordable as possible for British Columbians.

7.1 Affordability of premiums

As the Basic product is compulsory for BC auto owners, the affordability of premiums is a key issue as customers do not have a choice to remain uninsured if they cannot afford the premium.

The level of premiums paid by vehicle owners determines the amount of money or premium pool that is available for payment to injured people in auto accidents for loss of wages, medical and other expenses and compensation. The pool of available premiums must also cover the cost of delivering those benefits (i.e., ICBC expenses, legal and other costs of delivery) to claimants.

Arguably one, if not the most important, public policy issue is to decide the appropriate balance between premium affordability and the level of compensation and benefits available for a bodily injury, while recognizing that property damage insurance cover impacts premium affordability. As we have noted in the review of Canadian and international jurisdictions in Section 5, there is a wide range of views as to what represents an acceptable level. For bodily injury, the affordability of premiums has been deemed by governments to be as low as 25% of weekly wage levels in some countries, while in other countries and some Canadian provinces (including BC), it is as high as around 100%.

There is no right or wrong level, and everyone will have a different view on an appropriate level of premium affordability. In deciding on an appropriate level, the matters that the BC government can consider include, but are not limited to, the following:

- The impact on the BC economy. The greater the premium paid, the lower the amount auto owners and consumers have to spend on other goods and services. What level of premium is appropriate to assist the BC economy in achieving its growth and social objectives?
- What level of premium will make the cost of living in BC more or less attractive for people to consider living in BC or another province or for businesses to set up in BC? If premiums are too high, the cost of living for BC citizens may be considered to be too high, and it may play a part in them moving to another province.
- If premiums are too high, the proportion of auto owners who choose not to take out insurance coverage will increase, as is the experience in many other provinces and countries internationally. Higher proportions of uninsured autos places a greater financial burden on the insured auto owners.

7.2 Proportion of benefits/compensation paid to minor versus non-minor injuries

Whatever the level of premiums, there is a finite pool of money available for claims and costs of delivering benefits and compensation to claimants. How that is split between minor and non-minor injuries is an important public policy consideration.

As discussed in Section 5, many bodily injury schemes in Canada and around the world have come under financial stress due to substantial cost increases for minor injury claims. Currently, BC is in that position. It is almost universally the case that governments have reformed bodily injury insurance products when the proportion of the finite pool of money going to minor injury claims has been out of proportion to that for non-minor injuries and inconsistent with social and economic expectations. In BC, the proportion of premiums going to minor claims is almost 60% compared to 30% in 2000, with the former figure being much higher than that observed in stable and low premium schemes.

There is a finite limit to the level of premiums (i.e., affordability), and so the question becomes, what percentage of claims costs should be paid to minor claims? Many governments have taken the policy decision not to reduce the benefits paid to non-minor injuries to any material extent and to target reductions in benefits to minor injuries; this is a key policy issue and a social policy outcome the government needs to consider.

7.3 Litigation-based lump-sum models versus care-based model

There is significant debate around whether a litigation-based lump-sum model or care-based model presents the best way of supporting injured claimants and delivering benefits and compensation to injured road users, particularly whether all people should be covered and whether fault is the best way to ration and allocate the resources of the scheme.

Proponents of litigation-based models (such as the one operating today in BC) believe that they:

- Provide an incentive for people to drive safely;
- Provide greater flexibility to deal with individual and unique claims;
- Are more adaptable to changing legal and compensation environments;
- Provide fairness, as someone who injures another person is deemed responsible; and
- May allow for an injured person to negotiate for greater benefits.

Proponents of care-based schemes (such as those operating in Manitoba, Saskatchewan and New Zealand) believe that they:

- Provide simpler, faster and more predictable paths for compensation;
- Do not unduly punish an injured driver for a momentary lapse in judgment;
- Provide benefits that are not reliant on the quality of representation and argument;

- Provide a fairer proportion of scheme funds going to the injured;
- Improve health outcomes, as needing to prove fault delays treatment and compensation;
- Have a greater focus on effective medical treatments for a faster return to function; and
- Are generally cheaper to deliver benefits to claimants than litigation-based models.

Litigation-based lump-sum models pay once-only lump sums. Some people argue that lump sums create incentives to exaggerate claims to maximize payments (and for insurers to negotiate equally hard to keep payments down).

Recipients of lump sums also need to manage the lump sum for the rest of their life to ensure they have ongoing access to support. This means they are exposed to fluctuations in economic markets, which may see the value of their investments fall.

Recipients of lump sums also need to avoid the temptation to use the lump sum for purposes unrelated to their injury. When the lump sum runs out, the injured person may be left to fend for themselves, or end up back on publicly funded support, eroding the purpose of insurance.

Another aspect is the wide variation in lump-sum settlements. Injuries, even when distinctly similar in nature, often attract disparate amounts of compensation. For example, compensation for minor injuries such as low-level whiplash, sprain or moderate bruising may range from $10,000 to $120,000.

Care-based models are not without their shortcomings. There are numerous examples of care-based schemes that have failed to deliver stable claim costs as their benefits are too generous and act as a disincentive for claimants to return to their pre-accident lives. This is exacerbated where poor claims management systems exist or where benefit structures are overly complex. Examples include South Australia and Ontario.

In BC and in many other schemes in Canada and around the world, there is a mix of both litigation- and care-based models. In BC, the benefit mix is more weighted to a litigation-based model, while in other schemes in Canada (e.g., Ontario) and overseas (e.g., Victoria and the 2017 scheme in NSW, Australia) the model is more weighted towards a care-based model (e.g., with benefit components such as ongoing treatments). While there are a few purely litigation-based models (e.g., the UK) and a few more purely care-based models (e.g., Manitoba, Saskatchewan and New Zealand), most schemes are a mix of the two models.

The key policy consideration is deciding what mix between the two models is appropriate for BC.

7.4 Exploiting weaknesses in the system

Different designs for bodily injury products can encourage people to exploit weaknesses in the system design. This can include "soft fraud" such as the embellishment or exaggeration of injuries by claimants (and occasionally "hard fraud" such as staged or fictitious crashes) as the benefits paid often depend upon an assessment of the severity of the injury. This can be hard to prove or disprove.

Litigation-based lump-sum models may also encourage unacceptable behaviours by service providers, who may assist these claimants to build a case. Proponents of care-based models argue that lump sums provide incentives for claimants to submit a claim and or exaggerate their injuries. A different product design may reduce or remove the opportunity or incentives to abuse the system, which will ultimately result in reduced premiums for auto owners. Two good case studies are the NSW (Australia) and UK schemes where governments have set up fraud task forces to tackle hard and soft fraud. In NSW in recent months, the police fraud task force has made a number of arrests and had successful prosecutions, with operations ongoing. The NSW task force has targeted claimants, lawyers and medical practitioners.

Care-based models are not immune to exploitation by service providers (e.g., medical and allied health) who can over-service and over-bill for services if the management of the product is not adequate. Care-based scheme insurers and regulators are generally focused on tackling these activities.

All system designs are vulnerable to misuse by claimants and service providers alike. Careful design is imperative and must be supported by adequate claims management and monitoring processes. Any weaknesses in design or operation will be exploited to the advantage of claimants and service providers.

7.5 Product choice

With the need to moderate lump-sum payments for injuries (especially minor injuries) to address the current financial stress in the bodily injury scheme, the government could consider requiring insurers to offer policyholders optional "top-up" coverage to replace any reduction in litigated claim entitlement. Similar provisions exist in other schemes in Canada (Saskatchewan) and in the US (Pennsylvania). The details of the design would need to be explored. The "top-up" coverage would be offered as part of the ICBC's Optional product and would be open to competition.

8. Potential reform options

8.1 Road safety solutions

Preventing accidents on BC's roads will reduce the tragic human consequences of injuries and loss of life, reduce the number of claims being filed, and save hundreds of millions of dollars.

This report recognizes that many road safety programs, enforcement technologies, laws and penalties have been successfully implemented in BC over the past decades, resulting in improvements in the number of accidents and fatalities occurring on BC roads. While the overall BC road accident trend over the past decade is positive, the recently observed 23% upswing in crash rates needs to be addressed. In BC, as in many other jurisdictions, the top contributing factors in accidents involving a death or serious injury are speed, distractions and impairment – accounting for 84% of all road fatalities in BC in 2015.

An analysis of initiatives in global jurisdictions with leading road safety performance, such as Australia, New Zealand, the UK and other European countries, highlighted a number of road safety initiatives (some of which are already being deployed in BC today) that, within the next three to five years, could save the system over $250m annually through reductions in the number and severity of accidents, and by providing additional revenue from those engaged in high-risk driving behaviours.

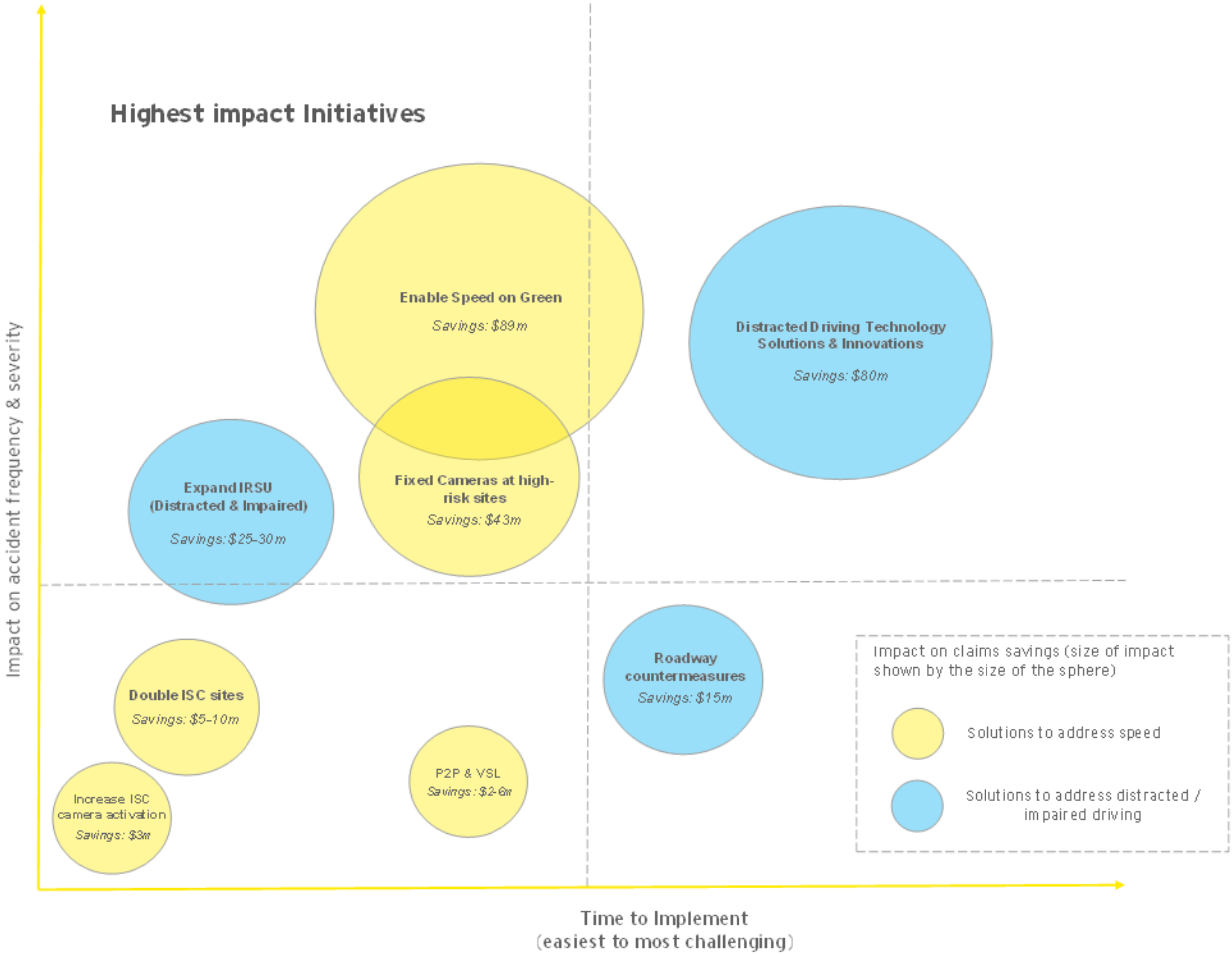
It is further recognized that there is no one silver bullet in terms of road safety initiatives that will solve the problems on BC roads. It requires a systemic approach to address speed, distracted driving and impairment. Experience around the world indicates that in order to make sustainable changes in driver behavior, the three pillars of penalties, public awareness and enforcement must be aligned.

Table 23: Highlighted road safety initiatives could save the system over $ 250m annually within the next three to five years

	Road safety initiative	Annual contribution
Speed	✓ Double the number of intersection cameras and increase activation to 100%* ✓ Automated speed enforcement cameras at high-risk sites ✓ Variable speed limits and point-to-point speed systems	~ $150m
Distracted	✓ Increase the number of Integrated Road Safety Unit (IRSU) officers by 100 FTEs ✓ "Safe Work" programs (corporate policy and practices) ✓ Technology solutions and innovations ✓ Road infrastructure countermeasures, e.g., rumble strips	~ $100m
Impaired	✓ Increase the number of IRSU officers by 100 FTEs (assign to distracted driving) ✓ Review current penalties to assess current effectiveness	~ $20m–$30m

8.1.1 Potential sequencing for solutions

A number of solution considerations are set out over the following pages. These can be implemented in full for a higher impact on claim costs, or as a partial set, recognizing that the latter will require greater contribution from product reform and other initiatives to address the overall rate gap and trend. The chart below describes a potential sequencing of solutions for speeding, as well as distracted and impaired driving, showing both potential impact to claim costs and time to implement (easiest to most challenging).



8.1.2 Three pillars in addressing road safety

It is typical for road safety programs to support the successful implementation of new and ongoing initiatives with the three key pillars of penalties, public awareness and enforcement.

Penalties

Penalties are a key factor to any modern day road safety program. In Europe, where leading countries demonstrate some of the lowest accident and fatality rates in the world, 21 of the 27 EU member states had a demerit point system in place in 2012[27]. The effectiveness of penalty point systems has been extensively documented, with studies showing an initial impact of a 15% to 20% reduction in crashes, fatalities and injuries (with maximum effect over the first 12–18 months). While demerit penalties are an effective tool for adapting driver behaviour, strong and continuous enforcement combined with ongoing awareness campaigns is required to deliver positive impacts on road safety.

Public awareness

Road safety campaigns are widely undertaken to target and influence desired driver behaviors and instill long-term societal change towards safe driving. A recent analysis of 228 international studies conducted in 14 European countries over the last 30 years has shown that public awareness campaigns had the following effects on driver behaviours[28]:

- Reduced the number of road accidents by 9%
- Increased seatbelt use by 25%
- Reduced speeding by 16%

The duration of the campaign is directly correlated with its effectiveness. Thus, campaigns such as drink driving and use of seatbelts need to be delivered over a sustained period to keep issues at the top of the public's mind.

Enforcement

The success of any road safety program relies on the premise that road rules are only obeyed when drivers believe that not obeying them will result in unwanted outcomes. Thus, the perceived likelihood of being caught and penalized for disobeying road rules should be high for any road safety initiative.

A review of all violation tickets and sanctions issued by all police agencies in BC, as reported in the Enhanced Traffic Enforcement Program 2015 Annual Report, shows there has been a significant decrease in tickets issued over the past three years for speeding and distracted and impaired driving (those contributing to 84% of fatalities on BC roads).

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[27] (BestPoint, 2012)

[28] (Traffic Injury Research Foundation, 2015)

Table 24: Summary of tickets and violations issued

	Speeding		Distracted driving		Impaired driving			Total	
Year	Tickets issued	Fatal victims	Tickets issued	Fatal victims	Issued sanctions	Criminal Code charges	Fatal victims	**Tickets issued**	**Fatal victims**
2013	184,000	77	66,000	77	30,000	860	64	**280,860**	**218**
2014	176,000	81	66,000	66	28,000	730	64	**270,730**	**211**
2015	164,000	88	59,000	88	25,000	530	69	**248,530**	**245**

Available data above indicates that the current levels of enforcement currently on BC roads are not sufficient to curb the growing levels of fatalities experienced today in BC.

- **Speeding:** Tickets issued decreased by over 10% from 184,000 to 164,000; fatalities due to speeding also increased by over 10%.
- **Distracted driving:** Tickets issued decreased by over 10% from 66,000 to 59,000; related fatalities increased by over 10%.
- **Impaired driving:** Issued sanctions and Criminal Code charges have decreased by approximately 17% and 38%, respectively; related fatalities increased by 8%.

In summary, the three pillar approach is foundational for ensuring a successful outcome of any prospective road safety initiative. Underperformance of one pillar potentially results in reduced outcomes and thus any of the solutions proposed below should be considered within the context of ensuring that there are appropriate penalties, public awareness campaigns and enforcement to provide the initiative with a foundation for success.

8.1.3 Speeding

Speeding in excess of posted limits is one of the key critical factors driving rising accident and fatality rates in the province; the speed at which a vehicle travels is an important determinant of injury. The following are solutions that should be considered for implementation:

Automated speed enforcement

An area of opportunity that would create immediate improvement in road safety is the expanded use of proven automated speed enforcement technologies, which are commonplace in other jurisdictions. The goal of automated enforcement is to significantly increase the perceived chances of being caught, creating a change in behaviour that will translate into a crash reduction at high-risk locations. An analysis of 28 automated speed enforcement studies across the globe found a consistent crash reduction effect — with most studies reporting reductions of 14% or greater at the camera sites and a halo effect of additional benefit to adjacent roadways.[29]

Current state

Sixty percent of accidents on BC roads happen at intersections. BC Intersection Safety Camera (ISC) program was introduced in 1999 as a means to change red light running behaviour at high-risk intersections and prevent crashes, reduce injuries and save lives. Operated as a partnership between ICBC, the provincial government and the RCMP, the program was updated and expanded in 2011 to provide 140 digital cameras permanently located at the highest-risk intersections. In BC, there are no speed cameras positioned on any major or minor roads, and speed enforcement is not provided under BC's ISC program.

The lack of speed enforcement is a cause of concern in BC, as analysis of 2011 and 2012 speed data recorded at 140 intersection safety camera sites found that of the 1.1 billion vehicles that passed those sites over the two-year period, 1.1 million were travelling at an excessive speed, defined as 40 km/h or more than the posted speed.

Conclusively, BC's current speed safety program could be further improved with the implementation of a comprehensive automated enforcement program that would reduce claims costs via the reduction of accidents and fatalities in BC.

Leading practices

Speed cameras are heavily deployed in Australia, the UK and Japan, with the UK currently having approximately 5,000 speed checking units, making it one of the largest programs in the world. A comprehensive study undertaken by RAC Foundation & Road Safety Analysis on the levels of occurrence of collisions before and after average speed camera (ASC) systems' installations in the UK found:

- A 36.4% reduction in the mean rate of fatal and serious collisions (FSC) after the system's installation; and
- A 16% reduction in the mean rate of personal injury collisions (PIC) after the system's installation.

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[29] (Cochrane Group, 2010)

Further, in the state of Victoria, Australia, over 280 fixed speed cameras are deployed across the state's road network, the majority of which are deployed at intersections, but some are on key highways and other roads. Additionally, mobile cameras are operated at approximately 2,000 locations – in April 2017, there were approximately 1,750 reported cameras deployed across a subset of the 2,000 locations. Speed and red-light cameras were introduced on Victoria's roads in the late 1980s in recognition of the role they play in changing driver behaviour – encouraging drivers to slow down and obey traffic signals. Since then, the annual fatality rate has halved, in part due to cameras. In 2001-2002, Victoria introduced a package of speed enforcement initiatives including a 50% increase in mobile camera hours, a decrease in speeding tolerance, and the introduction of a 50 km/h urban speed limit. In 2009, the number of road fatalities fell below 300 for the first time (to 290) and in 2015 was recorded at 252.

Table 25: Comparison of the state of Victoria, Australia with the province of BC is provided below.

Stats	Victoria, Australia	BC, Canada
Number of registered vehicles	4.6m	3.2m
Population	5.8m (2013)	4.6m (2014)
Geographic area	238km^2	945km^2
Speed camera coverage	280 fixed cameras 1,750 mobile cameras	140 fixed cameras

Chart 30: Cameras across Victoria state road network

High-level state view of 2,000+ fixed and mobile cameras shows the proliferation of cameras located around the Greater Melbourne area (5 km map scale).

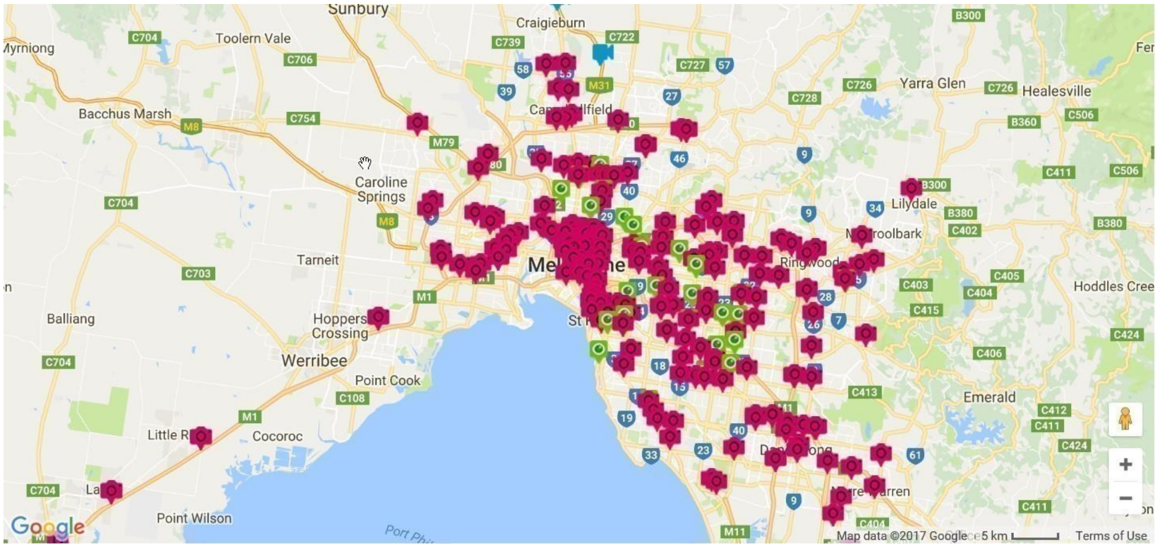
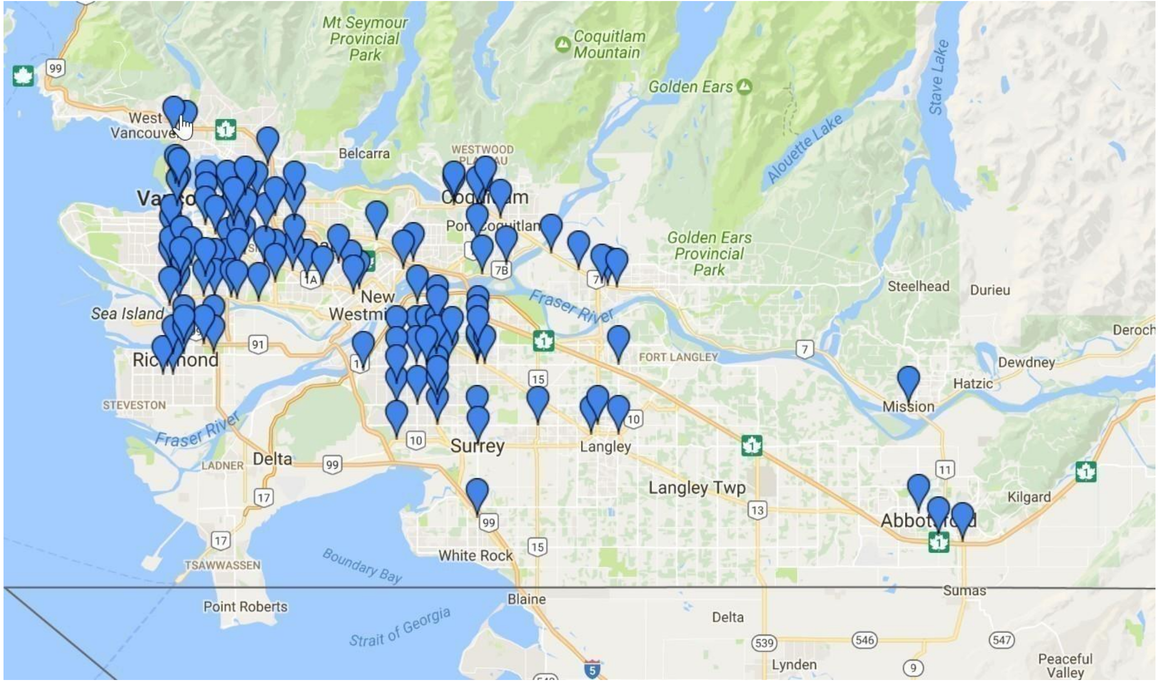


Chart 31: Cameras across BC road network

High-level state view of 140 fixed intersection cameras shows a much less dense concentration of camera deployments around the BC Lower Mainland (5 km map scale)



The application of automated safety cameras across the UK and the state of Victoria, Australia, both of which are recognized globally as leaders in road safety, has had a strong effect in reducing accidents and fatalities across their respective road networks.

Solutions for consideration

In order to experience the same safety results as other higher-performing jurisdictions, the following road safety initiatives could be considered, with potential impact of $150 million annually within the next three to five years.

Table 26: Potential road safety initiatives

Speed solution	Purpose	Impact
Increase ISC camera activation from 25% to 100%	Modeling conducted on the ISC camera systems suggests that there is additional safety as well as monetary benefit from retention of incremental fines to offset costs associated with increasing ISC activation to 100%.	$3m
Expand ISC program to 240 units	A study by Monash University Accident Research Centre in 2011 evaluated the casualties at 77 signalized intersections across Victoria, Australia and noted the following: ‣ 26% reduction in accidents ‣ 17 fewer fatal crashes a year ‣ 39 fewer minor injury crashes Intersection cameras are an effective method of reducing accident and fatalities, thus resulting in claims savings. Modelling suggests that if BC were to double the current ISC program to 240 units based on a site review of high-risk intersections across the province, it would result in a material annual net benefit.	$13.5m
Enable speed on green	Currently BC's ISC program does not have the infrastructure to capture and prosecute speeding violations on a green light. Intersections are where the majority of accidents occur within the province. The introduction of speed on green at the high-risk ISC sites could reduce the frequency of accidents by 14%–25% and the severity of the accidents by 11%–45%. Thus, modifying existing cameras to allow them to capture speed on green would result in a material net benefit due to increased safety and significant claims cost savings.	$89m

Speed solution	Purpose	Impact
Fixed cameras	Currently, BC's speed program does not have the automated infrastructure present to measure and enforce speed limits in identified high-risk roads in BC. The introduction of automated fixed/mobile cameras at high-risk sites could reduce the frequency of accidents by 14%–25% and the severity of the accidents by 11%–45%, resulting in significant claims savings.	$43m
Point-to-point systems (P2P)	Evaluations conducted in the UK suggest that from two to eight years of pre- and post-implementation, there were decreasing trends in KSI (killed or serious injury) crashes after the installation of P2P of between 33% and 85%, with reductions in minor injury crashes also noted. In the context of BC, P2P is an effective tool in reducing both the number and severity of crashes, as well as smoothing traffic flows. Implementing P2P amongst BC's highest risk highways (Sea to Sky, Coquihalla Hwy, Hwy 99/Massey Tunnel, Hwy 1/Surrey) would result in moderate claims savings.	$1-$3m
Variable speed limits	Variable speed limits (VSL) have been trialed in the US and in Europe over the last decade with significant success. In the UK, the introduction of VSL led to significant traffic flow and safety benefits on key highways: the implementation of VSL on the M25 motorway around London led to a 15% reduction in serious injury accidents and a 30% reduction in the frequency of accidents. In the context of BC, given the global success of this safety initiative, expansion of the current three sites to include other risk areas would result in moderate claims savings.	$1–$3m

Other considerations

As noted above, the introduction of any road safety initiative must be considered alongside the three pillars. The following considerations would need to be addressed to ensure successful implementation:

- **Enforcement:** The most effective case studies have noted that 100% automated camera activation is critical to ensure that public-perceived chances of being caught are extremely high. Further, the ability to take a picture of the driver would also provide additional benefit as the ticket can be correctly issued to the driver of the vehicle without dispute. Thus, ensuring that a revised speed program is automated is essential in adapting driver behaviour and yielding significant claims savings.

- **Awareness:** The implementation of any road safety program should be paired with a comprehensive awareness program to inform drivers of the risks of violations and to adapt behaviour. Thus, it is pivotal that the government consider with any proposed changes a road safety awareness campaign illustrating the risks and impacts of speeding to drivers.
- **Penalties**: EY recommends that the penalty amount be reviewed to apply Driver Risk Premium (DRP) to automated speed enforcement tickets. Under the current legislation, camera violation tickets are issued to the registered owner (MVA 83.1, as the driver cannot be identified in the images) and driver penalties are not applicable. Changing the legislation would enable the "registered owner" automated speed violation tickets to carry the same penalties as roadside tickets for excessive speeding. This change could potentially result in a greater crash reduction effect of the program due to the deterrent effect of the significantly increased penalties related to the DRP. The impact of applying DRP to automated enforcement of excessive speeding offences would be significant, as the charges appear on a driver's account for three years. Further, BC could implement a system that rewards safer driving, as demonstrated in Sweden and Canmore, Alberta, where drivers who obey the speed limit are entered into a prize lottery.

8.1.4 Impaired driving

The risk of accidents increases rapidly with alcohol consumption. Drivers with a blood alcohol concentration (BAC) between 20mg/100ml and 50mg/100ml have at least a three times greater risk of fatality in a crash. In 2015, impaired driving was responsible for 23% of all driving fatalities in BC down from 34% in 2010[30]. In order to further strengthen the current program, the following impaired driving initiatives could be considered in order to reduce claim costs via reducing the number and severity of accidents in BC:

Leading practices

Role of enforcement*:* The significance of enforcement in reducing impaired driving is unequivocal. Studies conducted in Australia have been profound, with the following outcomes observed in Western Australia:

- If the average number of random breath tests (RBTs) were doubled from 60,000 to 120,000 per month, at an annual cost of $4.5m, it would lead to a reduction of 23 accident-related traffic crashes (ARTC) per month, with a monthly claims saving of $2.9m. We have estimated the potential savings to BC to be in the region of $20–$30m per year.

Conclusively, as noted above within the discussion of the three pillars of road safety, the role of enforcement is critical in positively adapting driver behaviour to the risks of impaired driving as the greater the likelihood of being caught, the greater the deterrent to impaired driving behaviours.

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[30] The number of fatal victims where impairment by alcohol, drugs or medication was a contributing factor decreased from 127 in 2010 to 69 in 2015.

Penalties: In addition to enforcement, penalties also play a pivotal role in adapting impaired driving behaviours. For example, the state of Victoria implemented some of the toughest impaired driving penalties globally and has subsequently seen the proportion of drivers and motorcycle riders who lost their lives with a BAC greater than 0.05 decline from 38% in 1987 to 17% in 2015, with approximately 25 road deaths in 2015. Comparatively, BC currently experiences 66 deaths a year involving impaired driving, 164% more in comparison to the state of Victoria.

The following penalties are enforced for drivers found to be operating a vehicle with the following Blood Alcohol Level (BAC):

- **BAC 0.05–0.07:** Full license holders less than 26 years old are disqualified from driving for a six-month period and require an alcohol interlock for a minimum period of six months.
- **BAC 0.07–0.10:** All drivers are disqualified from driving for a six-month period and require alcohol interlock for a minimum period of six months.
- **BAC 0.10–0.15:** All drivers are disqualified from driving for 10–14 months and require an alcohol interlock for a minimum period of six months.

Contextually, in BC if a driver is caught impaired for the third time within a five-year period, they will only be disqualified from driving for approximately 30 days[31], a difference of 5–13 months in comparison to the state of Victoria.

Solutions for consideration

In order to further strengthen the current program, the following impaired driving initiatives should be considered in order to reduce claim costs via reducing the number and severity of accidents in BC:

- **Penalty review**: EY recommends that the government conduct a penalty review to assess the current effectiveness of the existing penalties and to assess the impact of a stricter model on reducing accidents and fatalities.
- **Enforcement:** Our modelling suggests that doubling the number of full-time officers within the Integrated Road Safety Unit (IRSU) would result in 1,916 additional impaired driving sanctions. This number could be tripled or quadrupled if the IRSU's mandate was solely to focus on impaired and distracted driving violations.
- **Awareness:** EY recommends that the government consider implementing, alongside a revised impaired driving prevention program, a comprehensive public awareness campaign illustrating the effects of drink driving on road safety and the risks and impacts violations would have on driver records.

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[31] Refers to the automatic consequences associated with roadside screening results under Provincial legislation. Significantly greater penalties and a minimum one-year driving suspension pursuant to Section 259 of the Criminal Code of Canada following a Criminal Code Conviction for this offence.

8.1.5 Distracted driving

Distracted driving studies show that phone usage increases the likelihood of getting into a crash by five times. In BC, police statistics illustrate that more than 25% of all car crash fatalities in the last five years were related to distracted driving, an average of 78 deaths per year. In order to further strengthen the current program, the following distracted driving initiatives could be considered in order to reduce claim costs via reducing the number and severity of accidents in BC:

Leading practices

The UK, US, Australia and other Canadian provinces with lower accident and fatality rates have initiated the following practices in relation to distracted driving:

- **School road safety programs (Australia):** These encourage and educate youth on the impact of distracted driving and encourage them to speak out against usage;
- **Stricter penalties (UK):** New drivers in the UK (up to two years after gaining a full license) lose their license if caught for distracted driving;
- **Roadway countermeasures (US):** Implementing edge line and centre line rumble strips. Research shows there is a 50% reduction of single vehicle run off road injury crashes on rural highways and 91% reduction on urban two-lane roads;
- **Employer programs (US):** Employers implement distracted driving policies and programs for their employees and tie them to employee conduct and performance; and
- **Creative enforcement (Canada):** Officers in Manitoba have disguised themselves in plain clothes to spot distracted drivers at intersections. Police in Ontario ride public transport (like the bus) to spot distracted drivers on the roads, while in British Columbia police have utilized hydraulic cranes ("cherry pickers") to catch people using their phones at intersections.

Solutions for consideration

In order to further strengthen the current program, EY highlights the following best practices that could be implemented to reduce claims costs:

- **Penalty review**: EY recommends that the government conduct a penalty review to assess the current effectiveness of the existing penalties and to assess whether a stricter model would reduce accidents and fatalities.
- **Enforcement**: The most effective case studies have noted that strong, creative enforcement is required to ensure that drivers recognize that they will be caught for non-compliance. Our modelling suggests that doubling the number of full-time officers within the IRSU would result in 6,450 additional distracted driving sanctions. This number could be tripled or quadrupled if the IRSU's mandate was solely to focus on impaired and distracted driving violations.
- **Awareness:** EY recommends that the government consider, with the proposed changes above, a road safety program illustrating the effects of distracted driving and the risks and impacts violations would have on driver records.

Within the next three to five years, distracted driving initiatives could save the system $100m annually, demonstrated below:

Distracted driving solutions	Purpose	Impact
Technological solutions and innovations	Utilize and enforce existing and upcoming technological innovations to combat distracted driving	$80m
Roadway countermeasures	Implement road enhancements, e.g., rumble strips, to reduce crash rates	$15m
Expanded IRSU (additional enforcement)	Increase the current IRSU unit by 100 officers to increase presence across BC roads	$5m
	Total	**$100m**

8.2 Product and policy

Even with measures to reduce road accident numbers, the number of claims per accident has been rising. This behaviour is driven by the fundamental structure of the auto insurance product in BC, and product changes are required in order to avoid significant rate increases on the Basic product.

Lump-sum settlements in the current system can act as incentives for persons injured in road accidents to decide to make a claim, possibly exaggerate their injuries and potentially get unnecessary medical treatments — evidenced by the cost of minor injuries now representing almost 60% of all bodily injury claim costs, up from about 30% in 2000. The latter figure is more consistent with the experience of stable and lower cost auto insurance schemes in Canada and internationally. Product reform should target these areas: restricting access to lump-sum awards for pain and suffering for minor injury claims and increasing the proportion of benefits received as accident benefits. Such changes should also see a reduction in the number of litigated claims, resulting in a reduction in legal costs and disbursements for the entire scheme.

Premiums currently collected by ICBC are not sufficient to cover claim costs and expenses, yet they are the second highest in Canada, and affordability by international standards is unfavourable. Basic premiums (excluding optional property damage coverage for your vehicle) are almost equivalent to a typical weekly wage in the province (about $920), which is much higher than other jurisdictions; for example, annual auto insurance premiums in Australia range from about 25%–40% of a typical weekly wage. Some Canadian provinces (e.g., New Brunswick, Alberta and Nova Scotia) have premiums that are between 50% and 70% of weekly earnings, but others (e.g., Ontario) exceed 100% of weekly wages.

8.2.1 Product change objectives

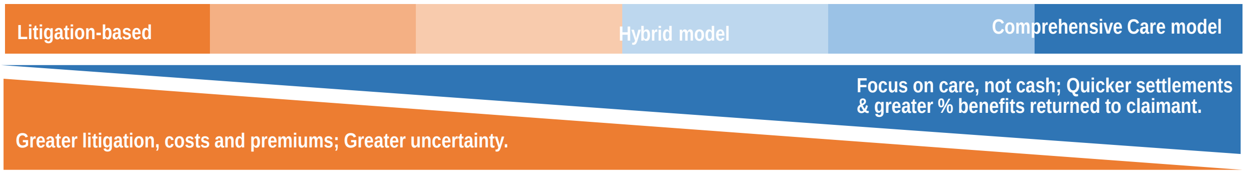
Product change can be effected in many different ways, and the scale of change will depend on the objective or desired outcome. To illustrate some potential outcomes, we have set out four illustrative objectives, which describe possible product changes that would simply close the Basic rate gap and trend gap, ranging toward more comprehensive product reforms that could reduce Basic premiums below current levels.

These four objectives are designed on a spectrum going from minor limitations to compensation for litigation-based claims under Objective 1, to essentially a care-based system under Objective 4. In simple terms, the way claimants receive their benefits changes from mostly a lump-sum method under Objective 1 to increasingly greater care benefits under each of the other objectives. It is important to note that while there are reductions in compensation for litigated claims, these are offset by increasing care benefits. In addition, there are fewer incentives for claimants and other scheme participants (legal and medical service providers) to exaggerate claims under a care-based system compared to a litigation-based system, and this reduces claim costs across the spectrum, enabling premium reductions.

For each objective described, access to lump-sum payments under the Basic product will have limitations compared to today (where it is basically unrestricted) for minor injury claims. It is proposed that policyholders under any of the different regimes discussed for British Columbia will have the option to buy back any new restrictions to litigated claims under their Optional insurance product. This means that drivers wishing to pay premiums reflective of the cost of the currently unrestricted

litigation-based model in BC will be able to maintain full access to their entitlement to claims against another driver that causes injury to them.

Chart 32: Spectrum of different auto insurance models, with features of litigation-based models on the left and care-based models on the right



The desired level of savings under each objective could be achieved in different ways, i.e., significantly limiting the awards available for one benefit type (e.g., pain and suffering) could achieve large savings, or the same level of savings could be achieved by a series of smaller changes on several benefit types or litigation process changes. We have illustrated one package of product changes that could achieve the savings required under each stated objective; however, alternative product changes could achieve the same result. For example, varying the level of caps applied to pain and suffering awards would achieve greater or lesser savings as required. System changes such as rules for court claim processes could similarly be made stronger/weaker to achieve greater/lesser savings.

8.2.2 Product change themes

Cost of minor injury claims

Bodily injury claim costs for minor injury claims are disproportionately high under the current BC system. Minor injuries are costing the system significantly more in total than non-minor (moderate and serious including catastrophic) bodily injury claims. Based on other jurisdictions in Canada and internationally, this acts as an indicator that the system is under financial stress and not performing as it should, and system reforms should aim to make minor injury claim awards more proportionate and fair relative to non-minor injured claimants.

The average award for pain and suffering received by minor injury claimants is approaching that received by non-minor injured claimants. A cap on pain and suffering for minor injury claims would help control the cost of minor injuries, with no impact to non-minor injured claimants and no restriction to claims for economic loss (e.g., wages and medical treatment) for minor or non-minor injuries. Different levels of caps could be set under each objective and would achieve savings through:

- Reductions in the number of minor injury claims;
- Reductions in the cost of pain and suffering awards for minor injury claims; and
- Reductions in legal costs including costs and disbursements.

Such caps have been introduced and effected more stable claim costs in the auto insurance systems in Alberta, New Brunswick and Nova Scotia. Similarly, auto insurance schemes worldwide have typically targeted minor injury soft-tissue claims when tackling deteriorating claim costs (e.g., the UK, France and many states in Australia).

The effectiveness of any minor injury cap relies on the definition of what constitutes a minor injury and the robustness of that definition in any dispute event. Many jurisdictions use similar definitions for minor injuries, and this experience should be considered in setting a minor injury definition under these designs. We have used Alberta's definition for the purpose of costing changes, but similar results should emerge if we had used a minor injury definition from another jurisdiction. Regardless of the definition used, experience from other jurisdictions suggests that it should be regularly reviewed by government, and revised as needed to ensure the desired impact is being achieved.

Accident benefits

The level of Accident benefits provided today require many claimants to pay for care and treatment out of pocket unless a claim against another driver is pursued. This may act as an incentive to claimants to pursue a litigated claim rather than accessing the accident benefits they need quickly and efficiently (e.g., adequate medical costs and weekly wage replacements) in order to return to their pre-accident lives as soon as possible. Moreover, the most seriously injured at-fault claimants have no opportunity to recover amounts beyond the current limits, meaning the system is failing those policyholders and putting a burden on public health systems. Savings gained from applying caps to litigated awards such as pain and suffering for minor injury claims could be redistributed to increase accident benefits to more beneficial levels for all claimants. Another option is to restrict access to litigation just to loss of wages and pain and suffering benefits for all types of injuries, with medical treatment, rehabilitation, and care benefits paid purely as an accident benefit for life.

Claimants not accessing remedies at adequate levels to cover needs via litigation will see an increase in the total amount received in benefits, which includes at-fault drivers. For those accessing damages against an at-fault driver, there is no net increase in the cost of their claims as the increased accident benefits are offset by reductions to lump-sum payments for past and anticipated future care and medical treatment.

Legal costs

The current claim litigation process in BC is very adversarial. As a result, it is also very costly. There are multiple areas where improvements to the process could be made to help speed up the resolution of claims, reduce the complexity of resolving claims (especially for minor injuries), reduce the costs associated with resolving claims, including both legal costs and disbursements, and overall create a fairer balance between all parties through the process.

Claims management

Changes to benefits under the Basic product should be accompanied by appropriate claims management strategies to both manage and monitor claims experience. In particular, limiting the awards available under certain benefit types (e.g., pain and suffering awards for minor injuries) can put cost pressures on other benefits. (This is typically experienced in other jurisdictions following major scheme reforms.) The extent to which claims management processes need to change will vary by Objective.

8.2.3 Cost and premium estimates

Product design changes will impact behaviours of claimants and their representatives (mainly lawyers). How their behaviour changes is difficult to predict, but the experience of other schemes can be used to assess the potential impact. Two examples are illustrative:

- There are many schemes in Canada and internationally (e.g., Australia and the UK) where product design changes similar to the options explored below have resulted in a significant reduction in claim numbers
- Similar changes to those explored below have resulted in significant reductions in the proportion of legally represented claims in other schemes in Canada and internationally.

While we have assumed plausible reductions in claim numbers and legal representation in our work, other plausible assumptions could also be chosen. The uncertainty of the change in behaviours of claimants and their representatives introduces a significant amount of uncertainty into the cost estimates and consequently the extent to which product changes need to be varied to achieve the cost reduction objectives outlined later in this section.

8.2.4 Overview of objectives

By targeting benefit changes in the areas described above, increased levels of savings could be achieved across the objectives in the following areas:

Chart 33: Cost of key components under the current system compared to under each Objective

	Minor injury litigation claim costs	Non-minor injury litigation claim costs	Accident benefits	Legal costs (ICBC & plaintiff)	Estimated savings by 2019
Current state	$718m	$612m	$199m	$845m	
Objective 1	↓ 70%	↔ No change	↑ 38%	↓ 30%	**$770m**
Objective 2	↓ 84%	↔ No change	↑ 75%	↓ 35%	**$840m**
Objective 3	↓ 93%	↔ No change	↑ 126%	↓ 40%	**$875m**
Objective 4	↓ 90+%	↓ 90+%	↑ 490+%	↓ 90+%	**$1.4b**

Details of the product design options are set out below, including the cost and premium impact. We have not included the cost of implementation of the product design changes, which should be a one-off cost and relative to the annual cost savings should not be material.

8.2.5 Objective 1: Reduce Basic rate gap and trend gap

As discussed earlier, Basic premiums are currently below the level required to cover claims and expenses net of investment income — this is the Basic rate gap. As the trends in claim costs continue to worsen, the Basic rate gap grows — this is the Basic trend gap. In order to achieve the goal of reducing the Basic rate gap and trend gap, measures such as the following could be taken:

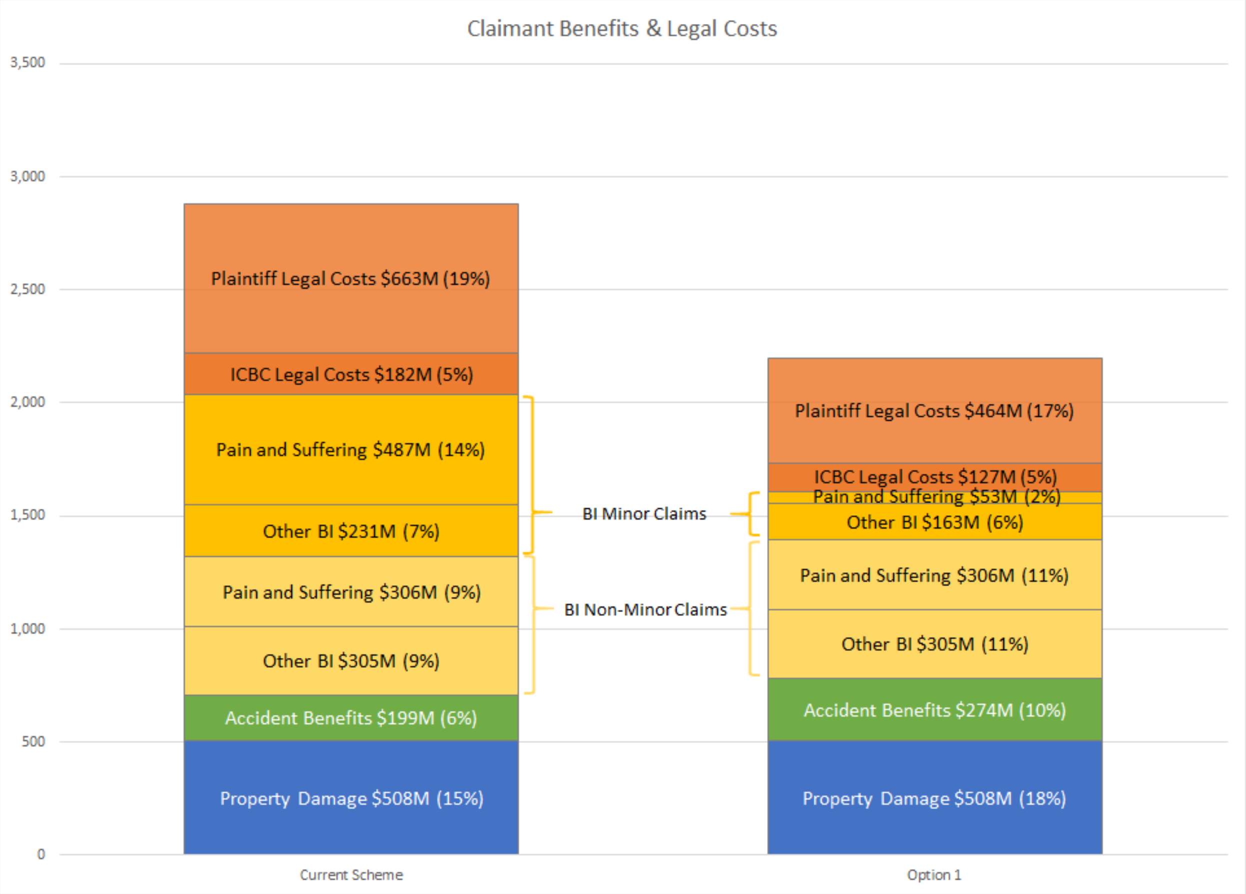
1) Introduce a cap in the range of $7,000 to $9,000 on pain and suffering for minor injury claims (annually indexed to inflation). No impact to non-minor (moderate and serious including catastrophic) injury claims.

2) Increase accident benefits by 100%. Doubling benefit levels would result in the weekly wage benefit limit increasing from $300 to $600 per week, and the current limit on medical payments of $150,000 increasing to $300,000 (all benefits annually indexed by inflation). ICBC remains being the second payer for loss of wages.

The above product changes could achieve estimated savings of $770 million — of sufficient magnitude to close the Basic rate gap and help control trends in future claim costs, but are not likely sufficient to limit long-term Basic insurance rate increases to the rate of inflation. As noted earlier in this section, these product changes are illustrative and other alternatives are available to achieve the cost savings targeted.

Key cost outcomes compared to the current state are shown in the chart below.

Chart 34: Breakdown of claim costs and expenses compared to current state (policy year 2016)



The above chart sets out the cost for policy year 2016 under the current product design and under the proposed product changes:

- The cost of litigated minor injury claims would reduce from $718m (or 21% of total claims costs) to $216m (8%), with the biggest reduction arising from the fall in pain and suffering awards;
- A reduction in legal costs from $845m (or 24% of total claims costs) to $591m (or 22% of total claims costs);
- An increase in the cost of accident benefits from $199m (or 6% of total claims costs) to $274m (or 10% of total claims costs);
- No change in the cost of non-minor injury claims; and
- There may also be a small reduction in ICBC claims handling costs, which are not included in the above reduction.

This objective could potentially solve for the Basic rate gap and trend gap. However, claim costs may continue to deteriorate, and it is likely that significant premium rate rises above inflation would be required in following years. Hence, this design is not expected to meet all of the review objectives.

8.2.6 Objective 2: Basic premium increases in line with about 2% inflation for five years

Auto insurance claim costs tend to increase above the rate of inflation due to a combination of factors such as higher cost of new medical procedures/equipment, more expensive automobile parts and repair costs, and other medical, legal, judicial and social factors. Therefore, to keep premium increases in line with about 2% inflation for say five years, more limitations on litigation awards would be required to achieve this objective.

Possible measures could include:

1) Introduce a cap in the range of $5,000 to $7,000 on pain and suffering payments for minor injury claims (annually indexed to inflation). A lower cap on pain and suffering for minor injuries would bring greater cost control to the system and make holding premium increases to the rate of inflation more achievable. As under Objective 1, the cap would only apply for claimants with minor injuries — serious or catastrophically injured claimants would not be affected.

2) Increase accident benefits by 200%. With the additional savings from the lower cap on pain and suffering for minor injuries, accident benefits could be tripled. These enhancements would mean the weekly wage benefit limit could increase from $300 to $900 per week, and the current limit on medical payments of $150,000 could increase to $450,000 (all benefits annually indexed by inflation). ICBC remains being the second payer for loss of wages.

3) Introduce rules and regulations for the litigated claim process and introduce an alternative independent dispute resolution system. Examples of measures that could be introduced include the following:
    - Early reporting to the insurer of the intention to pursue a litigated claim (e.g. within one month of consulting a lawyer)
    - Duty of both parties to share documents and expert reports within tight time frames,
    - Duty of claimant and other parties to co-operate with requests for information and to be assessed by medical and other experts
    - Duty of insurer to provide details of decisions and information to claimant
    - Set up alternative dispute resolution service, which could be compulsory for both parties but with exemptions and access to court after process if no resolution achieved
    - Compulsory settlement conferences before proceeding to court process and mandatory settlement offers before proceeding to court process
    - No disbursements payable until insurer is notified of a claim demand or intention to sue
    - Cap on disbursements or cap on number of expert reports allowed for minor injuries
    - Cap on fees for individual disbursement costs (e.g., medico-legal)
    - Setting up a new independent service to address medical disputes

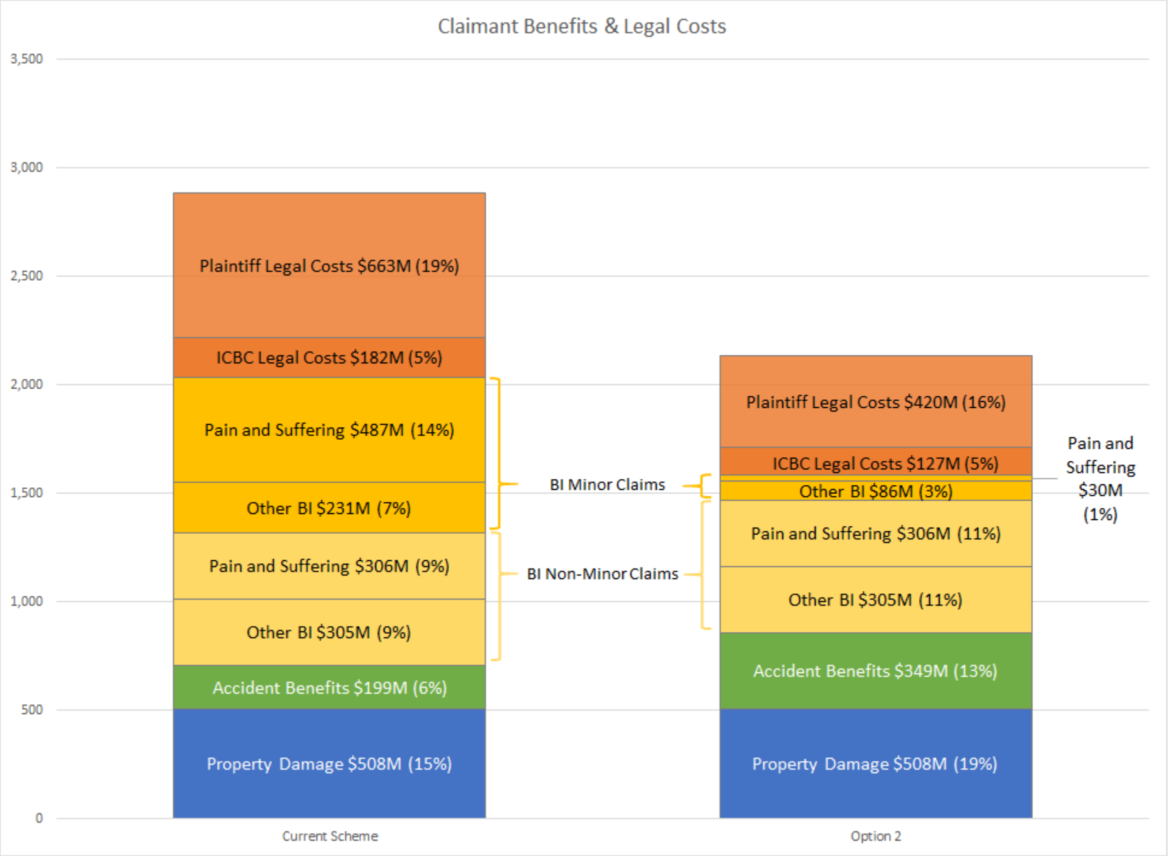
The new ligation and alternate dispute resolution system would require the setting up of a government body independent of ICBC to manage the new system to ensure an appropriate balance in its operation between ICBC and claimants.

Product design elements such as those suggested above are similar to the schemes in place in a number of Australian states including Queensland and New South Wales. These elements were introduced to these schemes in order to curb rising claim costs stemming from similar cost drivers as seen in BC today, by speeding up settlement of claims and reducing the number of disputes.

Introducing these product changes would further improve the balance of the system as the total cost of minor injury litigation claims would decrease and all injured claimants would have access to more appropriate accident benefits. Changes like this could achieve estimated savings of roughly $840 million, of a large enough magnitude to close the Basic rate gap and improve cost control to the point that rate increases could be limited to inflation for five years. As noted earlier in this section these product changes are illustrative, and other alternatives are available to achieve the cost savings targeted.

Key cost outcomes compared to the current state are shown in the chart below.

Chart 35: Breakdown of claim costs and expenses compared to current state (policy year 2016)



The above chart sets out the cost for policy year 2016 under the current product design and under the proposed product changes:

- The cost of litigated minor injury claims would reduce from $718m (or 21% of total claims costs) to $116m (4%), with the biggest reduction arising from the reduction in pain and suffering awards;
- A reduction in legal costs from $845m (or 24% of total claims costs) to $547m (or 21% of total claims costs);
- An increase in the cost of accident benefits from $199m (or 6% of total claims costs) to $349m (or 13% of total claims costs);
- No change in the cost of non-minor injury claims; and
- There may be a small reduction in ICBC claims handling costs, which are not included in the above reduction.

This design is expected to meet the review objectives of solving for the Basic rate gap and trend gap and keeping future premium increases in line with the rate of inflation (for five years).

8.2.7 Objective 3: Freeze Basic premiums (for five years)

In order to be able to freeze Basic auto insurance rates for say five years, significant claim cost reductions and controls would need to be implemented. Implementing such changes would also start to shift the focus of the insurance system to a more care-focused model as opposed to primarily cash-focused. To achieve this objective, a combination of measures would likely be required, such as:

1) Introduce a cap in the range of $4,000 to $6,000 on pain and suffering for minor injury claims (annually indexed to inflation). A lower cap on pain and suffering for minor injuries would bring greater cost control to the system and make freezing rates more achievable. As under Objectives 1 and 2, the cap would only apply for claimants with minor injuries — serious or catastrophically injured claimants would not be affected.

2) Increase accident benefits by 300%. With the additional savings from the lower cap on pain and suffering for minor injuries, accident benefits could be increased four-fold. These enhancements would mean the weekly wage benefit limit could increase from $300 to $1,200 per week, and the current limit on medical payments of $150,000 could increase to $600,000 (all benefits annually indexed by inflation). ICBC remains being the second payer for loss of wages.

3) Introduce additional rules and regulations for the litigated claim process and introduce an independent dispute resolution system as in Objective 2. A combination of measures discussed in Objective 2 could be introduced to achieve the goals of faster resolution of minor injury claims, with lower associated costs and a fairer balance between parties involved.

4) Make medical and rehabilitation costs payable only as accident benefits, no longer available as a single lump-sum benefit. These accident benefits could be available on a "reasonable and necessary" basis for the lifetime of the person injured in a car crash.

The goal of insurance is to restore premium payers to their pre-accident condition. Insurance is not designed to allow the insured to profit from loss as this would be unsustainable and unaffordable. Shifting the focus from cash settlements to claimants' treatment and care is an effective way to ensure they are returned to their pre-accident condition as best as possible and in a more cost-effective manner. By restricting medical and rehabilitation costs to be payable only as accident benefits and on a "reasonable and necessary" basis, claimants' treatment could be better managed by medical experts rather than legal experts.

The provision of medical and rehabilitation as a stream of lifetime benefits on an as-needed basis is incorporated in the benefit structure of schemes in Manitoba and Saskatchewan, as well as in New Zealand, Victoria (Australia) and New South Wales (Australia) following its recent reforms in 2017. Protocols for effective medical and rehabilitation of claimants would need to be implemented to ensure they receive the proper treatment for their injuries up until they have recovered. Setting maximum fee schedules for care providers would also be important to achieve the desired cost control of such changes. It is also important to the integrity of a more care based model that a simplified dispute resolution mechanism be established to resolve questions over accident benefit entitlement, ideally with access to advocates for those claimants that feel they are being treated unfairly.

With the changes described above, the focus of the system begins to shift to claimant care rather than purely cash settlement. Minor injury costs would be further controlled, and all injured claimants would have access to the significantly enhanced accident benefits. Estimated savings of roughly $875 million could be realized, enough to close the Basic rate gap and improve cost control allowing Basic rates to be frozen for five years. As noted earlier in this section, these product changes are illustrative and other alternatives are available to achieve the cost savings targeted.

Key cost outcomes compared to the current state are shown in the chart below.

Chart 36: Breakdown of claim costs and expenses compared to current state (policy year 2016)

The above chart sets out the cost for policy year 2016 under the current product design and under the proposed product changes:

- The cost of litigated minor injury claims would reduce from $718m (or 21% of total claims costs) to $48m (1%), with the biggest reduction arising from the reduction in pain and suffering awards;
- A reduction in legal costs from $845m (or 24% of total claims costs) to $507m (or 19% of total claims costs);
- An increase in the cost of accident benefits of $199m (or 6% of total claims costs) to $449m (or 17% of total claims costs);
- No change in the cost of non-minor injury claims; and
- There may also be a small reduction in ICBC claims handling costs, which are not included in the above reduction.

This objective could achieve the review objectives of closing the Basic rate gap and trend gap. Furthermore, it could potentially freeze premiums for the short-term future, improving the affordability of auto insurance premiums for all British Columbians. This could be achieved by moving some benefit types to a care-based rather than cash-based delivery method.

8.2.8 Objective 4: Reduce Basic premiums

Numerous and substantial changes to the current system are required to achieve either Objective 1, 2 and/or 3 above. This suggests the current system is not working as intended — BC drivers are having to pay significant and increasing auto insurance premiums to fund a system that is returning less than 60% of premiums to the premium payers as claimant benefits. In order to achieve the goal of being able to reduce Basic premiums, one possible option is to fundamentally change the design of the product from its current expensive and adversarial nature to a treatment-focused comprehensive care model.

This would involve the following changes:

1) Significantly enrich accident benefits;
2) No lump sum payments for pain and suffering; and
3) Right to sue only available in instances of driving related criminal offences and certain Motor Vehicle Act violations (e.g. excessive speeding, impaired driving, and for prohibited use of an electronic device).

Rather than receiving limited first-party benefits and having to sue an at-fault third party for damages, richer accident benefits would be available to both at-fault and not-at-fault parties as necessary to return them to their pre-accident condition as best as possible. Being able to avoid the claim litigation process to access these benefits would allow claimants to be treated sooner, allowing care to be as effective as possible. In cases where the at-fault driver is criminally negligent (e.g., drunk driving), the right to sue for damages above the accident benefit limits may be available. Limits would be applied to the maximum medical and rehabilitation fees and possibly a maximum loss of wages, and all these would be annually indexed by inflation.

The level of the accident benefits would be at similar levels to other Canadian provinces such as Saskatchewan and Manitoba, whose insurance systems are similarly designed and have stable claim costs and lower average premiums than BC. ICBC would be the primary payer for loss of wages, unlike in the current scheme and the product design under Objectives 1 to 3.

Premiums would be set based on the experience of the at-fault driver, which is the basis of the current method for determining premiums. High-risk drivers under this model would be charged a higher premium relative to lower risk drivers. A high-risk driver is one that causes more accidents than a lower-risk driver. Therefore there would be no change to the current financial incentive to avoid causing car crashes.

These fundamental changes would achieve a significant improvement in scheme efficiency, with the portion of premium returned to claimants as benefits surpassing 74%, as compared to 58% in the current system. With a greater focus on care as opposed to cash settlements, the high costs of the litigation process are mostly removed from the system and redistributed to claimants as benefits.

Without the uncertainties of the litigation process, claim costs could be better estimated and controlled, allowing premiums to be reduced below today's level.

Such a fundamental change to the system would require significant investment as systems and protocols would need to be overhauled. Dispute resolution processes would also need to be implemented to manage disputes between claimants, medical providers, ICBC, etc.

Estimated savings under this objective could be approximately $1.4 billion by 2019. Similar scheme designs achieve stable costs and highly affordable premiums in Manitoba and Saskatchewan in Canada, and in New Zealand – all are publically managed auto insurance schemes. As noted earlier in this section, these product changes are illustrative and other alternatives are available to achieve the cost savings targeted.

Chart 37: Breakdown of claim costs and expenses compared to current state (policy year 2016)

The above chart sets out the cost for policy year 2016 under the current product design and under the proposed product changes:

- Legal costs would reduce to almost $0 while pain and suffering awards would reduce from $790m to $17m;
- Accident benefits would increase from $199m to $1,175m; and

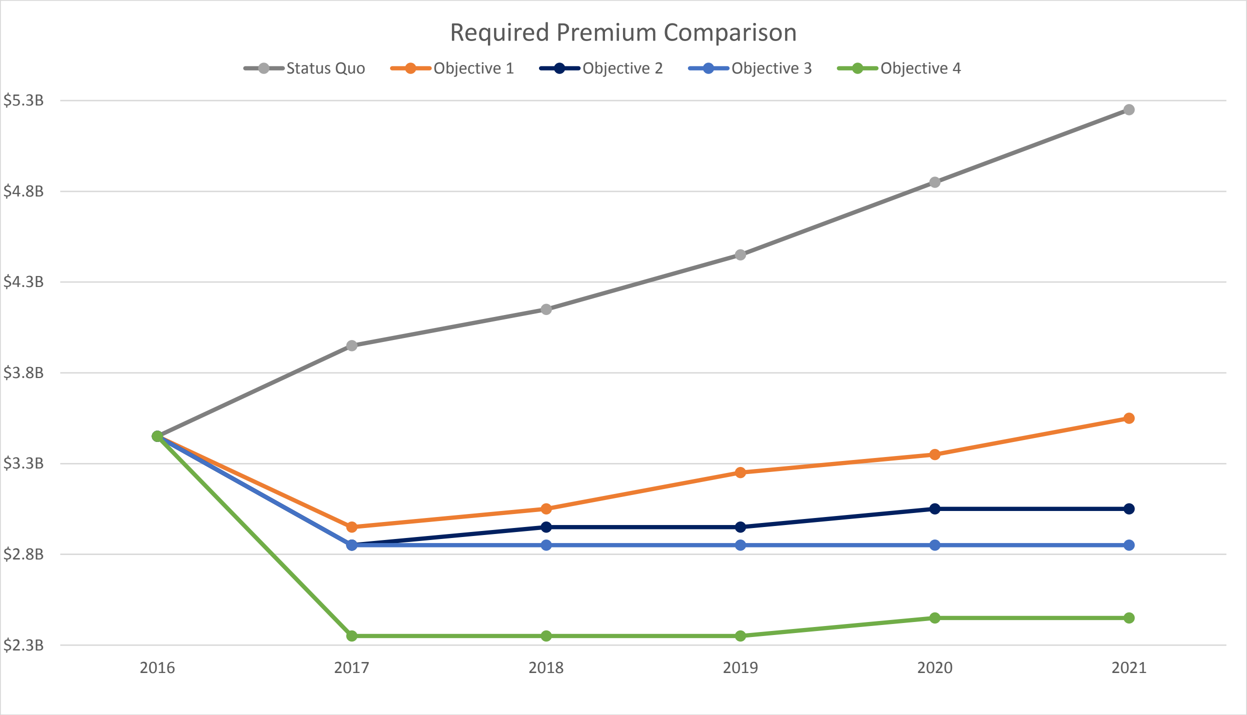
- There may also be a small reduction in ICBC claims handling costs, which are not included in the above reduction.

This objective would represent a fundamental structural change to the entire auto insurance system in BC, which if successfully implemented could bring about substantial reductions in premiums and a more efficient and care-based scheme for all policyholders.

8.2.9 Summary of objectives

The projected premium impact for the Basic product for each objective compared to the current state is illustrated below.

Chart 38: Comparison of projected costs under the current state and each objective



The outlook for premiums under each objective is significantly improved compared to the current system, which, remaining unchecked, would require premium increases of almost 30% by 2019 and over 40% by 2021.

One flow on impact for each product design option above will be to reduce the cost of optional bodily injury coverage as the cost of claims under the Optional coverage that exceed the $200,000 policy maximum for the Basic product for litigated claims would reduce. For example, the cost of the Optional product will reduce for the bodily injury component. We have not estimated the premium reduction for

the Optional product for this cost impact in any of the product options in the four cost-saving objectives.

8.2.10 Product choice

With the product changes discussed above, an option that should be considered is to allow policyholders to purchase optional "top-up" coverage which if purchased, would avoid any reduction in litigated claim benefits under all options. Similar provisions exist in other schemes in Canada (Saskatchewan) and in the US (Pennsylvania). The details of the design would need to be considered and various optional features explored.

The "top-up" coverage would be offered as part of the ICBC's Optional product and would be open to competition. The cost of the "top-up" coverage will depend on the product design.

8.2.11 Supplementary Product Modifications

ICBC is a provincial crown corporation that provides universal public auto insurance to drivers in BC. As owner of a monopoly insurer of the Basic product the province can make policy decisions as to how ICBC prices individual risks. As an example, ICBC can choose to offer lower rates to young drivers than may be actuarially indicated since they will insure these drivers across their driving lives and hence a deliberate choice has been made to smooth rates across age. Similar decisions can be made based on gender, location etc. Opportunities for rating reform should be viewed through this lens to ensure they meet policy objectives.

During the course of our engagement we were provided detailed information regarding the current product structure and rating model. Based on our review of this information against other models in other jurisdictions we believe there are opportunities for other reforms which will improve the fairness of the current product and that should be considered as part of a broader product reform.

Direct Compensation Property Damage (DCPD)
The Third Party liability coverage included in ICBC's Basic product includes coverage for Bodily Injury liability and Property Damage liability. The Property Damage liability coverage provides protection to motorists for damage they cause to property of others in the event of an accident. This includes damage to another motorist's vehicle or in rare cases damage to other property such as a person's fence if you drive off of the road onto someone's property. Since this is a "Third Party" coverage the injured party must make a claim against the liable party to be compensated for damage to their property.

In a number of Canadian jurisdictions the Property Damage liability coverage has been modified to be a Direct Compensation Property Damage[32] coverage.

Direct compensation means that the injured party does not have to sue to be compensated for damage to their property, but instead are compensated directly by their own insurer. This approach has a number of advantages:

- Administrative costs of settling claims for property damage would be reduced;
- It allows for more equitable rating of vehicles based on their claims costs, such as that used by ICBC in the optional collision coverage;
- Fault determination for purposes of rating is not affected by this change;
- As in the optional collision coverage, it allows for the introduction of deductibles which allows consumers to reduce premium levels should they choose.

We recommend ICBC consider replacing the Property Damage liability coverage with DCPD, however we recommend that this coverage remain part of the Basic product. Should this be an optional coverage, consumers who choose not to purchase this product may unwittingly find themselves without coverage for unusual or unanticipated situations such as damage to non-vehicle property, out-of-province exposure etc. We note that the other Canadian provinces that have introduced the DCPD coverage have kept this coverage as part of the mandatory product.

Usage Based Insurance (UBI)

A number of insurers in Canada and other jurisdictions offer consumers the option of participating in a UBI program that is intended to match insurance rates with distance travelled and other driving behaviour such as fast acceleration, hard braking, hard cornering, speed and time of day travelled. This behaviour is monitored electronically and converted into a score which adjusts premiums on renewal. UBI technology allows drivers to monitor their driving behaviour through reports and drivers can modify their behaviour to achieve lower scores and lower premiums. This technology, therefore has the potential to improve driver behaviour, make roads safer and reward good drivers.

Claim Rated Scale (CRS)

ICBC has in place a CRS system which provides customers with either a surcharge or a discount depending on their driving history and previous claims experience. There are 20 levels of discount ranging from 5% to 43% off of the base rate and 10 levels of surcharge ranging from 10% to 205%. Movement on the scale is based on whether or not there was a chargeable claim in the past year and the extent of movement on the scale depends on your current discount/surcharge level at the time of the claim.

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[32] In these jurisdictions DCPD only covers damage to the automobile. Damage to other property is covered by PD liability. It may not be necessary for ICBC to separate out property damage liability to vehicles from other property since they are a monopoly insurer, however this should be explored in greater detail

Engaging in what are known to be high risk driving behaviours leading to convictions for speeding above posted limits, driving while impaired or distracted driving, currently have no impact to a drivers level of discount in the CRS system.

Clearly, the goal of rewarding good drivers and penalizing poor drivers is not being met by the CRS system. ICBC has recently announced changes that will result in quicker recognition of multiple claims in the CRS system, however we do not believe this will provide sufficient differentiation between those with poor driving experience from those with good driving experience and recommend that alternative models be explored to improve this mechanism.

8.3 Interim measures

Over the years and with particular focus since 2012, ICBC has either completed, or is in the process of delivering against, a number of initiatives to reduce costs borne by the Basic insurance scheme. Costs have been reduced from a wide range of operational, staffing and technology initiatives across the organization and its partners. Such initiatives include reductions in management costs and operating budgets, significant productivity gains in claims management and handling initiatives, quality assurance and fraud mitigation programs, and strategic sourcing.

8.3.1 ICBC's progress against prior recommendations

EY conducted a high-level review of ICBC's current state claim operation and evaluated progress against recommendations from previous reviews undertaken by the corporation over the past few years. ICBC has made significant progress and has implemented numerous initiatives aimed at reducing costs associated with claims handling, while also focusing on increased customer satisfaction. Included in these initiatives is ICBC's Operational Excellence program, which integrates Lean methodologies into the claims operation to drive continuous improvement and process efficiency. The following table describes the progress against the review recommendations that ICBC has achieved (resulting in over $100 million in savings) over the past few years, through a dedicated focus on operational, staffing and technology initiatives.

Table 27: ICBC progress against review recommendations

Prior recommendation	Status
ICBC should develop a retrospective claim Quality Assurance (QA) Program that focuses on both timely completion of key claim activities along with a rigorous qualitative analysis of claim subprocesses.	Currently in progress. QA program is in the process of being formally defined and implemented.
Contract with third-party resource or create in-house specialized medical unit within the claims operation to assist in reviewing and analyzing medical exposures.	Currently in progress as suppliers have been identified though an RFPQ process. Targeted implementation of summer 2017.
Increase training on common medical aspects that lead to high exposure claims such as soft-tissue injuries, impact of comorbid conditions, subjective diagnosis and evidence-based medicine.	ICBC developed additional training courses focused on the medical aspects that can lead to high exposure claims.

Prior recommendation	Status
Increase training on settlement planning and negotiation.	ICBC is currently evaluating solution options, including input from plaintiff counsel. In 2014, ICBC developed four instructor-led negotiation courses, which have been continuously updated and modified.
Continued planned claim analytics initiatives specifically around severity predictive modeling and fraud identification leveraging ClaimCenter capabilities.	Currently in progress as a fraud analytics vendor was identified and a proof of concept was completed. The analytics engine is currently being used, and full implementation of the fraud analytics initiative is slated to be complete by November 2017.
Broaden competitive procurement activities.	In progress. Some strategic sourcing initiatives still waiting approval or paused by government for further review.
In order to better understand the impact on claimants and overall costs, ICBC should track the original offer vs. the ultimate payout. It would also be very helpful to better understand what percentage of payout, on average goes to the claimant vs. the lawyers.	As part of the ClaimCenter implementation, individual offers can now be tracked and reported on.
Take a stronger stance on borderline and suspicious claims via targeted litigation, as needed. Consider enhanced litigation strategy protocols on claims with minor vehicular damage.	ICBC's Special Investigation Unit has been increased and a greater focus has been placed on suspicious claims as part of ICBC's ongoing Counter Fraud Strategy.

In any other operating environment, the savings achieved to date would have been considered a significant management success. However, the growing premium rate gap caused by the recent increases in accident and claims trends in BC has readily consumed those savings, and at the same time highlighted a much bigger series of cost pressures that internal productivity and efficiency gains cannot and will not address.

8.3.2 Observations on the current state operating model

The current claims operations strategy is heavily tailored to the unique challenges ICBC faces operating a public auto insurance model in the province of BC. Given the current litigation-based model, ICBC's claims operation is focused primarily on productivity and resolving claims as quickly as possible, with a goal of resolving claims prior to legal representation and limiting the costs and disbursements owed at the time of settlement.

- **Segmentation and workflow** – The claim workflow is largely dictated by whether or not a claimant has retained counsel and then secondarily segmented by severity of injury and by which firm has been retained. Rather than triaging and assigning claims based on the injury severity, the primary segmentation is based on legal representation.

- **Productivity goals** – Adjusters largely are focused on reaching productivity and closure goals that are centred around claim cycle time and early resolution of claims.

This production-based operating strategy is not common among injury claim operations in the industry. While this strategy is appropriate based on the challenges posed by the current BC system, in the event of product reform, significant changes to the operating model will be required. ICBC will need to shift from a production-focused environment to a more standard claim operating model that is focused on case management of treatment, thorough claim investigations, evaluations, and efficient and fair resolution for all parties.

8.4 Incremental impact to the future performance of insurance

While the major reform efforts are being planned and executed, there are a number of initiatives that ICBC can and should take in the areas of operational improvements to minimize financial losses in the interim. Previous reviews as well as ICBC management have identified a large number of cost savings initiatives, some of which were completed, others that are in progress (e.g., QA and fraud programs), and a number of which have not yet received final approval for implementation (e.g., strategic sourcing for auto repair and treatment costs). There are also cost savings in ICBC's financial forecasts associated with some initiatives pending final government approval.

With that said, there remain a number of outstanding initiatives that have been identified by the Board and management that are still to be implemented, and although they cannot solve ICBC's rate and trend gap outlined in this report, they are important and prudent steps to minimize ICBC losses in the short term. Some of these key initiatives are described below.

For simplicity's sake, we would recommend that a rapid refresh/validation is done on the existing cost savings initiatives, and that they are prioritized based on alignment to strategy, cost-saving potential and ease of implementation. Recognizing that the main reform activities around road safety and product reform are going to drive the bulk of the savings and have the only material impact on rates, and that the organization has a limited amount of capacity, the highest priority initiatives should be

undertaken at a pace that doesn't distract the organization from its more significant change agenda. In addition, ongoing innovation and performance improvement processes should be continued, to find additional incremental improvements in future years.

8.4.1 Claims cost-saving recommendations

Absent any product reform, two in-flight claim initiatives (once fully implemented) have the potential to drive additional claim cost savings:

- ICBC is in the midst of developing and implementing a formal retrospective claim Quality Assurance Program that focuses on both timely completion of key claim activities along with a rigorous qualitative analysis of claim processes.
- At the forefront of ICBC's counter fraud strategy is the utilization of an algorithmic, data-driven fraud detection tool that can be used to identify claims that have a higher potential for fraud. Since 2016, ICBC has been working with its analytics vendor on developing a detection tool and has already completed a proof of concept. Based on the proof of concept, ICBC estimates approximately 10,000 special investigation unit (SIU) referrals will be generated on an annual basis across both bodily injury and material damage. It is anticipated that the tool will be in full production by November of 2017.

Organizations that successfully implement leading practice Quality Assurance and Fraud Mitigation programs have experienced savings between 2% and 3.5% of overall claim severity. Given the unique nature of the BC system, EY estimates potential savings on the lower end, between 1% and 2% of annual claim costs (approximately $30–$60 million in annual savings). ICBC could expect to begin to experience savings approximately one year post full implementation of these two programs.

In addition, there are a number of previously identified strategic sourcing initiatives, including the tiering of auto insurance suppliers to drive better customer service and cost savings, an update of glass moulding policy, standardized costing for medical assessments and reports, which should be revisited based on the significant savings that could be made.

8.4.2 Driver risk premiums: higher-risk drivers should pay for their choices and behaviours

ICBC's current insurance model does not adequately price driver behaviour and choices, having not incorporated any significant rate design changes since 2007. As a result, a driver's individual Basic premium no longer reflects the risk and cost that they impose on the Basic insurance system. Fundamental changes to ICBC's rating scheme – targeted at increasing fairness in Basic rates, while also mitigating Basic cost pressures – will help reduce pressure on Basic insurance by promoting a cultural shift toward safer driving, increasing revenues from high-risk drivers (including appropriately pricing premiums for those that choose to drive high-value luxury vehicles) and reducing claims costs.

High-Value vehicle Surcharge

Recognizing the rapidly increasing costs to repair high-value vehicles, government recently approved a high-value vehicle (HVV) Basic surcharge of 100% on vehicles over $150,000. We believe this was a positive step but would recommend going further to achieve greater fairness in rates recognizing the extra costs being borne on the insurance system and all policy holders by expensive luxury vehicles. EY recommends the introduction of a sliding scale pricing model which would apply to the same group of vehicles based on the vehicles value over the threshold. For example, applying a $1,000 surcharge to vehicles above the $150,000 threshold plus an additional $7 premium for every $1000 between the threshhold amount and the MSRP

Example:
For a $180,000 vehicle the HVV premium is $1000 + $210 = $1210
For a $575,000 vehicle the HVV premium is $1000 + $2975 = $3975

A sliding scale approach would offer a fairer distribution of premium costs amongst high-value vehicle owners and would increase annual revenue from this initiative. The sliding scale surcharge option is expected to generate an estimated $2.5 - $3m in annual premium.

Public consultation in 2012 (Basic Vehicle Insurance Rating System Consultation and Engagement) has informed a number of preferred strategies to better set premiums for Basic vehicle insurance coverage. Customers have told ICBC they think the system would be fairer if lower-risk drivers paid less for their vehicle insurance, and higher-risk drivers paid more. Regardless of the current or future choice of product structure, ICBC needs to change its pricing and risk model to be able to clearly identify and penalize higher-risk drivers, and conversely improve the reward system for those who drive safely. ICBC has committed to its regulator, BC Utilities Commission, to move to a system that better recognizes driving records. It is estimated that a modernized pricing and risk model could generate up to $80m in claim savings per year. We recommend that detailed design on fair pricing and a modernized risk model commence immediately.

8.4.3 Regulatory oversight

ICBC is currently regulated by the BC Utilities Commission. The current system is based on a utility model and was not built for purpose – the annual rate filing and intervenor process is time consuming, expensive and inefficient. The future requirements of the organization will require a nimbler approach to competitive pricing and the ability to respond to customer requirements and to evolve the system in an intelligent, responsive manner. There may be other models that would achieve these goals more efficiently, and we encourage a review of the governance and regulatory framework.

8.4.4 Non-insurance revenue opportunities

There may be further opportunities to reduce costs or free up revenue though further examination of non-insurance services. For example, we would encourage the progression of analysis related to the viability and fit of services such as salvage operations. ICBC has significant real estate holdings, which may also represent potential unrealized value. Other jurisdictions have moved more assertively into

the auction and sale of specialized license plates (vanity plates). Again, while these will not solve the fundamental financial issues, they may represent financial opportunities for the corporation.

9. Summary and implementation plan

The reform of BC's auto insurance system is not going to happen overnight, and a thoughtful and measured approach is required. We recommend structuring the reform efforts in several parallel streams: those that require stakeholder consultation and the development of new policy and legislation (including road safety and product reform) and those interim measures that can and should be undertaken immediately to minimize ongoing losses and to set the foundation for successful reform.

Experience would show that there are a number of critical success factors that should underpin the implementation approach:

- Robust and inclusive public and stakeholder consultation results in better policy development and ultimately a stronger legislative framework. It is also critical for gaining support for the case for change. Key stakeholders include various levels of government, the public, medical professions, regulators, the legal community, key suppliers and special interest groups.
- The program must be managed as an integrated portfolio given the many dependencies between the streams.
- Investment in change management is essential – the impact on the system and supporting organizations (ICBC, brokers and other key stakeholders), employees, and the nature of work they undertake cannot be underestimated.
- Progress and outcomes must be carefully monitored and value should be delivered throughout the implementation time frame.
- Dedicated leadership and bringing the right talent to the table is critical.
- Momentum is important – it needs to proceed at pace.
- Reform is not a one-time effort – the overall system will require ongoing maintenance and must be designed to evolve over time.

Chart 11 (Section 2.4) outlines an illustrative and high-level implementation approach, designed to deliver the reform outcomes within two years through a series of immediate initiatives and those that require ongoing and longer-term consultation and development. There would also be ongoing efforts of refinement and incremental improvement activities, which would continue into the future. The key streams of activities are described in greater detail below:

1. Policy and Legislative Framework Development:

   a. The development of strong public policy informed through comprehensive consultations is an important first step and will support both the Road Safety and Product Reform streams of work. Good public policy stands the test of time and will feed directly into the development of smart and practical legislation as well as supporting regulations. This process is somewhat iterative and is expected to last approximately a year.

2. Road Safety:

   a. Road Safety Vision and Governance – Road safety involves a number of different authorities including the Ministry of Transportation, Solicitor General, police.

RoadSafetyBC and municipalities. A provincial vision needs to be agreed to, and then the proper leadership structure and accountabilities must be clarified as there is a lack of clarity within the system today. There is important work to do in terms of defining allocation of resources and funding mechanisms as well as tracking performance against targets and outcomes.

b. Road Safety Delivery and Culture – Detailed design of an integrated approach to address the key causes of crashes: distracted driving, speed and impairment. Initiatives include expanding and optimizing intersection and speed cameras, deployment of more road safety unit officers, solutions to address distracted driving, improved road infrastructure and design of convictions and penalties to impact driving records and premiums. This suite of initiatives is aimed to change driving culture and behaviour and will be reinforced through driver education, enforcement and increased awareness.

3. Product Reform:

a. Product Design – Detailed product design will need to be undertaken to refine the key elements of the product portfolio, including establishing what specifically will be included in the Basic product and what elements of choice will be offered within the Optional offerings. This will feed into the legislative process. Specific claimant benefits will also need to be defined, and the whole portfolio will be supported by detailed pricing and risk models.

b. Operating Model and Implementation – Once the detailed product design has been completed this stream of activity is focused on understanding the impact on people, processes and technology and then designing and executing on the implementation. A shift from a litigation-based to care-focused model will have a significant impact on the organizational construct, business processes and skills required to support this model. Staff will need to move towards essentially a treatment case management function and away from legal process management, which will necessitate the definition of a new business service model, target operating model, roles and skills definitions. Data requirements will need to be defined, and changes to the risk rating engine and PolicyCenter and ClaimCenter applications, amongst others, will need to be delivered.

4. Interim Measures:

a. Finally, there are a bundle of activities that should begin now in order to drive incremental savings as well as establish a strong foundation for successful reform. These include:

    i. Implement some specific claims efficiency and cost savings initiatives such as completion of the QA and fraud programs and the strategic sourcing portfolio;

    ii. Validate and refine the auto insurance governance and regulatory model for greater efficiency and effectiveness;

    iii. Modernize the risk rating and pricing model to provide greater fairness and better reflect the risks related to driver behaviour and choices (e.g.,

implementation of sliding scale pricing for luxury vehicles, including convictions and penalties within pricing design);

iv. Analyze non-insurance revenue and funding sources to ensure better alignment and allocation; and

v. Continue to innovate and bring forward other cost savings initiatives such as rationalization of the real estate portfolio, potential sale of non-core assets, and additional revenue sources such as vanity plates, etc.

The entire implementation program would be supported by a strong governance model, program and risk management, and strategic stakeholder consultations.

Appendix 1: Jurisdictional comparison: performance, product and policy

This appendix contains a summary of the information gathered in an international jurisdiction scan in respect of auto insurance product and covers:

- **General information** including population, auto numbers insured, type of insurance model (public or privately underwritten), coverage provided, key legislation, interaction with health system, regulatory model and other relevant information
- **Benefits and compensation available** including a summary of key benefits available by type (e.g. loss of wages, medical) and the form of delivery (e.g. litigation, accident benefits)
- **History of reform** including an overview of recent reforms (if any), drivers and objectives of reform, summary of main changes and impacts
- **Premium system** provides a short summary of rating variables and limitations imposed
- **Key metrics** provides a summary of the measures used in this report (such as affordability and efficiency) plus base information used in those metrics (e.g. number of claims, number of accidents/casualties, average weekly wage, etc.)

The information gathered through the jurisdictional scan on road safety is contained in the body of the report.

The information provided in this appendix is based on publicly available data and information. Consequently:

- The results should only be used as a general guide to the differences between the performance of each jurisdiction due to the limitations noted below
- There are gaps in the public information available which vary from jurisdiction to jurisdiction
- Definitions of metrics can vary between jurisdictions and as we do not have access to the underlying data we are relying on the publicly available results are on a consistent basis between jurisdictions. Even the definition of the underlying data may vary by jurisdiction

The approach we took in identifying the relevant jurisdictions was:

- As noted above we focused on auto schemes where there was sufficient public information available to provide a sensible comparison to BC
- Focused on a sample of jurisdictions most relevant to the scope of work including examples where the scheme had similar experience to BC and how they dealt with the issues. The intention was to provide a reasonable spectrum of examples
- We focused on developed countries as they are the most relevant having well developed social and economic infrastructures and auto schemes to compare against BC.
- The following countries were deemed to be of most relevance for a comparison against BC due to their social and economic infrastructures, legal frameworks, product design and available information:
    - Other Canadian provinces
    - USA (selected states)
    - UK
    - Australia (selected states)
    - New Zealand

Australia overview

Metrics by Jurisdiction	**New South Wales, Australia**	**Victoria, Australia**	**Queensland, Australia**	**New Zealand**
Model for mandatory product	Privately underwritten	Publically underwritten	Privately underwritten	Publically underwritten
Scheme coverage	The CTP scheme covers not-at-fault claimants with some at-fault coverage. Not at fault injured person can include: - the driver - passengers - someone else driving your vehicle - driver and passengers in another vehicle - motorbike riders and pillion passengers - cyclists, pedestrians and other road users If at fault, cover for the first $5000 of treatment costs and lost income incurred in the first six months after an accident. Contributory negligence results in reduced benefits for partly at fault: - driving at an unsafe speed - travelling in a vehicle when you knew the driver was affected by alcohol or drugs - not wearing a seatbelt - not wearing a helmet on a motorcycle or bicycle - under the influence of alcohol or drugs Special protections: - Children (All children under 16 who are residents of NSW and injured in motor accident in NSW are covered by a Green Slip, regardless of who is at fault - Close relative dies (if a close relative dies in an accident caused partly or completely by another driver) - Blameless accident e.g. vehicle has an unexplained failure or a	The TAC covers transport accidents directly caused by the driving of a car, motorcycle, bus, train or tram. The TAC can provide support services for people injured in a transport accident as a driver, passenger, pedestrian, motorcyclist, or in some cases, a cyclist. Interstate accidents covered if involving a Victorian registered vehicle. The TAC can pay benefits to an eligible client injured in a transport accident involving a registered and/or an insured motor vehicle on private land. However, the TAC is unable to pay benefits to any person injured as a result of a transport accident involving an unregistered/uninsured motor vehicle on private land and where no transport accident charge has been paid (Transport Accident Act 1986 reference: s.41A and s.41B).	A CTP claim can be made if injured in a motor vehicle crash in Queensland due to fault of the driver, owner or another person insured under a CTP insurance policy. A claim can be made if partially at fault, but compensation may reduce. The Nominal Defendant is established under the MAI Act to provide access to compensation for injured persons where the at-fault vehicle is uninsured or cannot be identified. The Nominal Defendant is also required to meet the cost of claims in the event a CTP insurer becomes insolvent (as was the case with FAI, a licensed CTP insurer and subsidiary of the HIH Insurance Group which collapsed in 2001). Compensation cannot be claimed if the injured person was totally at fault or no-one was at fault. Insurers may offer limited additional benefits for at fault driver cover for serious injuries or death. Since 1 July 2016, an at-fault driver or any other person who sustains catastrophic injuries as a result of a motor vehicle accident, may be eligible to receive lifetime medical, care and support services under the new National Injury Insurance Scheme Queensland (NIISQ).	All New Zealanders and visitors to New Zealand who get injured can apply for help. Catastrophically injured parties are also covered by the ACC. Everyone in New Zealand is eligible for comprehensive injury cover: - no matter what you're doing or where you are when you're injured, e.g. driving, playing sport, at home, at work - no matter how the injury happened, even if you did something yourself to contribute to it - no matter what age you are or whether you're working – you might be retired, a child, on a benefit or studying.

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	driver has a stroke and causes an accident - Those who are catastrophically injured are supported by the Lifetime Care and Support Scheme (icare lifetime care) regardless of fault. In NSW all insurers are required to be part of the Nominal Defendant fund. Where a vehicle is uninsured, or unidentified the injured person can make a claim through the Nominal Defendant, meaning they don't go without adequate treatment or compensation.			
Benefits available	Fault-based (with exceptions) Common law with restrictions At fault claims receive up to $5,000 in benefits	Hybrid No fault Defined benefit Common law restricted to the most seriously injured	Fault-based Common law with restrictions	No fault Defined benefits No access to common law
Regulatory body	State Insurance Regulatory Authority (SIRA) Funded by levy on premiums The Motor Accidents Insurance Regulation (MAIR) branch has assumed the functions of the former Motor Accidents Authority as the regulator of the state's privately underwritten compulsory third party personal injury insurance scheme. It is responsible for monitoring insurer performance, supporting road safety initiatives and promoting optimal recovery for injured people. A Medical Assessment Service (MAS) deals with disputes in relation to medical and care treatment plus assessment of whole person impairment A claims Conciliation and Resolution Service (CARS) is an alternate dispute (i.e. not court based) process for to speed up resolution of claims at a lower cost. Parties can request an	Transport Accident Commission (TAC) does not view itself as regulator - view Treasury as regulator Funded by vehicle registrations The TAC is a Victorian Government-owned organisation whose role is to promote road safety, improve the State's trauma system and support those who have been injured on the roads. Disputes are managed via an internal review within the TAC (no legal representation is required) which is conducted by an area independent of the management of the claims. A high proportion of disputes are resolved at this stage. The second step is an application to the Victorian administrative appeal tribunal which is a multi-purpose tribunal (i.e. not just for auto claims). Very few claims proceed to a court process.	Motor Accident Insurance Commission (MAIC) Funded by levy on premiums MAIC is responsible for: ‣ ensuring people injured in road accidents receive fair compensation ‣ compensating people who are injured as a result of the negligent driving of an unidentified or uninsured motor vehicle through the Nominal Defendant ‣ ensuring Queensland motorists receive affordable premiums ‣ the regulation of insurers' activity and compliance ‣ meeting any claim costs of an insolvent insurer.	Accident Compensation Corporation (ACC) Funded by levies on petrol use and motor vehicle licensing fees As a Crown organisation, their role is set out by the Government. ACC is responsible for: - preventing injury - making sure people can get treatment for injury, if it happens - help people get back to everyday life as soon as possible.

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	exemption from CARS for complex matters and other specified cases (e.g. infant claims).	Limits are imposed for legal fees per dispute which are quite low		
Legislation/ Acts	State Insurance and Care Governance Act 2015 Motor Accidents Compensation Act 1999 Motor Accidents Compensation Regulation 2015 Motor Accidents Compensation (Determination of Loss) Order 2009 Motor Accidents Compensation (Determination of Non-Economic Loss) Order 2009 Motor Accidents Act 1988 Indexation of Damages, Section 79 and 79a - Motor Accidents Act 1988 & Section 125 and 134 - Motor Accidents Compensation Act 1999 Motor Accidents (Lifetime Care and Support) Act 2006 Motor Accidents (Lifetime Care and Support) Regulation 2015	Transport Accident Act 1986 Transport Accident Regulations 2007 Transport Accident (Impairment) Regulations 2010 Transport Accident (Administration of Charges) Regulations 2011	Civil Liability Act 2003 Civil Liability Regulation 2003 Motor Accident Insurance Act 1994 Motor Accident Insurance Regulation 2004	Accident Compensation Act 2001 Official Information Act 1982 Privacy Act 1993
Interaction with Health System / Social Security System	Compensation received from a CTP claim can affect the amount of social security (Centrelink) income support being received. When a claim reaches judgment or settlement and is for more than $5,000 including all legal costs, repayments need to be made for Medicare benefits, nursing home benefits, residential care or home care subsidies that will be made in the course of the claim.	Same comments as NSW for the interactions with the social security system/health system (Centrelink/Medicare)	Same comments as NSW for the interactions with the social security system/health system (Centrelink/Medicare) If you are unable to claim compensation you will need to rely on sick leave, Centrelink benefits, Medicare and the public health system unless you have other insurance policies such as income protection or private health insurance.	The ACC covers loss of earnings due to accidents. The other systems support New Zealanders for all other reasons. ACC benefits for injuries from accidents may affect the NZ Super allowance.
Fraud - estimated costs	Fraudulent and exaggerated claims cost NSW motorists as much as $400 million per year. This is estimated to add around $75 to the cost of each Green Slip. A CTP Fraud taskforce was established in 2016 and to date has made arrests following	When endeavouring to reduce fraud across the scheme the following enforcement action was taken during 2015/16. There were 21 prosecutions finalised through the Magistrates Court. In sixteen (16) cases, a conviction was recorded and a total of $563,655 in restitution was awarded to the TAC. Nine	It is also worth noting that while the Scheme receives over 6,500 claims each year, less than ten cases a year are referred by CTP insurers to MAIC as being potentially fraudulent. It is in insurers' interests to be vigilant to such activity; hence the low referral numbers could	The ACC estimated up to 11 per cent of its more than $2.5 billion annual spend was being misappropriated by exaggerated injuries and medical providers inventing "phantom" clients. "Total fraud is estimated by ACC to be somewhere between 8-11 per cent of total entitlements

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	investigations into claimants and scheme providers including legal firms and medical services.	(9) matters are currently before the courts at various stages where TAC is alleging fraud against the scheme totalling $253,887. Forty-nine (49) warning letters for breaches of the Act relating to fraud and providing false information to the TAC were sent to clients, Medical and Service Providers incorporating demands for reimbursement of $302,205.	be interpreted as an indicator that fraud is not a significant problem in the Queensland CTP Scheme. (2016 Scheme review discussion paper)	paid," the report said. (Based on a news article on 29 Oct 2014, which states that an unofficial report by the Serious Fraud Office in February 2013)
Population (millions)	7.7	6.0	4.9	4.7
Exposure / Number of registered vehicles (millions)	6.1	4.75	4.9	3.9

Benefits available

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
Overview of benefits	Primarily lump sum Economic loss (lost income and loss of future income) Treatment and care Non-economic loss / General damages (pain and suffering) Death (medical, funeral costs, loss of financial support/earnings/services from the relative who died) Legal fees	Primarily defined benefit with limited access to lump sum (through common law) Economic loss Treatment and care Lump sum impairment benefit Non-economic loss / General damages Death Legal fees	Primarily lump sum Economic loss Treatment and care Non-economic loss / General damages Death Legal fees	Periodic benefits and lump sum Economic loss Treatment and care Non-economic loss / General damages Death
Non economic loss benefits	Only available if Whole Person Impairment (WPI) is greater than or equal to 10%, damages capped at $521,000	Access to common law only available to those injuries defined as serious or a WPI over 30% Only available if assessed at more than $52,770 Capped damages at $528,050	Variable amount based on an assessment of the injury using an Injury Scale Value (ISV) between 0 and 100. Capped damages at $358,000	Level of impairment must be 10% or more and injury after 1 April 2002 to be eligible for a lump sum payment Capped damages at $100,000 and impairment of 80% or more
Economic loss benefits	No fault: Limited benefit under the Accident Notification Form (ANF) for lost earnings made after treatment expenses have been paid Common Law: 100% of past losses and estimated future lifetime losses awarded at common law (capped at $4,777 net per week – as at 1 October 2016, adjusted annually)	No fault: 80% of pre-injury earnings (excl. first 5 days) subject to caps and drop-downs. Overall maximum of $99,200, ceasing at 3 years unless seriously injured (i.e. over 50% Whole Person Impairment (WPI)). A work capacity assessment determines ongoing entitlement to benefits. Common Law: Restricted access to future economic loss at common law - capped at $1.1m. Access to common law is only available to those injuries defined as serious or a WPI over 30%.	No fault: not applicable Common Law: Capped at 3 times average weekly earnings in Queensland (currently $4,380.90 gross based on May 16 Average Weekly Earnings – Ordinary Time (AWOTE) for Queensland)	Up to 80% of pre-incapacity weekly earnings after being off work for a week. Subject to a maximum which is adjusted each year
Medical / Treatment / Care benefits	Past and future costs: negotiated and paid at settlement Gratuitous care: only if assistance is needed for at least 6 hours per week and for at least 6 consecutive months of the year	Past and future costs: available as part of the injury management plan, subject to an excess ($629) Gratuitous care: not recoverable Not available at common law	Past and future costs: negotiated and paid at settlement Gratuitous care: only if assistance is needed for at least 6 hours per week and for at least 6 consecutive months of the year	The Accident Compensation (Liability to Pay or Contribute to Cost of Treatment) Regulations 2003 sets out the types of treatment and amounts that are paid. These regulations are set by government. Gratuitous care: based on an assessment by ACC and can be provided by an ACC contracted agency, non-contracted agency, private caregiver. ACC pays

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
				agencies up to an approved amount. Co-payments may be required when using a non-contracted agency charging a higher rate.
Death / Funeral benefits	You can claim for: medical expenses funeral costs loss of financial support from the relative who died loss of services, such as the care of a parent for a child loss of earnings from your relative from their injury until their death You may be able to claim even if the relative who died was partly at fault in the accident.	Support with funeral/burial and cremation expenses (maximum amount of $15,010) Travel and accommodation expenses to attend a funeral, burial or cremation (up to $5,000 per family) Support with family counselling (maximum of $15,920 per family) Support for a dependent spouse or partner (lump sum up to $178,540, weekly payment and/or support at home) TAC support for dependent children (lump sum of up to $178,540, legal guardian $175 each week for each dependent child, education allowance of $2,850 per year)	Examples of loss that may be claimed by a relative or dependant of the person who sustained a fatal injury are: - reasonable funeral costs - financial loss arising from the death of an income provider (this could be claims from the surviving spouse, including de facto partner, dependent children and other dependent persons).	Lesser of the actual costs of the funeral; or $4,500. Pay a survivor's grant for a deceased claimant as follows: (a) to a surviving spouse or partner of the claimant, $4,702.79 but, if there is more than 1 surviving spouse or partner, the Corporation must divide that amount equally between them: (b) to each child of the claimant who has not yet turned 18 years, $2,351.40: (c) to any other dependant of the claimant, $2,351.40. The amount of any weekly entitlement to payment for child care per child is as follows: (a) if the number of children of a deceased claimant entitled to payment for child care is 1, $100; and (b) if the number of children of a deceased claimant entitled to payment for child care is 2, $60; and (c) if the number of children of a deceased claimant entitled to payment for child care is 3 or more, $140 divided by the number of children of the claimant for whom payment is being made.
Other benefits	Legal fees are regulated, with contracting out available as agreed between lawyers and claimants	Lump sum impairment benefit paid if WPI exceeds 10% according to a scale based on WPI assessment Legal fees payable subject to court scale	Legal fees by conference, as agreed between parties. For court settlement, varies by accident period and settlement amount relative to earlier negotiation amounts; for the most recent period, fees are subject to a lower settlement threshold of $43,020, with the fees limited to $3,600 if benefit is less than $71,730	Treatment and rehabilitation costs for vistors who are injured in an accident that occurred whilst in New Zealand. Covers accidents that occurred overseas but only for the costs incurred after returning to New Zealand.

History of reform

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
Overview of recent reform activity	2016 scheme review 2013 scheme review	No recent reform activity, only slight amendments to legislations.	The 2016 scheme review has recently been completed with a number of recommendations.	No recent reform activity, only slight amendments to legislations.
Drivers of reform	- Reduce the time it takes to resolve a claim - Increase the proportion of benefits provided to the most seriously injured road users - Reduce the cost of Green Slip premiums - Reduce the opportunities for claims fraud and exaggeration.	Not applicable	Focus on scheme affordability and efficiency and to identify sustainable savings to assist with offsetting the cost to motorists of the new National Injury Insurance Scheme (Queensland). Review whether previous reforms are having their intended effect and investigate new options to further improve the affordability, efficiency, fairness and flexibility of Queensland's CTP Scheme.	Improve flexibility in the Scheme, help contain rising costs to provide value for money services, and encourage closer working relationships between government agencies and ACC.
Key objectives / intents	This Act establishes a new scheme of compulsory third-party insurance and provision of benefits and support relating to the death of or injury to persons as a consequence of motor accidents. For that purpose, the objects of this Act are as follows: (a) to encourage early and appropriate treatment and care to achieve optimum recovery of persons from injuries sustained in motor accidents and to maximise their return to work or other activities, (b) to provide early and ongoing financial support for persons injured in motor accidents, (c) to continue to make third-party bodily insurance compulsory for all owners of motor vehicles registered in New South Wales, (d) to keep premiums for third-party policies affordable by ensuring that profits achieved by insurers do not exceed the amount that is sufficient to underwrite the relevant risk and by limiting benefits payable for minor injuries,	Not applicable	Not applicable - no changes to legislation arising from the 2016 scheme review	Not applicable

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	(e) to promote competition and innovation in the setting of premiums for third-party policies, and to provide the Authority with a role to ensure the sustainability and affordability of the compulsory third-party insurance scheme and fair market practices, (f) to deter fraud in connection with compulsory third-party insurance, (g) to encourage the early resolution of motor accident claims and the quick, cost effective and just resolution of disputes, (h) to ensure the collection and use of data to facilitate the effective management of the compulsory third-party insurance scheme			
Key changes made to legislation or guidelines through reform process	- Introduction of Motor Accidents Injuries Act 2017: - Establishes a hybrid scheme - Provisions for a statutory income, medical and care benefits for up to six months for all injured people, without any need for fault to be proven. - Removal of access to common law damages for soft-tissue and minor psychological and psychiatric injuries - Reduce opportunities for fraudulent and exaggerated claims by providing statutory benefits for soft-tissue and minor psychological injuries for up to six months and removing access to the common law system - Gives the regulator stronger powers to investigate fraud as well as for prosecution and enforcement, and penalties will be increased for people abusing the system - Regulator power to impose a risk equalisation mechanism to stop insurers targeting low risks and avoiding high risks. - Reduce fraudulent and	Not applicable	In 1994, the Scheme underwent significant reform with the objective of earlier resolution of claims and a strong focus on the provision of early rehabilitation services for claimants. In 1999, a major review of the Scheme culminated in significant legislative amendments in 2000. The key reforms were the introduction of an Affordability Index, a competitive premium model also known as the Vehicle Class Filing Model, streamlining of claims processes and minor changes to claimant benefits. The last review of the Scheme was conducted by MAIC in 2010, the outcome of which focussed on reducing delivery and acquisition costs, and promoting greater price competition between insurers by prohibiting the payment of commissions and other inducements to intermediaries such as motor	Not applicable

Metrics by Jurisdiction	**New South Wales, Australia**	**Victoria, Australia**	**Queensland, Australia**	**New Zealand**
	exaggerated claims - New and enhanced dispute resolution model		dealers. This change was complemented by other initiatives aimed at encouraging consumer choice.	
Observed impacts following reform	Not applicable	Not applicable	Not applicable	Not applicable

Premiums

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
Premium policy	Motor accidents premiums determination guidelines Section 24 of the Motor Accidents Compensation Act 1999 Guiding principles The primary objects of the Act relating to a premium framework are to: - promote competition in the setting of premiums - keep premiums affordable - ensure that insurers charge premiums that fully fund their anticipated liability - ensure that insurers, as receivers of public money that is compulsorily levied, account for their profit margins - SIRA seeks to achieve a balance between these objectives in managing third-party insurance premiums.	The TAC Charge for a motor vehicle varies according to several factors and the charge is determined by VicRoads when the vehicle is registered for the first time. (see rating factors) The Transport Accident Act 1986 provides for TAC Charges to be automatically indexed by inflation (CPI) on 1 July each year.	Since 1 October 2000, the Scheme has operated a competitive Vehicle Class Filing Model, based on a community rating philosophy (all owners of a particular class of vehicle pay the same within the premium range, based on the collective claims experience of the class and regardless of driving history, vehicle usage and the like). This allows the Scheme's licensed insurers to determine and file their premiums for each of the 24 vehicle classes every three months within floor and ceiling premiums set by MAIC. A key objective of this approach has been to facilitate and encourage price competition between insurers. The setting of a floor and ceiling range by MAIC is informed by actuarial analysis and other factors, is intended to ensure premiums are reasonable, neither excessive nor insufficient having regard to the cost of the Scheme. Levies and administration fees are set by the regulator.	When setting Motor Vehicle levies, the ACC try to make sure that the money collected will be enough to cover the cost of injuries – including those injuries which will need lifelong support. Before Motor Vehicle levies are set, the ACC look at the claims received in the past to work out how many claims they expect in the next year, and what they'll cost – not just over the next year, but for the total time a person is injured and needs the help of the scheme.

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
			Rate changes to be approved by the regulator in a rate filing process. Costs of CTP benchmarked against an affordability index and recommendations for scheme changes made by the regulator to the Minister if costs exceed the index.	
Regulations and limits	Full rate filing at least once a year SIRA engages an independent actuary (currently Ernst & Young) to review each insurer's proposal and the actuary provides independent advice to inform the decision making process The MAC Act 1999 provides limited power to reject a premium based on whether we believe that the premium: - will not fully fund the present and likely future claims liability - is excessive - does not conform to premiums determination guidelines, or - is calculated in contravention of the maximum commission allowed to be paid to agents Risk-based pricing within certain limits using objective risk factors (excluding postcode, gender, race, policy duration or GST status). Overall range of discounts and loadings that insurers can apply: - the maximum bonus or discount is 15 per cent (except for drivers over 55 where it's 25 per cent) - the maximum loading varies from one insurer to the next	Not applicable - set by the regulator	The commission first fixes limits of insurer's premium for each class of CTP insurance. (3) The limits consist of a floor amount (below which the premium cannot be set) and a ceiling amount (above which the premium cannot be set). (4) Before the commission fixes the limits, the commission must invite written submissions from— (a) licensed insurers on matters relevant to the fixing of the limits and, in particular, on— (i) current factors and trends influencing the cost of insurance under the statutory insurance scheme; and (ii) any other factors that should, in the opinion of the insurers, influence the permissible range of insurers' premiums for the assessment period; and (b) major organisations representing motorists in Queensland. (5) The commission must at least once in each year obtain an actuarial analysis of the statutory insurance scheme and, at least once in each quarter, obtain an actuarial review of current trends that could affect the financial soundness of the scheme. (6) After considering the financial soundness of the	Not applicable - set by the regulator

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	but is currently around 43 per cent on average		statutory insurance scheme in the light of the most recent actuarial analysis and quarterly review obtained under subsection (5), the submissions made in response to the commission's invitations and other material the commission considers relevant, the commission must— (a) fix the limits of insurer's premium for each class of CTP insurance; and (b) give each licensed insurer a written notice— (i) stating the limits fixed for each class of CTP insurance; and (ii) requiring the insurer to submit its insurer's premiums for each class of CTP insurance for the relevant assessment period on or before a date stated in the notice; and (iii) specifying other requirements with which the insurer's submission must comply. (7) The premiums must be submitted in accordance with requirements specified in the notice within a time limit fixed under a regulation. (8) Each licensed insurer must give the commission written notice of the premiums set by the insurer on or before the date stated in the commission's notice. (9) On receipt of the notice from the insurer, the commission must, within a time limit fixed by a regulation— (a) record the premiums set by the insurer for the relevant assessment period for each class of CTP insurance; and (b) give the insurer a written notice confirming the	

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
			insurer's insurance premiums for the relevant assessment period; and (c) notify transport administration of each insurer's insurance premiums for the relevant assessment period. (10) If a licensed insurer— (a) fails to submit premiums for each class of CTP insurance as required by the commission; or (b) sets a premium outside the limits allowed by the commission; the commission may, by written notice to the insurer, withdraw the insurer's licence.	
Rating variables	Primary factors used by the insurers and which affect greenslip prices are as follows: Geographic region Type of vehicle Age of vehicle Vehicle performance Age of vehicle owner Age of vehicle drivers Driving history - Number of traffic offences - Number of demerit points - Number of years licensed Claims history - Level of insurance and no claim bonus - Number of at fault claims Geographic regions and vehicle classifications are designated by SIRA.	Type of vehicle in calculating the cost of larger or commercial vehicles such as a bus, consideration will be given to the intended use, seating and carrying capacity. Location that the vehicle is garaged. The location that the vehicle is garaged will be in one of three risk zones: High, Medium or Low. Risk zones are assigned by postcode. registered owner (pensioner concessions may apply)	The Queensland CTP Scheme utilises a Vehicle Class Filing Model that is based on a community rating philosophy. Under this model, motor vehicles are classified into 24 separate vehicle classes defined by their type and purpose of use, with vehicle owners in each class all paying within the same premium range based on the collective claims experience of the class. This ensures that risks are spread across a vehicle class, providing a similar level of premium affordability within that class. The majority of vehicles are grouped in Class 1 (cars and station wagons). Premiums are determined based on vehicle class, private/business use (Premiums for vehicles used exclusively for private use are not subject to an Input Tax Credit Entitlement and period of cover (3/6/12 months).	Levies are based on vehicle class Light passenger vehicles are risk rated and placed into an ACC risk rating band (1 to 4). These include cars, passenger vans and SUVs that are: classified as a passenger vehicle by NZTA lighter than 3,500kg less than 40 years old. Risk rating is based on vehicle performance in an accident and injuries to people both inside and outside the vehicle in an accident. Light passenger vehicles made before 1976 are classed as either vintage or veteran vehicles, therefore are not subject to the same levy requirements as modern light passenger vehicles. Levies for goods service vehicles and the Fleet Saver programme (businesses with five or more vehicles weighing more than 3,500kg each can lower their ACC motor vehicles levies by

Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
				demonstrating strong safety management practices) Motorcycles: depends on the 'class' of motorcycle (Mopeds, Motorcycles up to 600cc, Motorcycles 601cc+) and whether it's powered by petrol or diesel.

	Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
Premium	Average premium	$658	$503	$369 (October 2016)	NZ $196 (Based on 2015/16 motor vehicle levies including the petrol levy based on annual petrol consumption of 1,200L and 6.90c per L)
	Average weekly earnings	$1,199	$1,092	$1,125	$1,186
	Affordability	43%	35%	23% The Affordability Index – a feature of the Scheme since October 2000 – focuses attention on the overall cost of CTP insurance relative to a selected index of income, Average Weekly Earnings (AWE). A review of the Scheme's affordability is triggered when the highest Class 12 premium filed by insurers exceeds 45 per cent of AWE in Queensland. Once triggered, MAIC is required to make recommendations to the Minister on possible changes to the Scheme.	21%
	Efficiency - amount of premium returned to policyholders as benefits	45% (excludes GST and Lifetime Care and Support Levy)	80%	60%	No information
Claim Frequency	Casualty rate per 1,000 vehicles	3.77	3.80	3.94	3.58
	Casualty rate per 10,000 population	30.63	30.08	32.54	27.39

	Metrics by Jurisdiction	New South Wales, Australia	Victoria, Australia	Queensland, Australia	New Zealand
	Claim rate per 1,000 vehicles	2.88	3.64	1.78	8.00
	Claim rate per 10,000 population	23.38	28.85	14.66	61.17
Claim Severity	Average casualty claim size	$135,000 (in June 2016$)	$62,736	$112,370	NZD 60,000
Expenses	Expense rate	Claims handling expenses, acquisition, commission and reinsurance are approximately 14% of premium ex GST and levies Levies (or known as the Medical Care and Injury Services (MCIS) levies) included in the premium charged to policyholders are used to pay for: - public hospital and ambulance costs of all road accident victims - all people requiring lifetime care following a motor accident, and - the operation of the regulator in administering the MCA Act	Administration Expenses: $32.9 per policy Motorcycle levy: $1.3 per policy Road Accident Rescue and other offline payments: $4.5 per policy Collection Fees: $8.5 per policy Program Costs: $41.8 per policy	Levies on premium: Statutory Insurance Scheme (SIS) levy National Injury Insurance Scheme Queensland (NIISQ) Levy Hospital and Emergency Services (HES) levy Nominal Defendant levy Administration Fee Premiums for vehicles used exclusively for private use are not subject to an Input Tax Credit Entitlement	Budgeted CHE (Motor Vehicle account) for 2017 of $38.1m: Lodgement ($0.5m) Treatment provider management ($2.7m) Entitlement management ($6.9m) Rehabilitation management ($17.5m) Serious injury ($10.4m) Hearing loss ($0m) The motorcycle safety levy was introduced in July 2010. The levy is an amount of money paid by all motorcycle, scooter and moped owners as part of the licence fee levy. The motorcycle safety levy has been set at $25 per year for each registered motorcycle and/or moped. The purpose of the motorcycle safety levy is to increase investment in initiatives that will reduce motorcyclist's deaths and injuries. The funds are managed by ACC who seek advice from the Motorcycle Safety Advisory Council regarding investment of the levy funds to maximise the benefits for motorcycle riders.

US overview

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
Model for mandatory product	Privately and publicly underwritten (with involvement from MCAA) If you find you are not an eligible person for auto insurance, you can apply to the Michigan Automobile Insurance Placement Facility. The Facility was created to offer insurance to those persons who have difficulty finding it through regular companies. This coverage is often described as 20/40/10. These are the minimum amounts of coverage you must have. Sometimes courts award more than these amounts. If this happens, you would be responsible for paying the amount not covered by your policy. To protect themselves, people often buy extra liability insurance. Michigan Catastrophic Claims Association The Michigan Catastrophic Claims Association (MCCA), a private non-profit unincorporated association, was created by the state Legislature in 1978. Michigan's unique auto insurance no-fault law provides unlimited lifetime coverage for medical expenses which result from auto accidents. The MCCA reimburses auto no-fault insurance companies for each Personal Injury Protection (PIP) medical claim paid in excess of a set amount. Currently that amount is $545,000. That means that the insurance company pays the entire claim, but is reimbursed by the MCCA for medical costs over $545,000.	Privately underwritten Pennsylvania is one of a very few states that uses something called "choice no fault" rules. Choice-no-fault is a hybrid of the pure no-fault system. Under this system, drivers have the choice of being insured under either a pure no-fault plan or a modified no-fault plan. Under the pure no-fault plan, one is unable to sue negligent drivers for non-economic damages, and is immune from such suits himself/herself. Under the traditional tort (personal injury suits) rights, one can sue other drivers who have also chosen to retain their tort rights, and in return they can sue him/her. If one that has chosen the modified plan has an accident with a driver insured under the pure no-fault plan, they are both unable to sue the other party	Privately underwritten The Illinois Automobile Insurance Plan (ILAIP) was created to provide automobile insurance coverage to those eligible risks who are unable to obtain coverage in the voluntary market. This Plan became effective on October 1, 1940. All insurers writing automobile insurance in Illinois are required to participate in the ILAIP by subscribing to the Plan. Minimum Requirements = 25,000/50,000/20,000	Privately underwritten Massachusetts is a No-Fault State. Massachusetts is a "no-fault state" with regards to car accidents. This means that your own Massachusetts car accident insurance company pays up to $8,000 of your medical bills, regardless of who was at fault. Under Massachusetts law, you are considered to be at-fault for an accident if your driving behavior at the time of the accident was more than 50% of the reason for the accident.

Metrics by Jurisdiction	**Michigan**	**Pennsylvania**	**Illinois**	**Massachusetts**
Scheme coverage	Modified Comparative Fault – 51% Bar Personal Injury Protection (PIP) Benefits are paid to accident victims by their own insurance company. These include the following: ‣ All reasonable and necessary medical expenses ‣ Up to three years of lost wages. This is subject to an annual cost-of-living adjustment. Higher benefit limits may be purchased. ‣ Up to $20 per day, for a maximum of three+D8 years, for "replacement services." This pays for services which the injured person cannot perform. ‣ Funeral and burial expense benefits. Personal Injury Protection coverage applies to accidents occurring throughout the US and Canada. Property Protection This provides coverage for damage caused by your car to property of others (except moving vehicles), regardless of fault. ‣ Coverage is provided up to $1 million maximum. ‣ Vehicles are excluded from coverage unless properly parked. ‣ Property Protection does not apply to accidents occurring outside the state of Michigan.	Comparative Negligence Modified Comparative Fault – 51% Bar Like most states, Pennsylvania comparative negligence laws allow individuals who've been injured in an accident to recover compensation for damages – even when they are partly at fault for the accident (contributory negligence). However, depending on your degree of shared fault, your ability to recover damages might be affected. The damages you can seek may be limited, or, in some cases, you might not be barred from compensation altogether. Drivers must purchase and maintain car insurance in order to legally drive in Pennsylvania. Limited or Full Tort You can choose to have full or limited tort coverage. Limited tort coverage offers you a savings on your premiums. You are still able to recover all out-of-pocket medical and other expenses; however, you are not able to recover certain damages - such as payments for pain and suffering - unless the injuries meet one of the exceptions to limited tort as defined in Act 6 of 1990, title 75, section 1705 (d). With full tort coverage selection, you retain unrestricted rights to bring suit against the negligent party	Comparative Negligence Modified Comparative, 51% bars recovery Illinois has adopted modified comparative negligence (735 ILCS 5/2-1116) as the standard for recovery of damages. Under modified comparative negligence, an injured party may recover damages only if he/she is less than 50% at fault for the injury or damages. However, the recovered amount may be reduced in proportion to the degree that the injured party was at fault. For example, if the other driver is determined to be 80% at fault and you are determined to be 20% at fault, you can collect for your damages because you were less than 50% at fault. However, the other driver's insurance company might only offer to pay for 80% of your damages.	Modified Comparative Fault – 51% The following Standards of Fault shall be considered determinative that an Operator of a Private Passenger Motor Vehicle was more than 50% at fault for an Accident, unless a showing to the contrary is demonstrated by the evidence presented in the course of review of the At Fault Accident: (01) Collision with a Person or a Lawfully or Unlawfully Parked Vehicle. (03) Rear End Collision. (05) Out of Lane Collision (07) Failure to Signal. (08) Failure to Proceed with Due Caution from a Traffic Control Signal/Sign (09) Collision on Wrong Side of Road. (10) Operating in the Wrong Direction. (11) Collision at an Uncontrolled Intersection. (14) Collision While in the Process of Backing Up. (15) Collision While Making a Left Turn or U-turn Across the Travel Path of a Vehicle Traveling in the Same or Opposite Direction. (17) Leaving or Exiting from a Parked Position, Parking Lot, Alley or Driveway. (18) Opened or Opening Vehicle Door(s). (19) Single Vehicle Collision. (20) Failure to Obey the Rules and Regulations for Driving (21) Unattended Vehicle Collision. (26) Collision While Merging onto a Highway, or into a Rotary (27) Non-contact Operator Causing Collision (29) Failure to Yield the Right of Way to Emergency Vehicles as is Required by Law. (31) Collision at a "T" Intersection.

Metrics by Jurisdiction	**Michigan**	**Pennsylvania**	**Illinois**	**Massachusetts**
Benefits available	Fault-based (with exceptions)	Medical benefits regardless of fault - minimum limit of $5,000. Higher limits are available. Full tort: 1. Individual pays higher premium 2. Individual can bring a claim for any injury suffered as a result of auto accident Limited tort: 1. Policy premium is less than full tort 2. Individual cannot seek recovery for non-economic damages unless the injuries suffered fall within the definition of "serious injury"	Medical Payments Covers medical and funeral expenses for you or your passengers if injured or killed in an accident in your vehicle. It also covers you and your family members if struck by a vehicle while walking or while riding in another vehicle. This coverage pays even if you cause the accident.	Compulsory Insurance Coverages Part 1 - Bodily Injury To Others Part 2 - Personal Injury Protection Part 3 - Bodily Injury Caused By An Uninsured Auto Part 4 - Damage To Someone Else's Property Massachusetts law requires a company that provides Compulsory Insurance Coverages to make a mandatory offer to issue to any person so insured additional coverages consisting of: 1. Limits up to $35,000 each person and $80,000 each accident for Parts 3, 5 and 12. 2. $5,000 each person for Part 6. Part 6 - Medical Payments The basic limit is $5,000 each person. Higher limits are available for all motor vehicles rated in this manual. Motorcycle limits are available from $500 to $50,000. This coverage does not duplicate expenses that are paid or payable under Personal Injury Protection.
Regulatory body	Michigan Department of Insurance http://www.michigan.gov/difs/	Pennsylvania Department of Insurance http://www.insurance.pa.gov/Pages/default.aspx	Illinois Department of Insurance http://insurance.illinois.gov/	Massachusetts Department of Insurance http://www.mass.gov/ocabr/insurance/providers-and-producers/doi-regulatory-info/insurance-regulations-and-laws/
Legislation/Acts	‣ Contracts with State and Local Government subject to Patient's Right to Independent Review ‣ Coordination of Benefits Act ‣ Credit Insurance Act ‣ Emergency Insurance Legislation	See link for all insurance acts: http://www.pacode.com/secure/data/031/031toc.html	‣ 215 ILCS 5/Illinois Insurance Code. ‣ 215 ILCS 97/Illinois Health Insurance Portability and Accountability Act. ‣ 215 ILCS 100/Reinsurance Intermediary Act.	Massachusetts Laws ‣ MGL c.90, s.34A-34R Compulsory Motor Vehicle Liability Insurance ‣ MGL c.175, s.4E Prohibits use of credit information in issuing or renewing auto insurance

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	‣ Health Benefit Agent Act ‣ Indemnification Reserve Fund Act ‣ Insurance Code of 1956 ‣ Intergovernmental Contracts between Municipal Corporations ‣ Interstate Insurance Product Regulation Compact ‣ Non-Profit Dental Care Corporations ‣ Non-profit Health Care Corporation Reform Act ‣ Office Agent; Set-Off For Damages ‣ Patient's Right to Independent Review Act ‣ Prudent Purchaser Act ‣ Public Employees Health Benefit Act ‣ Third Party Administrator Act ‣ Worker's Disability Compensation Act of 1969		‣ 215 ILCS 107/Producer Controlled Insurer Act. ‣ 215 ILCS 113/Employee Leasing Company Act. ‣ 215 ILCS 120/Farm Mutual Insurance Company Act of 1986. ‣ 215 ILCS 121/Navigator Certification Act. ‣ 215 ILCS 122/Illinois Health Benefits Exchange Law. ‣ 215 ILCS 123/Health Care Purchasing Group Act. ‣ 215 ILCS 125/Health Maintenance Organization Act. ‣ 215 ILCS 130/Limited Health Service Organization Act. ‣ 215 ILCS 134/Managed Care Reform and Patient Rights Act. ‣ 215 ILCS 136/Portable Electronics Insurance Act. ‣ 215 ILCS 138/Uniform Prescription Drug Information Card Act. ‣ 215 ILCS 139/Uniform Health Care Service Benefits Info. Card Act. ‣ 215 ILCS 140/Product Liability Insurance Act. ‣ 215 ILCS 145/Property Fire Loss Act. ‣ 215 ILCS 150/Religious and Charitable Risk Pooling Trust Act. ‣ 215 ILCS 152/Service Contract Act. ‣ 215 ILCS 153/Structured Settlement Protection Act. ‣ 215 ILCS 155/Title Insurance Act. ‣ 215 ILCS 157/Use of Credit Information in Personal Insurance Act. ‣ 215 ILCS 160/Vision Service Plan Act. (Repealed by P.A. 90-177) ‣ 215 ILCS 165/Voluntary Health Services Plans Act. ‣ 215 ILCS 175/Organ Transplant Medication Notification Act. ‣ 215 ILCS 180/Health Carrier External Review Act.	‣ MGL c.175, s.113A-113U Compulsory Motor Vehicle Liability Insurance Massachusetts Regulations ‣ 211 CMR 74 pdf format of 211 CMR 74 ‣ Standards of Fault ‣ Lists motor vehicle accident "situations in which fault is presumed to be more than 50%." ‣ 211 CMR 79 pdf format of 211 CMR 79 ‣ Private Passenger Motor Vehicle Insurance Rates ‣ Managed competition" insurance rate regulations cover policies with renewal dates beginning April 1, 2008 ‣ 211 CMR 88 pdf format of 211 CMR 88 ‣ SDIP Surcharge Appeals ‣ 211 CMR 134 pdf format of 211 CMR 134 ‣ Safe Driver Insurance Plan ‣ Lists minor and major traffic accidents and offenses which subject the violator to "points" on their auto insurance ‣ 211 CMR 135 pdf format of 211 CMR 135 ‣ Requirements Regarding Referrals to Motor Vehicle Glass Repair Shops

Metrics by Jurisdiction	**Michigan**	**Pennsylvania**	**Illinois**	**Massachusetts**
Interaction with Health System / Social Security System	‣ Personal protection insurance benefits are overdue if not paid within 30 days after an insurer receives reasonable proof of the fact and of the amount of loss sustained ‣ If reasonable proof is not supplied as to the entire claim, the amount supported by reasonable proof is overdue if not paid within 30 days after the proof is received by the insurer ‣ An overdue payment bears simple interest at the rate of 12% per annum ‣ No code, regulation, statute noted. Service contract between patient and health provider may imply lien protection ‣ The state department and the department of community health are subrogated to any right of recovery that a patient may have for the cost of hospitalization, pharmaceutical services, physician services, nursing services, and other medical services ‣ The patient or other person acting in the patient's behalf shall execute and deliver an assignment of claim or other authorizations as necessary to secure the right of recovery to the department or the department of community health ‣ If a payment is made, the state department or the department of community health, to enforce its subrogation right, may do either of the following: (a) intervene or join in an action or proceeding brought by the injured against the third person who may be liable for the injury (b) institute and prosecute a legal proceeding against a third person who may be liable for the injury ‣ The injured individual shall notify the state department or the department of community health of the action or proceeding entered into upon	‣ Notice and lien information request must be provided in writing and sent by certified or registered mail to Department of Public Welfare (DPW) ‣ DPW will deem a third party or insurer to have notice if the beneficiary's MA status is shown in records received by the third party or insurer ‣ Health insurance provider may place a lien on a claimant's tort recovery ‣ Benefits are overdue if not paid within 30 days after the insurer receives reasonable proof of the amount of benefits ‣ Rate of 12% per annum from the date the benefits become due may be assessed as a penalty	‣ Failure to make periodic payments within the period of time specified in item shall entitle the health care professional or health care facility to interest at the rate of 9% per year from the date payment was required ‣ Shall make all payments for health services within 30 days after receipt of due proof of loss ‣ An insured, insured's assignee, health care professional, or health care facility shall be notified of any known failure to provide sufficient documentation for a due proof of loss within 30 days after receipt of the claim for health care services ‣ Every health care provider that renders any service in the treatment, care, or maintenance of an injured person shall have a lien upon all claims and causes of action ‣ The total amount of all liens under this Act, however, shall not exceed 40% of the verdict, judgment, award, settlement, or compromise secured by or on behalf of the injured person	‣ Personal injury protection benefits and benefits due from an insurer assigned shall be due and payable as loss accrues, upon receipt of reasonable proof of the fact and amount of expenses and loss incurred ‣ Insurer shall commence medical payments within 10 days or give written notice of its intent not to make such payments, specifying reasons for said nonpayment, but an insurer may agree to a lump sum discharging all future liability for such benefits on its own behalf and the insured ‣ No insurer shall refuse to pay a bill for medical services submitted by a practitioner registered or licensed. If such refusal is based solely on a medical review of the bill or of the medical services underlying the bill, which review was requested or conducted by the insurer, unless the insurer has submitted, for medical review, such bill or claim to at least one practitioner registered or licensed ‣ In any case where benefits due and payable remain unpaid for more than 30 days, any unpaid party shall be deemed a party to a contract with the insurer responsible for payment and shall therefore have a right to commence an action in contract for payment of amounts due ‣ If the unpaid party recovers a judgment for any amount due and payable by the insurer, the court shall assess against the insurer in addition thereto costs and reasonable attorney's fees ‣ Hospital operated by the commonwealth which furnished medical or other services to any person injured in an accident shall have a lien for the reasonable and necessary charges

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	commencement of the action or proceeding			
Fraud - estimated costs	Property/casualty fraud in Michigan totals an estimated $900 million, or about 10 percent of claims. Adding other types of insurance to the equation, like health, life and specialty insurance, makes the total cost of fraud almost $3 billion. (2014)	‣ Each insurer licensed to write motor vehicle insurance in this Commonwealth shall institute and maintain a motor vehicle insurance antifraud plan ‣ All applications for insurance, renewals and claim forms shall contain a statement that clearly states in substance the following: "Any person who knowingly and with intent to injure or defraud any insurer files an application or claim containing any false, incomplete or misleading information shall, upon conviction, be subject to imprisonment for up to seven years and payment of a fine of up to $15,000."	‣ The Director of Department of Insurance is authorized to require insurers to report factual information in their possession that is pertinent to suspected fraudulent insurance claims	‣ Massachusetts launched task forces in 13 communities against widespread staged-crash rings amid public outcry after 65-year-old grandmother Altagracia Arias died in a setup crash in 2003. ‣ Drivers in the 13 communities have saved $875 in auto premiums per year; ‣ Drivers in Lawrence — the "worst hotbed of fraudulent claims" — have saved more than $68 million; ‣ Larger chiropractors in Lawrence have decreased in both clinic counts and billings by up to 90 percent. High-volume physical therapy clinics (billings exceeding $100,000 annually) have been eliminated, and attorney involvement in PIP claims has dropped; and ‣ Staged accidents in Massachusetts have been reduced dramatically as people around the state, who used to be involved in fraudulent activities, have taken notice of the crackdown and altered their activities. (Insurance Fraud Bureau of Massachusetts, April 2013)
Population (millions)	9.9	12.8	12.8	6.8
Exposure/ Number of registered vehicles (millions)	8.3	10.6	10.6	5.1

Benefits available

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
Overview of benefits	Residual Liability This provides protection if you are sued or legally responsible: ‣ In accidents involving death, serious impairment of body function or permanent, serious disfigurement. ‣ When actual economic losses sustained in an accident exceed the PIP benefits available. ‣ In accidents occurring outside of Michigan, for property damage and bodily injury. The required limits of this coverage are $20,000 for one person's injury, $40,000 for all persons injured in one accident and $10,000 Personal Injury Protection (PIP) - PIP pays all reasonable and necessary medical expenses if you are hurt in an auto accident, including wage loss and replacement services up to three years. Property Protection (PPI) - PPI pays up to $1 million for damage your vehicle does in Michigan to other people's property, such as buildings and fences MCAA covers and reimburses carriers for PIP claims above $545,000	Medical Benefits This coverage pays the medical bills for you and others who are covered by your policy, regardless of fault, if there are injuries resulting from an accident. The minimum limit is $5,000. Higher limits are also available. Bodily Injury Liability If you injure someone in an auto accident, this coverage pays damages for which you are liable, such as medical and rehabilitation expenses. The minimum limit is $15,000/$30,000. The $15,000 pays for injuries to one person, while the $30,000 represents the total available for one accident. Higher limits are also available. Property Damage Liability If you damage someone's property (such as his or her car) in an accident and you are at fault, this coverage pays for repairs to that property. The minimum limit is $5,000. Higher limits are also available	Liability Coverage – Bodily Injury (BI) – Pays for costs due to injury or death to a pedestrian(s) or person(s) in another car. It may also cover your passengers' injury costs as long as they aren't members of your household. Illinois law (625 ILCS 5/7-203) requires BI limits of at least $25,000 per person per accident and $50,000 total per accident. Property Damage (PD) – Pays for damage to another person's car or property such as fences, buildings, utility poles, signs, and trees. Illinois law (625 ILCS 5/7-203) requires PD liability limits of at least $20,000 per accident Uninsured Motorist Bodily Injury Coverage (UM) – Currently, Illinois uninsured motorist bodily injury minimum limits are $25,000 per person and $50,000 per accident. For additional premium, you may buy higher limits to pay for claims that exceed those amounts. Underinsured Motorist Bodily Injury Insurance (UIM) – Illinois law (215 ILCS 5/143a-2) requires this type of coverage if you purchase higher limits of uninsured motorist bodily injury coverage (UM).	Part 1 - Bodily Injury To Others The basic limits are $20,000 each person and $40,000 each accident. Part 2 - Personal Injury Protection The basic limit is $8,000 for each person. Deductible options are available. Part 3 - Bodily Injury Caused By An Uninsured Auto The basic limits are $20,000 each person and $40,000 each accident. Increased limits are available. The limits may not exceed the limits of Part 5, or if Part 5 is not purchased, Part 1 of this policy. This coverage does not duplicate expenses that are paid or payable under Personal Injury Protection. Part 4 - Damage To Someone Else's Property The basic limit is $5,000 each accident. Increased limits are available.
Non economic loss benefits	‣ A person remains subject to tort liability for noneconomic loss caused by his or her ownership, maintenance, or use of a motor vehicle only if the injured person has suffered death, serious impairment of body function, or permanent serious disfigurement ‣ The issues of whether the injured person has suffered	PA is a choice-no-fault state which a tort option can be selected for private passenger vehicles. ‣ Full Tort: Individual can bring a claim for any injury suffered as a result of auto accident ‣ Limited Tort: Individual cannot seek recovery for non-economic damages unless the injuries	Illinois follows a traditional "fault" or "tort" system. No restrictions to pursue a civil action against a party who may have caused physical injury or property damage in a motor vehicle accident	The law allows you to file an insurance claim for pain and suffering compensation. This amount is separate from lost wages and other medical expenses, such as x-rays, medications, and hospital visits. Plaintiff may recover damages for pain and suffering, including mental suffering associated with

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	serious impairment of body function or permanent serious disfigurement are questions of law for the court ‣ Damages shall be assessed on the basis of comparative fault, except that damages shall not be assessed in favor of a party who is more than 50% at fault ‣ Damages up to $1,000.00 to a motor vehicle, to the extent that the damages are not covered by insurance ‣ "serious impairment of body function" means an objectively manifested impairment of an important body function that affects the person's general ability to lead his or her normal life	suffered fall within the definition of "serious injury" (serious injury is defined as "a personal injury resulting in death, serious impairment of body function or permanent serious disfigurement")		such injury, sickness or disease, only if the expenses are determined to be in excess of two thousand dollars unless such injury, sickness or disease (1) causes death, or (2) consists in whole or in part of loss of a body member, or (3) consists in whole or in part of permanent and serious disfigurement, or (4) results in such loss of sight or hearing
Economic loss benefits	A Michigan no-fault policy provides unlimited medical and rehabilitation benefits. It provides wage loss benefits for up to three years, and $20 per day for replacement services if you are injured in an auto accident, regardless of fault. In exchange for these benefits, Michigan motorists gave up the right to sue in auto accidents except when someone is killed or very seriously injured. Because of this, disputes over who was at-fault in an accident will not hold up payment of medical bills. Michigan is unique in that damage to vehicles also falls under the no-fault system. This, too, saves time and money in claims payment. Michigan drivers must buy collision and/or comprehensive insurance to cover damage to their own car.	See above	See above	Personal Injury Protection (PIP) Some states have Personal Injury Protection or "PIP" regulations requiring drivers to carry PIP insurance. This is an extension of auto insurance that covers medical expenses, lost wages and/or other damages. Massachusetts requires drivers to purchase PIP insurance. The minimum PIP coverage amounts for Massachusetts are $8,000.00
Medical/Treatment/Care benefits	Michigan has the highest no-fault medical benefits in the nation. The Michigan no-fault insurance policy must cover all reasonable and necessary charges for lifetime medical care, including rehabilitation. No other state in	Medical Benefits This coverage pays the medical bills for you and others who are covered by your policy, regardless of fault, if there are injuries resulting from an accident.	Medical Payments Covers medical and funeral expenses for you or your passengers if injured or killed in an accident in your vehicle. It also covers you and your family members if struck by a vehicle	Personal Injury Protection (PIP): Your own Massachusetts car accident insurance company pays up to $8,000 of your medical bills, regardless of who was at fault. These benefits are called First-Party Benefits.

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	the country provides such high benefits. The Michigan policy also provides up to three years of lost wages and replacement services. Under no-fault, these benefits usually are paid without the need to file a lawsuit. (2014) Michigan is the only state to offer unlimited lifetime medical care for auto-related injuries under its no-fault auto insurance system.	The minimum limit is $5,000. Higher limits are also available. Extraordinary Medical Benefits This pays for medical and rehabilitation expenses that exceed $100,000, up to a maximum limit of $1.1 million.	while walking or while riding in another vehicle. This coverage pays even if you cause the accident.	
Death/Funeral benefits	No wrongful death caps related to civil actions involving motor vehicle accidents Funeral and burial expense benefits. Personal Injury Protection coverage applies to accidents occurring throughout the US and Canada. (Optional)	General Assembly cannot limit the amount to be recovered for injuries resulting in death Funeral Benefits pay, up to the limit specified in the policy, for funeral expenses if you or a family member dies as a result of an auto accident, regardless of who was at fault in the accident. (Optional)	No cap on wrongful death damages Optional: Accidental Death Benefit – Pays a death benefit if the insured dies because of an auto accident (optional)	*There are no caps on wrongful death Injury to a person that causes death, shall be liable in damages in the amount of: ‣ Fair monetary value of the decedent to the persons entitled to receive the damages recovered, including but not limited to compensation for the loss of the reasonably expected net income, services, protection, care, assistance, society, companionship, comfort, guidance, counsel, and advice of the decedent to the persons entitled to the damages ‣ Reasonable funeral and burial expenses of the decedent ‣ Punitive damages in an amount of not less than $5,000 in such case as the decedent's death was caused by the malicious, willful, wanton or reckless conduct of the defendant or by the gross negligence of the defendant
Other benefits	Michigan (pure no-fault) law requires you to have no-fault automobile insurance on your car. If you have an accident, this required insurance pays for injuries to people and for damages your car does to other people's property and to properly parked cars.	Some companies offer a combined single limit of $35,000 which meets the bodily injury liability and property damage liability minimum requirements **The Catastrophic Loss Benefits Continuation Fund** (CAT Fund) continues benefits for medical	‣ Accidental Death Benefit – Pays a death benefit if the insured dies because of an auto accident. ‣ Custom/Non-Factory Equipment – Covers customized features found in conversion vans, as well as tape decks, CD players, CB radios, cellular phones, etc. added after the vehicle left the factory.	‣ Part 5 - Optional Bodily Injury To Others ‣ The basic limits are $20,000 each person and $40,000 each accident. Increased limits are available. ‣ Part 6 - Medical Payments ‣ The basic limit is $5,000 each person. Higher limits are available for all motor vehicles

Metrics by Jurisdiction	**Michigan**	**Pennsylvania**	**Illinois**	**Massachusetts**
	Michigan is the only state to offer unlimited lifetime medical care for auto-related injuries under its no-fault auto insurance system.	treatment and rehabilitative services previously provided by the Catastrophic Loss Trust Fund. Except for workers' compensation the CAT Fund is the primary payor for eligible claimants and coordinates benefits with health and other insurance carriers. Insurers may confirm whether the CAT Fund is the primary payor on a particular claim by contacting the current third party administrator. The maximum benefit paid by the CAT Fund on behalf of any one eligible claimant is $50,000 per annual limit year with a $1,000,000 lifetime aggregate. During the first 18 months after the motor vehicle accident, benefits are provided without regard to the $50,000 per annual period limit but subject to the $1,000,000 lifetime aggregate.	‣ Gap Coverage for Leased or Financed Vehicles – Pays the difference between your vehicle’s actual cash value and what you still owe on your loan or lease. ‣ Medical Payments – Covers medical and funeral expenses for you or your passengers if injured or killed in an accident in your vehicle. It also covers you and your family members if struck by a vehicle while walking or while riding in another vehicle. This coverage pays even if you cause the accident. ‣ Physical Damage/Repair/Replace Coverage – Pays for a new vehicle if the cost to repair your vehicle is more than the value of a new car. The endorsement is usually available only during the first three model years. ‣ Rental Reimbursement – Pays a specific amount per day (e.g. $15) to rent a vehicle while yours is being repaired due to a covered loss. ‣ Towing – Pays all or part of the cost to tow your disabled vehicle to a repair shop. ‣ Uninsured Motorist Property Damage (UMPD) – Covers damage to your vehicle caused by an identified, at-fault, uninsured driver. If you don’t’ have collision coverage, this coverage is available for a maximum of $15,000 and subject to a $250 deductible.	rated in this manual. ‣ Motorcycle limits are available from $500 to $50,000. This coverage does not duplicate expenses that are paid or payable under Personal Injury Protection. ‣ Part 7 – Collision ‣ This coverage is subject to a basic deductible of $500. Higher deductibles and a Waiver of Deductible are available at the option of the insured. Waiver of Deductible SA-2932/MAEP must be attached. This coverage is written on an actual cash value. ‣ Part 8 - Limited Collision ‣ This coverage is subject to a basic deductible of $500. Other deductibles are available at the option of the insured. ‣ Part 9 - Comprehensive ‣ This coverage is subject to a basic deductible of $500. Higher deductibles are available at the option of the insured. ‣ A separate $100, deductible is also available at the option of the insured. This coverage is written on an actual cash value basis. ‣ Part 10 - Substitute Transportation

History of reform

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
Overview of recent reform activity	Lawmakers have considered changes to the no-fault law for the past several years, including last session, when former House Speaker Jase Bolger made a high-profile push. The substitute bill approved in April 2017, along with several amendments that were adopted, changed the legislation substantially. Perhaps most notably, instead of tying reimbursement rates for medical care to worker's compensation rates, the new legislation ties rates to an average among commercial carriers. http://www.mlive.com/lansing-news/index.ssf/2015/04/senate_makes_major_changes_to.html A proposal, **HB 4612**, was approved by the Michigan House Insurance Committee at the beginning of May 2013 but stalled. This bill would cap benefits provided under the personal injury protection portion of the no-fault law at $1 million, ending an era of unlimited benefits that has driven up costs to what many consider are unsustainable levels. Even with a cap, Michigan's benefits would still be more generous than those of any other state. New York ranks second, with $50,000. **Coalition Protecting Auto No-Fault and Brain Injury Association of Michigan v MCCA, Michigan Court of Appeals** In late 2011 and early 2012, the MCCA denied Freedom of Information Act ("FOIA") requests from the Coalition	Not applicable	Safety initiatives recently in place are: -Click It or Ticket -Don't Text and Drive -Start Seeing Motorcycles These are a few of the programs that provide a means to educate the public and make them responsible and safe users of Illinois roadways.	Private Passenger Motor Vehicle Insurance Rates. The amendments simplify the regulation by removing references to procedures that applied only to the transition period from a market in which the Commissioner fixed-and-established private passenger motor vehicle insurance rates to a competitive market. The proposed changes do not make substantive changes to the regulation as it applies to the competitive market. Procedures for the Appeal of Insurer At-Fault Accident Determinations and the Conduct of Hearings on Insurer At-Fault Accident Determinations. The current regulation explicitly establishes procedures for the filing, review, and conduct of hearings on appeals of an insurer's determination that an operator was at fault in a private passenger motor vehicle accident pursuant to the Safe Driver Insurance Plan approved in a fixed-and-established market. It does not address procedures for appeals arising in a competitive market. The proposed amendments establish procedures that will govern the filing, review, and conduct of hearings on appeals of an insurer's determination that an operator is at fault in an accident, either in accordance with the insurer's Merit Rating Plan or with the Safe Driver Insurance Plan. The proposed changes also improve the readability, organization, and ease-of-use of the regulation. Safe Driver Insurance and Merit Rating Plans. 211 CMR 134.00

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	Protecting Auto No-Fault ("CPAN") and the Brain Injury Association of Michigan ("BIAMI") on the ground that the MCCA is exempt from FOIA by statute. Michigan Catastrophic Claims Association (MCCA) must comply with Freedom Of Information Act (2013)			was promulgated to implement the Safe Driver Insurance Plan approved by the Commissioner as part of the process to fix-and-establish private passenger motor vehicle insurance rates and later amended to reflect the shift to a competitive market and the adoption by insurers of their own Merit Rating Plans. The proposed changes reflect the effect of 2015 legislation requiring the Merit Rating Board, the administrator of data reported pursuant to 211 CMR 134.00, to adopt new parameters for classifying motor vehicle accidents as "major" or "minor." Additional changes clarify the regulation and its application in a fixed-and-established rating market and in a competitive market.
Drivers of reform	Rising claim costs and rising auto insurance premiums. Recent data from National Association of Insurance Commissioners (2013) draws a stark contrast between Michigan and its surrounding states. Michigan is the 6th most expensive state for auto insurance, outpacing its neighboring states by hundreds of dollars. Insurance premiums in Michigan have increased more rapidly than those costs in other states. In 1997, Michigan had the 18th highest costs of auto insurance in nation. By 2007, Michigan was the 11th highest state. By 2010, Michigan ranked the 8th highest state and is now the sixth most costly state.	Not applicable	Not applicable	Not applicable
Key objectives/intents	Not applicable	Not applicable	Not applicable	Not applicable
Key changes made to	Not applicable	Not applicable	Not applicable	Not applicable

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
legislation or guidelines through reform process				
Observed impacts following reform	Other attempts to lower the price of auto insurance in the state have not met with success. Michigan is unique among no-fault states in that its no-fault law offers unlimited medical care under its PIP coverage and in that it does not use medical fee schedules (maximum fees that can be charged for common types of medical treatment for auto accidents, similar to the fees set under the state's workers compensation system). Claim costs are rising higher in MI than anywhere else in the US. Many believe that the main reason no-fault PIP medical claim costs are rising so fast is because Michigan's no-fault policy system does not have a medical-provider fee schedule that controls the price that hospitals and doctors can charge for treating auto accident victims.	Not applicable	Not applicable	Not applicable

Premiums

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
Premium policy	State law sets forth the factors companies use when setting their auto rates. More rating factors are allowed for group policies than for non-group policies as long as they are specified in the company's underwriting rules and applied uniformly and consistently to all of the company's policyholders. Some of the factors that companies can use in setting rates include the type of vehicle you own, your driving record, your age or length of driving	Various factors can change the cost of your auto premium, including adding or increasing coverages, adding another vehicle to the policy, replacing an older vehicle with a newer one, adding a new driver, changing the usage of the vehicle (driving to work, using for business purposes), claims, moving violations, increasing the number of miles per year and moving to another area. In addition, your company may have been granted a rate	‣ Age, gender, and marital status – Statistics show certain groups of drivers (for example, young unmarried males) have more accidents. A higher chance of loss means more premium. ‣ Coverage limits – The more insurance you buy, the higher the premium will be. ‣ Driving record – Drivers with accidents and tickets usually pay higher premiums than those with good driving records. ‣ Household driving information – The ages and driving records of	The Massachusetts Safe Driver Insurance Plan (SDIP) is a program that aims to decrease traffic accidents by requiring unsafe drivers to pay higher insurance premiums and offering discounts to safe drivers. SDIP rate discounts and increases specifically affect your liability and optional collision coverages. Your driving history directly affects your SDIP rating, as well as the effect of that rating on your premium. The MA RMV provides a detailed chart that

Metrics by Jurisdiction	**Michigan**	**Pennsylvania**	**Illinois**	**Massachusetts**
	experience, daily or weekly commuting mileage, and number of vehicles insured or number of licensed drivers in the household. Michigan law does not provide auto insurance companies the ability to negotiate discounted services with health providers. In addition, it is difficult to project future medical costs because auto insurers could pay benefits for a seriously injured person for the rest of their life. The high cost of medical expenses and the unlimited nature of Michigan no-fault benefits are some of the reasons premiums will increase.	increase since your renewal. Some rate increases are not due to a specific incident or condition of your policy but rather, are applied to all policyholders with the company	other drivers in your household may affect the premium. Most auto insurance policies cover family members while driving your car. You may jeopardize your coverage if you withhold this information. ‣ Location – Since heavily populated areas have more traffic, thefts, and vandalism, city drivers may pay higher premiums than rural drivers. ‣ Type of vehicle – Certain vehicles cost more to insure because they're more likely to be damaged in an accident, cost more to repair, or are frequently stolen. ‣ Use of vehicle, how far you drive to work, and annual mileage – Drivers who commute long distances or drive more miles per year may pay more than those who commute shorter distances and drive fewer miles per year. ‣ Credit history – Companies may consider your financial stability and charge higher premiums based on your financial status (i.e., credit card history, amount of credit, how timely you pay your bills, etc.).	shows how ratings affect your premium. Massachusetts car insurance companies have the option of using either the SDIP merit-based driver rating system, or their own merit-based rating system to help determine your insurance premium. Under the SDIP merit-based rating system, new drivers are automatically assessed higher premiums due to their lack of experience. Additionally, you will receive surcharge points for incidents such as car accidents or traffic violations.
Regulations and limits	Minimum Financial Responsibility = 20,000/40,000/10,000	Minimum Financial Responsibility = 15,000/30,000/5,000	Minimum Financial Responsibility = 25,000/50,000/20,000	Minimum Financial Responsibility = 20,000/40,000/5,000
Rating variables	Some of the factors that companies can use in setting rates include: ‣ -the type of vehicle you own ‣ -address ‣ -you're driving record ‣ -your age or length of driving experience ‣ -daily or weekly commuting mileage ‣ -number of vehicles insured or number of licensed drivers in the household. Companies use the premium they	Various factors can change the cost of your auto premium, including: ‣ adding or increasing coverages ‣ adding another vehicle to the policy ‣ replacing an older vehicle with a newer one ‣ adding a new driver ‣ changing the usage of the vehicle (driving to work, using for business purposes) ‣ claims ‣ moving violations ‣ increasing the number of miles	‣ 'Age, gender, and marital status – Statistics show certain groups of drivers (for example, young unmarried males) have more accidents. A higher chance of loss means more premium. ‣ Coverage limits – The more insurance you buy, the higher the premium will be. ‣ Driving record – Drivers with accidents and tickets usually pay higher premiums than those with good driving records. ‣ Household driving information – The ages and driving records of other drivers in your household	‣ 'Years' Experience ‣ Driving Record ‣ Good Student Discount Round ‣ Distant Student Discount Round ‣ Accident Prevention Discount ‣ Driving Training Discount Round ‣ Average Driver Factor ‣ Base Rate Round ‣ Territory Round ‣ Value Class ‣ Model Year Round ‣ Usage Round ‣ Vehicle-Drive r Relationship ‣ Child-Youth ‣ Age of Vehicle

Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
	collect to pay claims. In setting premiums, companies must estimate how much money they will pay for injuries related to accidents and for the repair or replacement of vehicles. Michigan law does not provide auto insurance companies the ability to negotiate discounted services with health providers. In addition, it is difficult to project future medical costs because auto insurers could pay benefits for a seriously injured person for the rest of their life. The high cost of medical expenses and the unlimited nature of Michigan no-fault benefits are some of the reasons premiums will increase.	per year and moving to another area. In addition, your company may have been granted a rate increase since your renewal. Some rate increases are not due to a specific incident or condition of your policy but rather, are applied to all policyholders with the company.	may affect the premium. Most auto insurance policies cover family members while driving your car. You may jeopardize your coverage if you withhold this information. ‣ Location – Since heavily populated areas have more traffic, thefts, and vandalism, city drivers may pay higher premiums than rural drivers. ‣ Type of vehicle – Certain vehicles cost more to insure because they're more likely to be damaged in an accident, cost more to repair, or are frequently stolen. ‣ Use of vehicle, how far you drive to work, and annual mileage – Drivers who commute long distances or drive more miles per year may pay more than those who commute shorter distances and drive fewer miles per year. ‣ Credit history – Companies may consider your financial stability and charge higher premiums based on your financial status (i.e., credit card history, amount of credit, how timely you pay your bills, etc.)	EXCLUSIONS IN RATING (13) No credit information contained on a consumer report obtained from a consumer reporting agency pursuant to M.G.L. c. 93, § 50 et seq. shall be used in private passenger motor vehicle insurance:

	Metrics by Jurisdiction	Michigan	Pennsylvania	Illinois	Massachusetts
Premium	Average premium	$1,227	$858	$775	$1,035
	Average weekly earnings	$884	$966	$1,023	$1,247
	Affordability	139%	89%	76%	83%
	Efficiency - amount of premium returned to policyholders as benefits	No information	No information	No information	No information
Claim Frequency	Casualty rate per 1,000 vehicles	9.08	7.85	8.08	No information
	Casualty rate per 10,000 population	75.66	64.99	66.60	No information
	Claim rate per 1,000 vehicles	6.00	4.42	5.29	10.33

	Claim rate per 10,000 population	50.02	36.60	43.60	77.06
Claim Severity	**Average casualty claim size**	Bodily Injury - $52,960.60 PIP - $52,263.27 (42,145 claims in 2013) From 2005-2013, the average payment per paid PIP claim increased 72.2 percent in Michigan, from $25,997 to $52,960.60.	$19,114.38	$16,952.43	$11,918.08
Expenses	**Expense rate - Loss Ratio**	73.65	72.87	73.83	54.04

Canadian overview

Metrics by Jurisdiction	**British Columbia**	**Alberta**	**Manitoba**	**New Brunswick**	**Nova Scotia**	**Ontario**	**Saskatchewan**
Model for mandatory product	Publically underwritten	Privately underwritten	Publically underwritten	Privately underwritten	Privately underwritten	Privately underwritten	Publically underwritten
Scheme coverage	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - No increase in limit between non-minor injury and catastrophic injury - Uninsured drivers	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - No increase in limit between non-minor injury and catastrophic injury, lower cap on minor injury claims - Uninsured drivers	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - Increased impairment benefits available to catastrophically injured, otherwise no increase in limit between non-minor injury and catastrophic injury - Uninsured drivers	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - No increase in limit between non-minor injury and catastrophic injury, lower cap on minor injury claims - Uninsured drivers	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - No increase in limit between non-minor injury and catastrophic injury, lower cap on minor injury claims - Uninsured drivers	Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - Higher medical rehabilitation and attendant care limit if injury of claimant deemed to be catastrophic according to regulation - Uninsured drivers	Two types of personal auto injury insurance in Saskatchewan - No Fault and Tort Coverage. Unless chosen otherwise, No Fault Coverage is default. Coverage applicable to: - Driver at-fault/not-at fault - Passenger and other road users - Limits vary depending on whether No Fault or Tort Coverage chosen - Uninsured drivers
Benefits available	Fault-based Common law with no restrictions	Hybrid	No-Fault	Hybrid	Hybrid	Hybrid	Choice between No-Fault and Tort
Regulatory body	The B.C. Utilities Commission (BCUC) was appointed in 2003 as the independent regulator for ICBC with the responsibility to approve rates for Basic insurance. The BCUC's primary responsibility is the regulation of BC's natural gas and electricity utilities. As well as approving rates, BCUC also ensures Basic product is adequate, efficient and reasonable.	The Alberta Automobile Insurance Rate Board (AIRB). AIRB's primary role is to regulate automobile insurance rating programs for private passenger vehicles for both basic and additional coverage. The Board's vision is to foster an efficient and effective automobile insurance market with fair and predictable rates.	The Public Utilities Board of Manitoba (PUB) is an independent, quasi-judicial administrative tribunal that has broad oversight and supervisory powers over public utilities and designated monopolies, as set out in statute. The PUB considers both the impact to customers and financial requirements of the utility in approving rates. Dispute resolution - If disputes about compensation arise and can't be solved with the	The automobile insurance industry is regulated provincially as follows: i.) New Brunswick's Financial and Consumer Services Commission (FCNB) is responsible for the administration and enforcement of provincial legislation that regulates insurance and other sectors. The Insurance Division provides day-to-day administration of the Insurance Act through the regulation,	The automobile insurance industry is regulated provincially as follows: i.) Office of the Superintendent of Insurance - regulates the business of insurance in the province and enforces the Insurance Act. They license all insurers and intermediaries operating in the province. The Superintendent has the authority to take disciplinary actions if the Act is not followed. Also facilitates the interface between	The automobile insurance industry is regulated provincially as follows: Financial Services Commission of Ontario (FSCO). FSCO's legislative mandate is to provide regulatory services that protect the public interest and enhance public confidence in the sectors it regulates. Disputes between consumers and insurers involving statutory accident benefits must go through mediation before the dispute can proceed to	The Saskatchewan Rate Review Panel advises the Government of Saskatchewan on rate applications proposed by the SGI Auto Fund. The Automobile Injury Appeal Commission is an independent tribunal responsible for hearing no fault benefit appeals in Saskatchewan. The Commission has the authority to set aside, confirm or vary benefits decisions made by SGI.

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
			claimant's case manager, the next step is to ask the Internal Review Office to review the decision. This office operates independently of Injury Claims Management. If not satisfied with the outcome of the internal review, claimants can appeal to the Automobile Injury Compensation Appeal Commission which is completely independent from MPI.	oversight and licensing of insurers and insurance intermediaries. Compliance staff work to ensure that insurers and intermediaries are following the provisions in the Act and Regulations. They are an arm's length, self-funded, independent Crown Corporation established by the provincial government on 1 July 2013. They are funded by the regulatory fees and assessments paid by the regulated sectors. ii.) The New Brunswick Insurance Board (NBIB) is a quasi-judicial administrative tribunal established by the Government of New Brunswick in 2004 as the regulatory agency for automobile insurance rates with the overall supervision of automobile insurance rates in New Brunswick. The NBIB is an independent agency that operates at arm's-length from government. They are funded by the regulatory fees and assessments paid by the regulated sectors.	consumers and the insurance industry by working toward a responsive legislative framework for insurance companies and agents and by assisting insurance consumers in dealing with insurance matters. ii.) The Nova Scotia Utility and Review Board (NSUARB) is an independent quasi-judicial body which has both regulatory and adjudicative jurisdiction flowing from the Utility and Review Board Act. It reports to the Legislature through the Department of Finance. The Board holds reviews and hearings on rules and rate filings to ensure they meet the standards set out in the legislation and regulations. The Board ensures compliance with the Insurance Act by administering rules, publishing policy statements and interpretations, ordering investigations and actuarial reports, imposing administrative and monetary sanctions and exercising the regulatory function of a tribunal.	arbitration or court. Dispute resolution responsibility moved from FSCO to Ministry of the Attorney General's Licence Appeal Tribunal.	

Metrics by Jurisdiction	**British Columbia**	**Alberta**	**Manitoba**	**New Brunswick**	**Nova Scotia**	**Ontario**	**Saskatchewan**
Legislation/ Acts	Insurance Corporation Act Insurance (Vehicle) Act Insurance (Vehicle) Act Regulation	Insurance Act Enhancing Consumer Protection in Auto Insurance Act	The Crown Corporations Public Review and Accountability and Consequential Amendments Act	Insurance Act	Insurance Act	Insurance Act 1990 Compulsory Automobile Insurance Act 1990 Prepaid Hospital and Medical Services Act 1990 Motor Vehicle Accident Claims Act 1990 Automobile Insurance Rate Stabilization Act 2003	The Saskatchewan Government Insurance Act The Automobile Accident Insurance Act The Crown Corporations Act
Interaction with Health System/ Social Security System	Wage loss payments from other disability benefit sources such as work/private insurance plans or employment insurance are deducted from the benefits payable under Basic Autoplan, i.e. ICBC is the second payer. ICBC reimburses the Medical Services Plan of BC (MSP) for services of medical practitioners that are required as a result of an ICBC claim.	The Government of Alberta assesses an annually adjusted amount to industry to cover the cost of health services provided to victims of automobile accidents.	MPI makes payments to Manitoba Health (included within Unallocated Loss Adjustment Expenses) which are calculated based on the Corporation's agreement with Manitoba Health.	The Minister of Health may, in respect of personal injuries arising out of the use or operation of a motor vehicle registered in the Province, impose a levy on each insurer for the purpose of recovering (a) the cost of the entitled services provided to beneficiaries under the Medical Services Payment Act, (b) the cost of the entitled services provided to persons under the Hospital Services Act, and (c) the cost of social services provided to persons under the Family Services Act.	The Office of the Superintendent collects the auto levies on behalf of the Department of Health pursuant to the NS Health Services and Insurance Act. Department of Health annually conducts an actuarial assessment of the auto collision costs for which the Superintendent will provide each automobile insurer of the amount of the levy. In addition, in each year, every automobile insurer shall pay a levy of fifty cents with respect to each vehicle insured by that automobile insurer for the purpose of recovering costs incurred by volunteer fire departments in responding to motor vehicle accidents.	1. The provincial health insurance plan is the first responder in an auto collision. It covers acute care typically performed in hospitals – for example, setting a broken bone. Car insurers reimburse the provincial governments for the medical services they provide to the collision victims up front. 2. A private plan – employee benefit plan, private health care plan or provincial workers compensation plan – responds second. 3. Auto insurers pay the majority of the costs for recovery (other than for acute care). Every year, car insurers pay $2 billion to help collision victims recover -- more than provincial health insurance plans, workers' compensation plans and private	To offset costs incurred by the provincial health care system as a result of bodily injuries sustained while either operating a motor vehicle or as a result of a motor vehicle, the Auto Fund reimburses the Ministry of Health for a portion of the costs, about $30 million per year. Medical funding costs are allocated to vehicle classes based on the amount of actual medical expenses they incur. The total assigned medical funding cost is then divided by the forecasted number of vehicles for the rating period within that class to determine the average medical funding cost per vehicle. Each vehicle within the class will pay the same amount.

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
						health care plans combined.	
Fraud - estimated costs	Fraud detection and enforcement activities expected to reduce basic insurance costs by $21 million for policies written over the next year, and will save up to $44 million a year by 2019.	Not available	MPI's Special Investigation Unit has saved policyholders approximately $60 million over the past five years	Not available	Not available	83% of auto insurance fraud in Ontario takes place in the Greater Toronto Area (FSCO) Estimates of auto insurance fraud range from 9 to 18 per cent of claims costs, which represents between $116 and $236 per average premium paid in Ontario (KPMG, 2010)	Not available
Population (millions)	4.7	4.2	1.3	0.8	0.9	13.8	1.1
Exposure/ Number of registered vehicles (millions)	3.2	2.7	1.1 (includes all vehicle types)	0.5	0.6	7.1	1.2 (includes all vehicle types)

Benefits available

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
Overview of benefits	- Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $20,000) - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.	- Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $10,000) - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.	- Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $20,000) - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.	- Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $20,000) - Direct Compensation Property Damage - Medical Payments/ Funeral Expense /Disability Income/Death Benefits - see details below.	- Compulsory minimum Third-Party Liability - limit $500,000 per claim - Direct Compensation Property Damage - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.	-Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $10,000) - Direct Compensation Property Damage - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.	- Compulsory minimum Third-Party Liability - limit $200,000 per claim (if limit is reached for bodily injury and property damage, payment on property damage capped at $10,000) - Medical Payments / Funeral Expense / Disability Income / Death Benefits - see details below.

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
Non economic loss benefits	Able to sue for pain and suffering, no limits	If injury is deemed "minor" under provincial legislation, maximum award is $4,956	No pain and suffering benefits	If injury is deemed "minor" under provincial legislation, maximum award is $7,818.87	If injury is deemed "minor" under provincial legislation, maximum award is $8,486	If injury meets severity test (called “threshold”) have the right to sue for pain and suffering, subject to deductible. Lawsuit allowed only if injured person dies or sustains permanent and serious disfigurement and/or impairment of important physical, mental or psychological function. The court assesses damages and deducts $37,385.17 ($18,692.59 for a Family Law Act claim)	If no-fault option selected: No pain and suffering benefits If tort option selected: Have the right to sue for pain and suffering, subject to $5,000 deductible.
Economic loss benefits	75% gross weekly wages to maximum $300/week; 104 weeks for temporary disability, lifetime for total disability; nothing is payable for the first seven days of disability; homemaker up to $145/week, maximum 104 weeks Right to sue for economic loss in excess of no-fault benefits	80% of gross weekly wages to maximum $400/week; up to 104 weeks for total disability; nothing is payable for the first seven days of disability; non-earner benefit (unemployed person 18 years or older) $135/week, for up to 26 weeks Right to sue for economic loss in excess of no-fault benefits	90% of net wages based on gross annual income of maximum $94,500/year; nothing is payable for the first seven days of disability	Maximum $250/week; 104 weeks for partial disability, lifetime for total disability; must be disabled for at least seven days to qualify; unpaid housekeeper $100/week, maximum 52 weeks Right to sue for economic loss in excess of no-fault benefits	80% of gross weekly income (less any payments for loss of income); 104 weeks partial disability; lifetime if totally disabled (incapable of performing essential duties); maximum $250/week; must be disabled for at least 7 days to qualify; unpaid housekeeper, if completely disabled, $100/week for maximum of 52 weeks Right to sue for economic loss in excess of no-fault benefits	Income Replacement Benefit: 70% of gross wages to maximum $400/week, minimum $185/week for 104 weeks (longer if victim is unable to pursue any suitable occupation); nothing is payable for the first seven days of disability. Non-earner Benefit (disabled unemployed persons, students enrolled in education full time, or students who completed their education less than one year before the accident and are	If no-fault option selected: 90% of net wages based on gross annual income of maximum $94,587/year; nothing is payable for the first seven days of disability unless catastrophically injured If tort option selected: Up to two years; $429/week for total disability (lifetime if unable to return to any job); $214/week for partially disability ($107/week if worked less than six months prior to collision); maximum $22,308/year

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
						not employed): $185/week for 104 weeks; four-week wait; limit two years; Not available if the insured is eligible for, and elects to receive, the income replacement or caregiver benefit Injured person may sue for 70% of net income loss before trial, 100% of gross after trial; also for medical, rehabilitation and related costs when injury meets severity test for pain and suffering claims Right to sue for economic loss in excess of no-fault benefits	
Medical / Treatment / Care benefits	Up to $150,000/person	Up to $50,000/person	No time or amount limit	Up to $50,000/person; four-year time limit	Up to $50,000/person; four-year time limit	Up to $3,500/person for minor injury; up to $65,000/person for combined medical and attendant care for non-minor and non-catastrophic injury for up to 5 years (longer for children; paid only as long as person remains medically eligible); up to $1 million for combined medical and attendant care for catastrophic injury	If no-fault option selected: Up to $6,813,680/person; If tort option selected: Up to $26,667/person for non-catastrophic injury, up to $200,000 for catastrophic injury
Death / Funeral benefits	Funeral expense: $2,500 Death following a collision; death	Funeral Expense $5,020 Death of head of household	Funeral Expense ($8,409 maximum) Death any time	Funeral Expense $2,500 Death of head of household	Funeral Expense $2,500 Death of head of household	Funeral Expense $6,000 (Cap) Death of	If no-fault option selected: Funeral Expense $10,219

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
	of head of household $5,000, plus $145/week for 104 weeks to first survivor, plus $1,000 and $35/week for 104 weeks to each child; death of spouse/partner of head of household $2,500; death of dependent child, according to age, maximum $1,500	$10,000, plus 20% ($2,000) for each dependent survivor after first, plus additional $15,000 for first survivor and $4,000 for each remaining survivor; death of spouse/adult interdependent partner of head of household $10,000; death of dependent relative, according to age, maximum $3,000; grief counselling up to $400 per family with respect to death of any one person	after injury; benefits for partners depend on wage and age of deceased and range from $61,706 to $472,500; benefits for dependent children depend on their age and range from $29,309 to $53,993; disabled dependants receive an additional $26,995; non-dependent children or parents receive $13,741	$50,000, plus $1,000 to each dependent survivor after first; death of spouse/partner of head of household $25,000; death of dependant $5,000	$25,000, plus $1,000 to each dependent survivor after first; death of spouse/partner $25,000; death of dependant $5,000	Spouse/Partner $25,000 (Cap) Death of Dependant $10,000 (Cap) Death of Other $10,000 (Cap; Benefits to each parent/guardian) If optional indexation coverage is purchased, these amounts may be higher. Time limit: Death within 180 days of accident (or three years if continuously disabled prior to death).	50% of deceased's income benefit; minimum $70,293 to spouse; 5% of calculated death benefits to each dependent child; if no spouse, $15,620 to each surviving parent or child (21 years or older), to maximum $70,293; death of dependent child $31,240 If tort option selected: Funeral Expense $6,667 45% of deceased's net income; minimum $60,000 to spouse; 5% of calculated death benefits to each dependent child; if no spouse or dependant, estate receives up to $13,333
Other benefits	Not applicable	Not applicable	Impairment benefits: Minimum $770/week, maximum total of $154,261 for non-catastrophic injury; a maximum $243,580 for catastrophic injury	Not applicable	Not applicable	Not applicable	Impairment Benefits If no-fault option selected: Up to $195,257/person for non-catastrophic injury, up to $238,479 for catastrophic injury If tort option selected: Up to $13,333/person for non-catastrophic injury, up to $173,333 for catastrophic injury

History of reform

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
Overview of recent reform activity	No recent reform activity	Bill 53 - The Insurance Amendment Act (2004) Bill 39 - Enhancing Consumer Protection in Auto Insurance Act (2014)	No recent reform activity	Bill 54 (Minor Injury Regulation) Regulation 2013-37 amending Regulation 2003-20 (Injury Regulation) under the Insurance Act	Bill 1 - Automobile Insurance Reform Act (2003) O.I.C. 2010 - 254 Fair Auto Insurance Reforms (FAIR) Phase I and II (2012 & 2013)	Bill 5 - The Automobile Rate Stabilization Act (2004) Ontario Auto Reform Reg. 34/10 (2010) Minor Injury Guideline and Treatment Assessment Plan OCF-18 (2014) Bill 15 - Fighting Fraud and Reducing Automobile Insurance Rates Act (2014) Bill 91 - Building Ontario Up Act (2015)	2003 Reform (Choice)
Drivers of reform	Not applicable	Rapidly rising premiums Pain and suffering cited as the biggest automobile claims cost factor in Alberta at the time of reform	Not applicable	Concerns about fairness between minor/non-minor injuries Cost and availability issues: - average premiums increased significantly (38%) over 2001 to 2003 - significant costs going towards minor injury claims, particularly pain and suffering, 2002 closed claims study showed 61% of claims were for pain and suffering	Concerns about fairness between minor/non-minor injuries Rapidly rising premium rates Pain and suffering costs significant - 2002 closed claims study found that for claims $20,000 or less, approx. 80% of total settlement amounts were for pain and suffering Lack of choice in coverage Inefficiency in parts of claims process	Escalating claim costs and premiums Lack of coverage options for consumers Increase in fraudulent claims	To meet the needs of those people in the province who want an alternative to no-fault insurance
Key objectives / intents	Not applicable	2004 reforms' goal was to achieve lower insurance premiums for drivers with good records and promised rate savings of 20% overall 2014 reforms allowed for stronger oversight	Not applicable	The government's stated goal was "to make sure the system in place for helping those people injured in motor vehicle accidents is fair, accessible and affordable for all New Brunswickers."	2003: Achieve a 20% reduction in rates 2010: With respect to the minor injury definition and cap, review the fairness of compensation while ensuring that premiums remain affordable.	Reduce claims costs and premiums Reduce waiting time	Allow drivers to choose no-fault or tort product

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
		of automobile insurance premiums by providing the Automobile Insurance Rate Board the responsibility to regulate both basic and additional premiums			2013: Increase choice in coverage. Increase claims process efficiency, reduce waiting times for treatment/reimbursement approval. Promote health and well-being of automobile accident victims.		
Key changes made to legislation or guidelines through reform process	Not applicable	2004: Introduction of a cap on non-economic losses of $4,000 to be adjusted annually by CPI Increased Medical/Rehab benefits from $10,000 to $50,000 Establishing protocols for diagnosing and treating minor injuries Grid System for calculating rates for basic coverage introduced 2014 File and approve system for premium adjustments introduced instead of the previous system involving an annual industry-wide rate adjustment	Not applicable	2003: -Cap on damages for non-pecuniary loss for non-permanent injuries of $2,500 - Creation of Review Panel mandated to review and approve any future rate increases and to monitor insurance issues - Requirement that insurers file their rates at least once every 12 months - Regulation of underwriting practices to prevent discrimination 2013: - Non-pecuniary losses cap increased to $7,500, indexed to CPI - Definition of minor injury amended	2003: Cap awards for pain and suffering for minor injuries to $2,500 Increase minimum liability limit from $200k to $500k All future rate increases have to be reviewed and approved by newly created review board 2010: Amend minor injury definition to mirror Alberta definition Pain and suffering cap increased to $7,500, indexed to inflation FAIR Product Reforms (implemented in two phases): Phase I included provisions for: enhanced accident benefits (including medical, rehabilitation, funeral, death and loss of income benefits), prohibiting premium increases if no claim is made, assistance for volunteer Fire Departments, and periodic review of Auto Insurance	2014 Ontario Bill 15: Establishing a more efficient and effective dispute-resolution system; Continuing the right of claimants and insurers to appeal decisions to the courts; Continuing the right of claimants to pursue tort claims in court; Reducing the applicable interest rate applied to overdue payments in the Statutory Accident Benefits Schedule (SABS) to reflect current interest rates; Reducing the prejudgment interest that can be awarded for non-economic losses to reflect current interest rates; and Reducing fraud and abuse in the towing and vehicle storage industries. 2015 Ontario Bill 91: Adjustments to the tort deductible and the monetary threshold beyond which the tort deductible does not apply to reflect inflation;	All drivers given the option of opting out of no-fault system and choosing tort coverage which would allow the right sue for pain and suffering, subject to a $5,000 deductible. No fault insurance also improved as recommended by independent committee that reviewed the coverage

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
					Law. FAIR Phase II included provisions for: diagnostic and treatment protocols for minor injuries, introduction of DCPD, and limited liability and new priority of pay rules for rental companies.	Introduction of a winter tire discount; Updating the Catastrophic Impairment Definition; Changes to standard benefit levels under the Statutory Accident Benefits Schedule (SABS); Restrictions on premium increases and lowering of the maximum interest rate charged on monthly automobile premiums (effective June 1, 2016).	
Observed impacts following reform	Not applicable	Reduction in bodily injury loss costs post reform Average premiums for Bodily Injury and Accident Benefits decreased following reform	Not applicable	Reduction in Bodily Injury loss costs and average premiums Availability of insurance improved Reduction in claims costs from the caps helped pay for the introduction of the First Chance subsidy which reduced rates for inexperience drivers maintaining clean driving records	Improved availability and affordability	2010 reforms had the most demonstrably positive impact reducing costs associated with minor injuries and restoring availabity and affordability of insurance.	Majority of drivers in the province remained under the no-fault system - the percentage of drivers electing tort had not surpassed 0.74% in any year from 2003 - 2013.

Premiums

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
Premium policy	Basic rates are regulated by the British Columbia Utilities Commission (BCUC), an independent regulator. The BCUC approves	The primary role of the Automobile Insurance Rate Board is to regulate automobile insurance rating programs for private passenger	The Public Utilities Board (PUB) acts as a rate setting tribunal for various public utilities. The PUB establishes just and reasonable rates for	Rate filing submission should include a detailed actuarial justification for rate level indications for all applicable coverage types.	Subject to the requirements to file at least once every two years for private passenger vehicles and once every three years for commercial	The insurer must provide detailed support for any rate level change. Actuarial support should contain the data and narrative description of all ratemaking steps	The Auto Fund's philosophy is that all drivers are treated equally unless their driving record shows they are a greater risk for causing a

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
	Basic insurance rates and ensures Basic product is adequate, efficient and reasonable. ICBC is committed to providing customers with the best insurance coverage at the lowest possible cost.	vehicles for both basic and additional coverage in Alberta. The Board's vision is to foster an efficient and effective automobile insurance market with fair and predictable rates. The Grid Rating Program was developed to set maximum premiums that insurance companies can charge for basic coverage for any driver profile. Many drivers with limited experience are capped by the Grid. Insurance companies must compare a driver's premium under their current rating program to a driver's premium on the Grid and charge the lesser of the two premiums. The Board reviews the base premiums for the Grid Rating Program for basic coverage on an annual basis factoring in loss experience specific to the Grid, loss experience for all private passenger vehicles, ratemaking components and any other matters the Board considers appropriate.	compulsory driver and Basic vehicle insurance provided by Manitoba Public Insurance (MPI). When considering a rate application, the Board reviews the financial requirements of the utility as well as the impact on the consumer. While the Board is sensitive to customer reaction to increases, it must consider the sustainability of the utility.	Actuarial support should contain the data and narrative description of all ratemaking steps for each coverage type. In general, documentation should be in sufficient detail to enable the Board to trace the resulting rates from the raw data experience and other supporting data. The NBIB does not require insurers to adopt a specific ratemaking methodology. However, rate indications should be developed in accordance with generally accepted actuarial principles including the appropriate utilization of professional judgment in the ratemaking process. Insurers wishing to deviate from the justified rate level indications developed will need to furnish the Board with a descriptive narrative explaining the rationale behind the proposed deviations. The Board will only consider such factors, apart from actuarial methodology, as are presented to them by the insurer. These factors might include, but are not limited to, competition,	and miscellaneous vehicles, a Company can file an application with the Board proposing changes to its rates and/or risk-classification system. Applications (approval typically 15-60 days, but extendible to 120 days) are made under one of three sections of the Insurance Act, namely: Section 155B – Overall Rate Decreases; Section 155H – Expedited Approval; and Section 155G – All others (Prior Approval / Adopt IAO Rates / CLEAR Table update / Commercial Rate Group Table update / GISA Class changes / Endorsements / Discounts & Surcharges). The Company must provide detailed support for any rate level change. Actuarial support must contain the data and narrative description of all ratemaking steps for each of the specific rate changes proposed. While the Board's consulting actuary provides selected trends based on industry data, companies are allowed to justify	for each of the specific rate changes being proposed. Each subsection, outlined in the guidelines, must contain the necessary documentation for all of the individual coverages. In general, documentation must be in sufficient detail to enable the reviewer to trace the resulting rates from the raw data experience and other supporting data. FSCO does not require insurers to use a specific ratemaking methodology. However, insurers are required to provide adequate actuarial documentation and support for the rate levels subject to prior approval. Technical notes includes analyses of the reform impact & loss trends.	collision. The Saskatchewan Rate Review Panel (SRRP) advises the Government of Saskatchewan on rate applications proposed by the SGI Auto Fund. The Panel reviews each application and provides a public report stating its opinion about the fairness and reasonableness of the rate change, while balancing the interests of the customer, the Crown corporation and the public. The Auto Fund does not receive money from, nor pay dividends to, the Province of Saskatchewan, SGI or Crown Investments Corporation of Saskatchewan (CIC), SGI's parent corporation. The Auto Fund is operated on a self-sustaining basis viewed over a long-term time frame. Any annual financial excess or deficiencies of the Auto Fund are recorded in its Rate Stabilization Reserve (RSR). The RSR is held on behalf of Saskatchewan's motoring public and cannot be used for any other purpose by the government or the administrator.

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
				market share, business plans, etc. The rationale provided should be as detailed as possible in order to illustrate for the Board that the rate selections are reasonable deviations from rate indications. NBIB proscribes Health Services Levy and Tax Rates to be used in rate filings.	their own trend selections.		
Regulations and limits	Changes to ICBC's basic insurance are regulated by the BC Utilities Commission. They ensure that basic insurance rates are justified and reasonable.	Alberta Regulation 117/2014 - Automobile Insurance Premiums Regulation No insurer may charge or collect a premium for basic coverage or additional coverage unless the insurer's rating program with respect to that coverage has been approved in accordance with this regulation. Automobile Insurance Rating Program Approvals Every insurer licensed to undertake automobile insurance in Alberta must file its rating program with the Board and obtain the prior approval of the Board to either establish a new rating program to enter the market or revise an existing rating program. The Board may	The Crown Corporations Public Review and Accountability and Consequential Amendments Act directs that no change in rates shall be made and no new rates for services shall be introduced without approval from the PUB.	Approval Process: The filing will be reviewed for completeness based on the filing guidelines and the Insurer will be informed of any information required to complete this filing. Once a filing is deemed complete, the NBIB and/or its consulting actuaries will proceed to review the technical components of the filing. The NBIB may request further information from the insurer. Although all rate filings are subject to review and are ultimately approved by the Board, appearing before that Board at a hearing is only required in specific circumstances. The Insurance Act specifies that if an insurer is seeking an increase of more than 3% over currently	Where Board staff or its consulting actuaries produce a report, the report is shared with the Company. The Company has ten days to respond with any comments. The author of the report will then have four days to respond to the comments. The Company would then have a further four days to respond to those final comments. At this stage, the application and the reports and comments are forwarded to a selected panel. In most cases, the hearing of the application will be a paper hearing in front of up to three members of the Board. Where deemed appropriate, a public hearing may be held. In these cases, an Order and Notice of the Public	Proposed changes to rates and risk classifications for Private Passenger Automobile (PPA) insurance are subject to: the simplified filing guidelines where the filing changes satisfy the criteria established by the Superintendent; the CLEAR simplified filing guidelines for filing changes to vehicle rate groups; or the major filing requirements (refer to the PPA Filing Guidelines - Major). Additional filing guidelines applicable to Underwriting Rules, Endorsements, Insurance Forms, and Manuals.	The Auto Fund is required to submit vehicle insurance rate changes to the SRRP. The SRRP's mandate is to evaluate the rate change and to provide an opinion on the fairness and reasonableness of the requested change. The SRRP does not have authority to implement any of its recommendations; the final decision to approve, change or reject rate changes is at the discretion of the provincial government.

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
		require a Full Filing where there has been no request for a revision to a rating program within the past three years, or at the Board's discretion.		approved rates then it must appear before the Board. Even if a rate filing is not in excess of the 3% threshold, the Board can still require an insurer to appear before the Board in order to better investigate the proposed rates. The hearing process used by the Board is designed to allow interested parties an opportunity to review the rate applications subject to a hearing, to ask questions of the company making the rate filing and to make representations to the Board with respect to the rate filing. Once all of the evidence has been received by the Board from the various parties, the Board will deliberate and render a decision on each rate application that has been subject to a hearing. Decisions of the Board are posted on NBIB's website.	Hearing will be advertised in the Province's newspapers. Interveners will have the opportunity to identify themselves during the time prior to the hearing. The Public Hearing will be in front of three members of the Board. With the exception of a filing of "a schedule of overall decrease in rates with a cap" as identified in the Rate Decrease Filing Regulations, the Board will issue an Order with reasons outlining the decision made by the Board on the application. At this point, the Company has fifteen days to file an appeal of the decision.		
Rating variables	The main factors ICBC considers in determining a driver's Basic Autoplan premiums are: - How the vehicle is used (e.g. commuting, pleasure, business, delivery) - Where the	The base premium for a relevant driver and occasional driver is calculated in accordance with a table published by the Board no later than October 31 each year by determining (a) the territory in	How much drivers pay for Autopac coverage depends on: - where they live (province split into 4 territories) - how the vehicle is used (i.e. commuting, pleasure, etc.) - the vehicle	Type of Vehicle Vehicle Use/Distance driven Territory Driving Record Years Licensed Limit/Deductible Vehicle Rate Group	Type of Vehicle Vehicle Use/Distance driven Territory Driving Record Years Licensed Limit/Deductible Vehicle Rate Group	Type of Vehicle Vehicle Use/Distance driven Territory Driving Record Age Gender Limit/Deductible Vehicle Rate Group	The Auto Fund's philosophy is that all drivers are treated equally unless their driving record shows they are a greater risk for causing a collision. It does not use a driver's age, gender or

Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
	insured lives or uses the vehicle - Insureds' insurance and claims history	which the policyholder resides and (b) the choice of the policyholder's liability limit. In adjusting base premiums, the Board must ensure that the base premium for the rest of Alberta territory is 20% less than for the Edmonton and Calgary territories. Years of driving experience, number of at-fault claims, and driving convictions are then considered to get from the base premium to the grid premium. Rating Variables: - Age - Gender - Territory - Type of Vehicle - Use of Vehicle - Years Licensed 'The Superintendent may prohibit the use of any rating variable in an insurer's rating program	(year, make and model) - driving record			Factors prohibited from use in risk classification system: - Past claims arising out of accidents occurring on or after September 1, 2010, for which an insured person was 25% or less at fault; - Existence or non-existence of a medical, surgical, dental, hospitalization or other similar plans; - Existence or non-existence of an income continuation plan, sick leave or other similar plans; - Certain lapses in automobile insurance coverage; and - Income, employment history, occupation, credit card history, credit rating, bankruptcy, residence history, net worth, minor accidents after June 1, 2016, etc.	where they live to determine a vehicle insurance premium or the fee for a driver's licence.

	Metrics by Jurisdiction	British Columbia	Alberta	Manitoba	New Brunswick	Nova Scotia	Ontario	Saskatchewan
Premium	Average premium[1]	$912	$623	$963 (All Coverages and Vehicles)	$465	$451	$1,156	$762 (All Coverages and Vehicles)
	Average weekly earnings (2015)	$910	$1,146	$880	$855	$835	$963	$981
	Affordability	100%	54%	109%	54%	54%	120%	78%
	Efficiency - amount of premium returned to policyholders as benefits	58%	Not available	104%	Not available	Not available	Not available	83%
Claim Frequency	Casualty rate per 1,000 vehicles (2014)	6.63	7.16	10.44	5.52	6.88	6.77	4.87
	Casualty rate per 10,000 population (2014)	45.55	45.49	89.52	35.38	41.24	34.74	51.64
	Claim rate per 1,000 vehicles	13.87	5.73	N/A	3.17	4.19	1.74 (BI Threshold claims)	N/A
	Claim rate per 10,000 population	95.21	36.40	N/A	20.29	25.15	8.91 (BI Threshold claims)	N/A
Claim Severity	Average casualty claim size	$45,169	$64,842	N/A	$60,414	$49,196	$153,831 (BI Threshold claims)	N/A
Expenses	Expense rate	Expense categories as a percentage of Basic premium: Claims Services Costs (ULAE) 6.3% Road Safety & Loss Management Costs 1.6% Insurance Operating Costs 4.1% Premium Tax & Commissions 5.0% Non-insurance operating costs 4.4% Total 21.4%	Insurance premium tax 4% Other expense rates vary by insurer, not available at provincial level	Operating Expenses 11.4% Commissions 7.2% Premium Tax 3.0% Regulatory/Appeal 0.3% Total 22.0%	Insurance premium tax 3% Other expense rates vary by insurer, not available at provincial level	Insurance premium tax 4% Other expense rates vary by insurer, not available at provincial level	Insurance premium tax 3.5% Other expense rates vary by insurer, not available at provincial level	Insurance premium tax 4% ULAE 3% General Expenses 11% Commissions 20%

Notes

[1] Average premium is for Basic coverage with the following exceptions: Manitoba and Saskatchewan figures are for all coverages and all vehicles.

Appendix 2: Investment management review

As part of our review we compared ICBC against Canadian and American insurers across a number of elements such as capital, asset allocation, investment performance etc. In order to complete these elements we relied on Canadian financial statement data from MSA Research Inc. (MSA) and American financial statement data contained in regulatory financial statements as reported to the National Association of Insurance Commissioners (NAIC).

Section 1: Canadian P&C Insurance Benchmarks

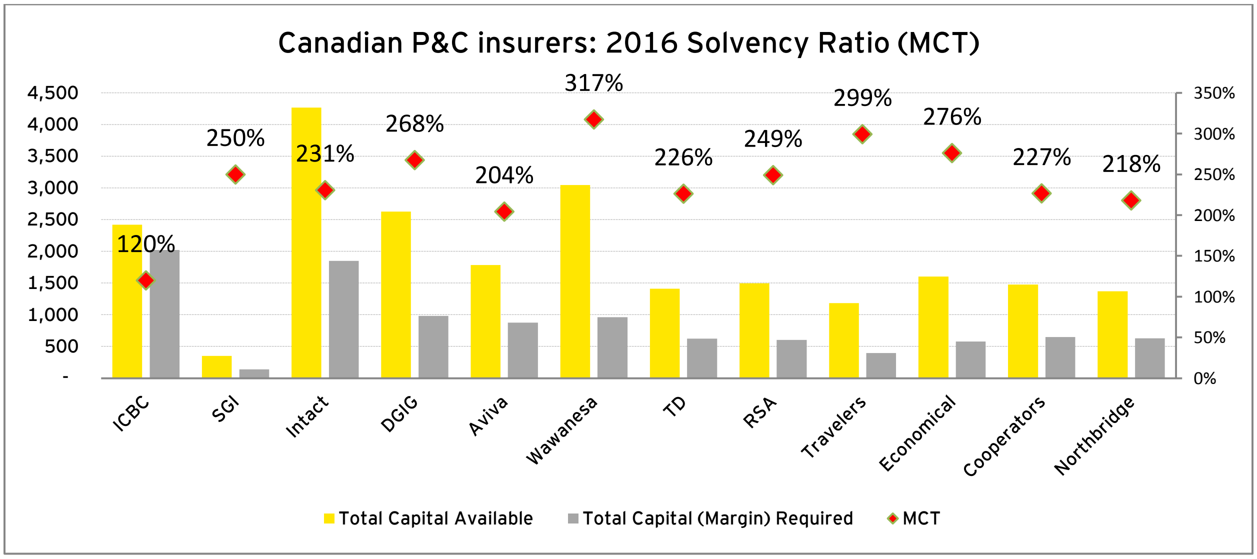
Purpose: Benchmark ICBC to similar organisations i.e. SGI, top 10 Canadian P&C companies, and average Canadian P&C industry.

2016 Solvency Ratio (MCT)

The MCT ratio is an indicator of the solvency strength based on the OSFI regulatory framework. The regulatory minimum requirement is an MCT ratio of 150%. Large diversified insurers typically operate with an MCT ratio of approximately 200%.

ICBC is not subject to the regulatory minimum but has an internal target of 145% for basic and 250% for Optional[33] (the combined target is approximately 177%).

Chart 1: Comparison of MCT Ratio of selected Canadian Insurers



Key Findings

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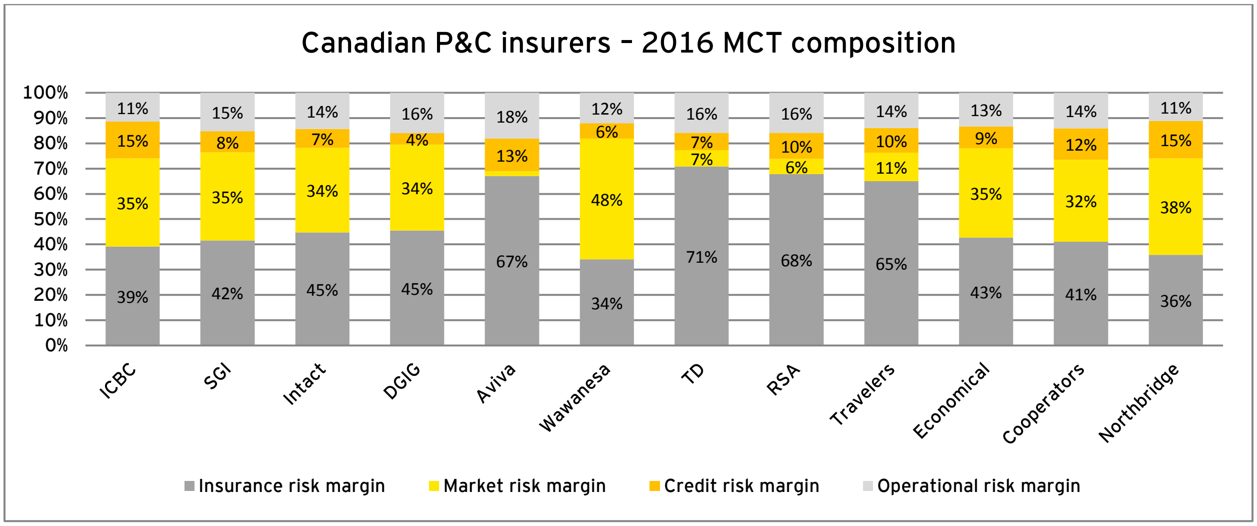
[33] ICBC's MCT ratio in these charts is on a total basis (Basic + optional)

- ICBC 2016 MCT ratio is below the average of comparable insurers and below its target. Improving the MCT ratio could be achieved either by injecting capital or reducing risk (or a mix of both)

<u>MCT composition</u>

The total of market and credit risk margin is approximately 30% for the total Canadian P&C industry, approximately 37% for the total top 10 companies, and ranges from 14% for TD insurance to 54% for Wawanesa among the top 10.

Chart 2: Comparison of MCT composition among selected Canadian Insurers



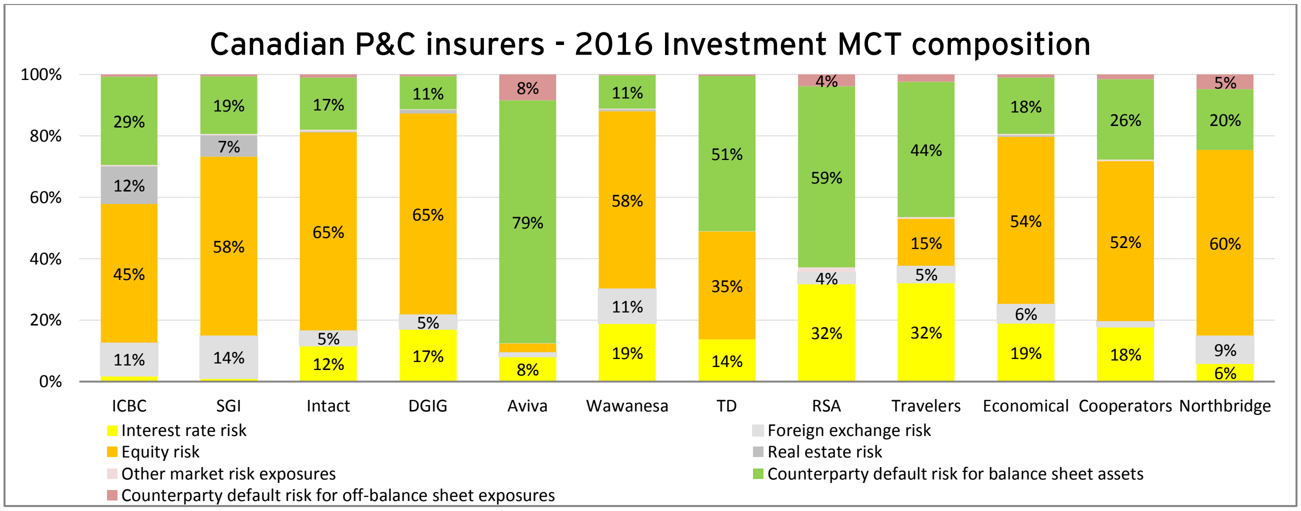
Key Findings

- ICBC market and credit risk margin is 50% of the total required capital. Only Wawanesa (54%) and Northbridge (53%) have higher contributions of investment risks to the total risk margin. This is a significant level of market and credit risk for ICBC given their capital position as measured by MCT

<u>Investment MCT composition</u>

When reviewing the capital components of the investment portfolio it is clear that certain insurers have little tolerance for equity risk and that very few are investing in real estate in a material way.

Chart 3: Comparison of Investment MCT composition among selected Canadian Insurers



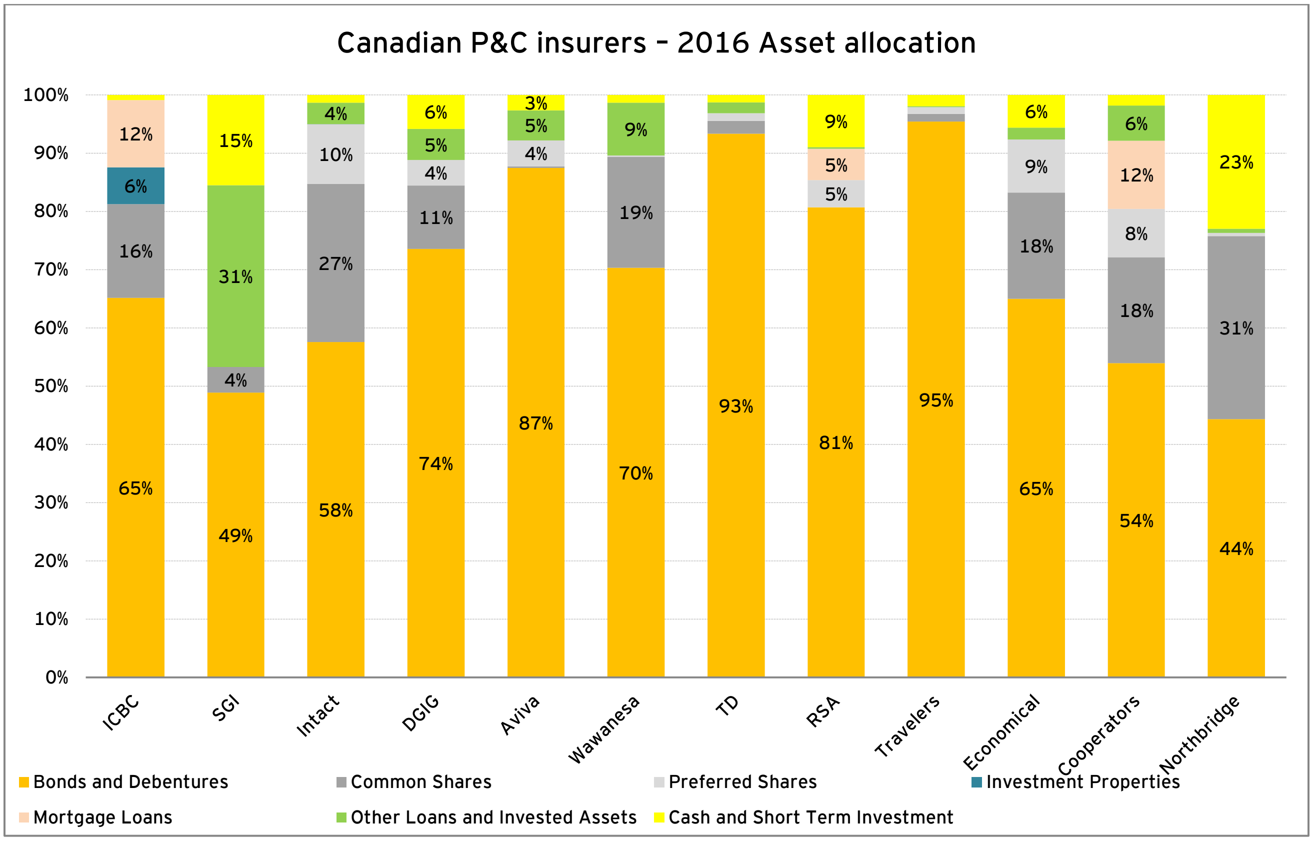
Key Findings

- ICBC has the highest Real estate risk margin ($199m) and Default risk margin ($470m) in dollar value compared to the top 10 Canadian P&C companies

Asset Allocation

Per review of the chart below, ICBC's exposure to Equity risk is comparable to the average exposure of the top 10 Canadian P&C companies (16% vs. 13%). Aviva, TD, RSA, Travelers and SGI have almost no common shares, while Northbridge have 31% and Intact 27%.

Chart 4: Comparison of High Level Allocation among selected Canadian Insurers



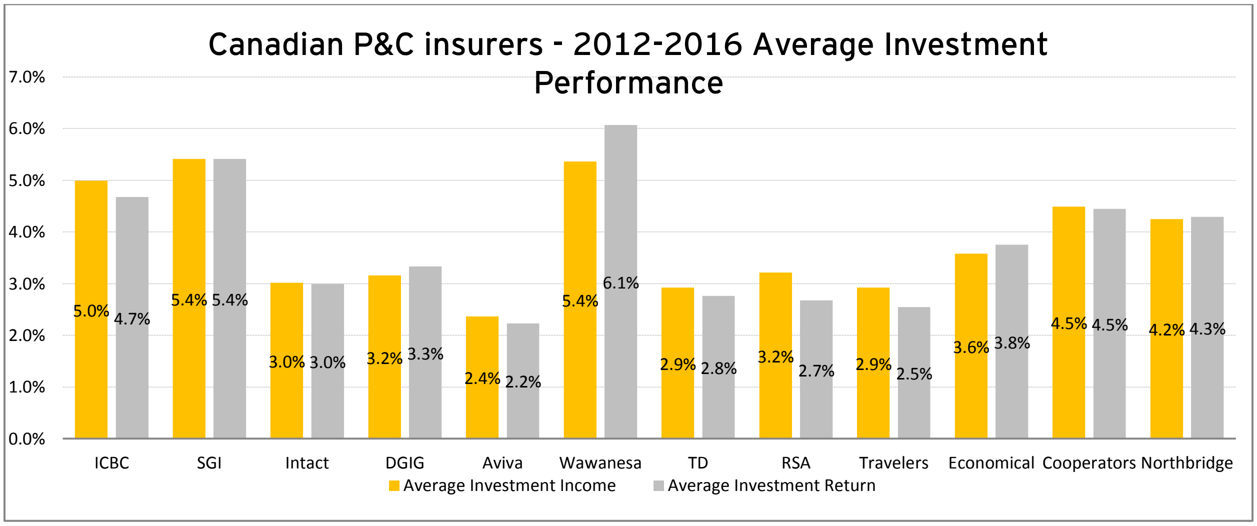
Key Findings

- ICBC has no exposure to preferred shares, while Intact, Economical and Cooperators have the highest exposure to preferred shares (10%, 9% and 8% respectively)
- ICBC and Cooperators have the highest exposure to mortgage loans (12%)

Investment Performance

Over a period of five years there is very little difference between investment income and investment return and those with higher returns are generally aligned with their higher risk asset mix.

Chart 5: Comparison of average Investment performance among selected Canadian insurers



**Investment income is the ratio of the P&L investment income over average invested assets*
***Investment return is the ratio of the P&L investment income plus the change in Accumulated Other Comprehensive Income (Loss) over average invested assets*

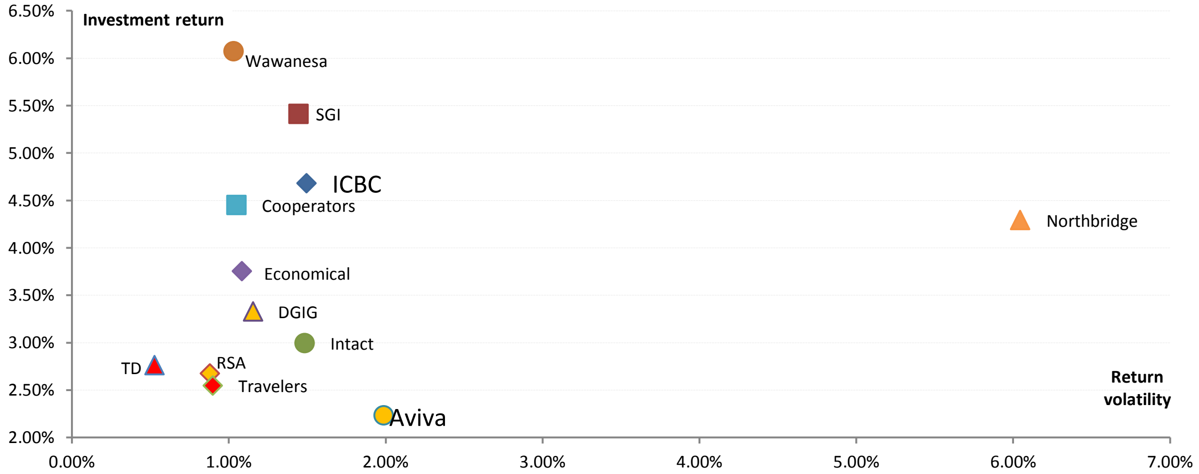
Key Findings

- ICBC is ranked 3rd. after SGI and Wawanesa. ICBC average investment income of 5.00% is higher than the average top 10 (3.41%) and the average of Canadian P&C industry (2.94%)
- A five-year average investment performance shows no material difference between investment income and investment return. On an annual basis, differences are much more significant.

Investment Performance vs Volatility

Reviewing investment performance against volatility of returns gives a measure of who has performed well relative to the level of risk inherent in the portfolio.

Chart 6: Comparison of average Investment performance among selected Canadian insurers



The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Sharpe ratio = (average return – risk free rate)/ standard deviation of return.
The risk-free rate is the average over the 2012-2016 period of the 1 year yield to maturity on federal government zero coupon bonds.

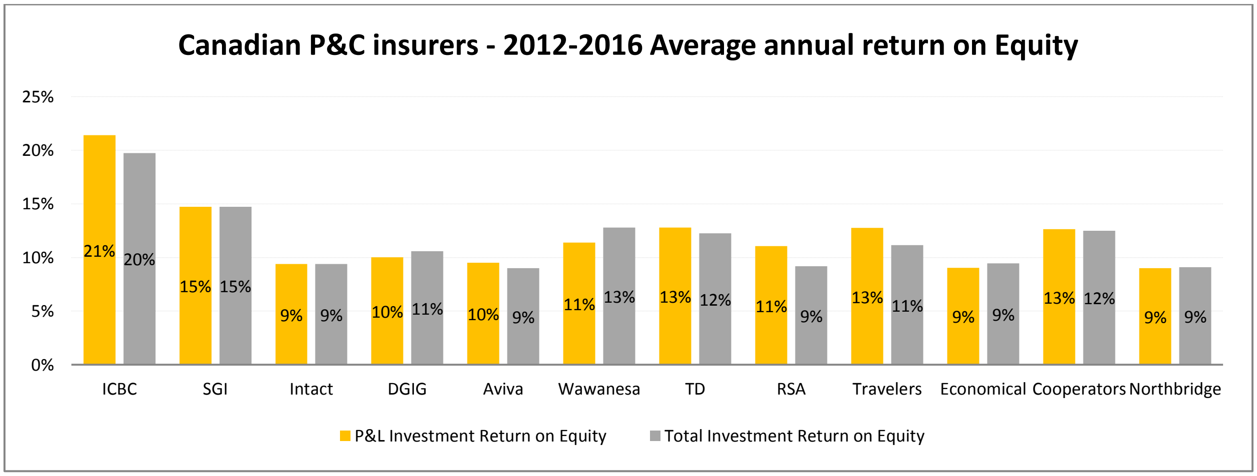
Key Findings

- ICBC is ranked 6th on Sharpe ratio (3rd. on absolute investment return) , while Wawanesa is ranked 1st (1st on absolute investment return)
- TD, Economical, and Cooperators have less absolute investment return compared to ICBC, but they have better Sharpe ratios.

Return on Equity

Reviewing the investment return on equity highlights the importance of investment income on overall financial performance.

Chart 7: Comparison of average investment return on equity 2012-2016



Key Findings

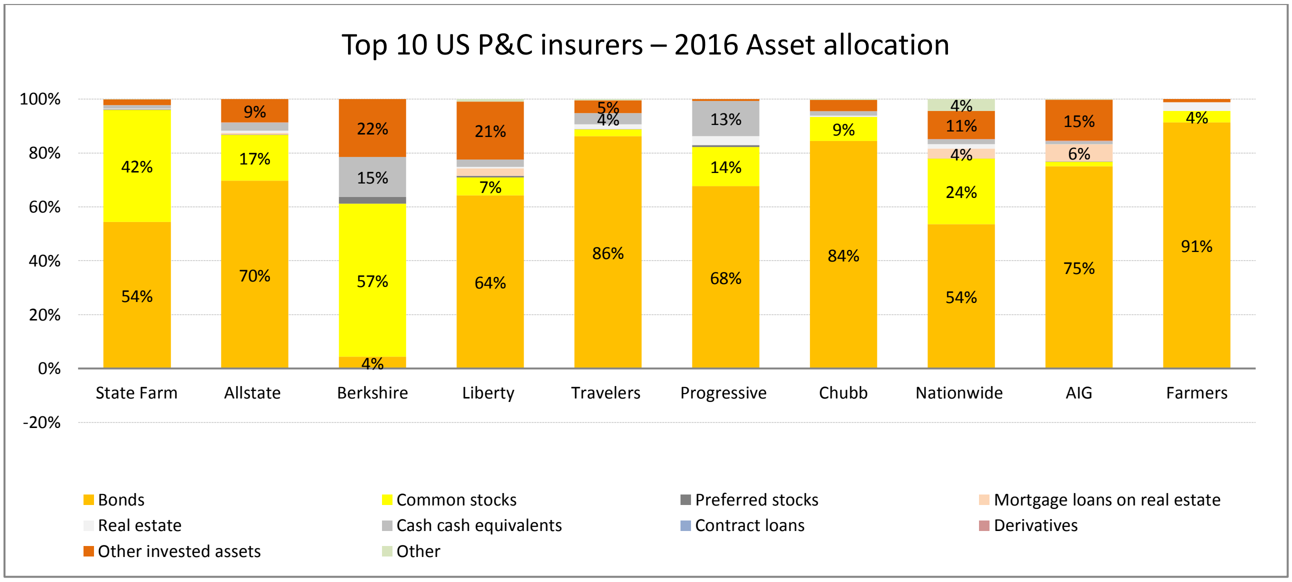
- ICBC has the best ROE compared to SGI and the top 10 Canadian P&C insurers. This measure is impacted by ICBC's lower capitalisation (2016 MCT is 120%).

Section 2: US P&C Insurance Benchmark

Purpose: Benchmark ICBC investment performance to top 10 US P&C companies and average US P&C industry.

Asset Allocation

Chart 8: Comparison of asset allocation of Top 10 US P&C Insurers

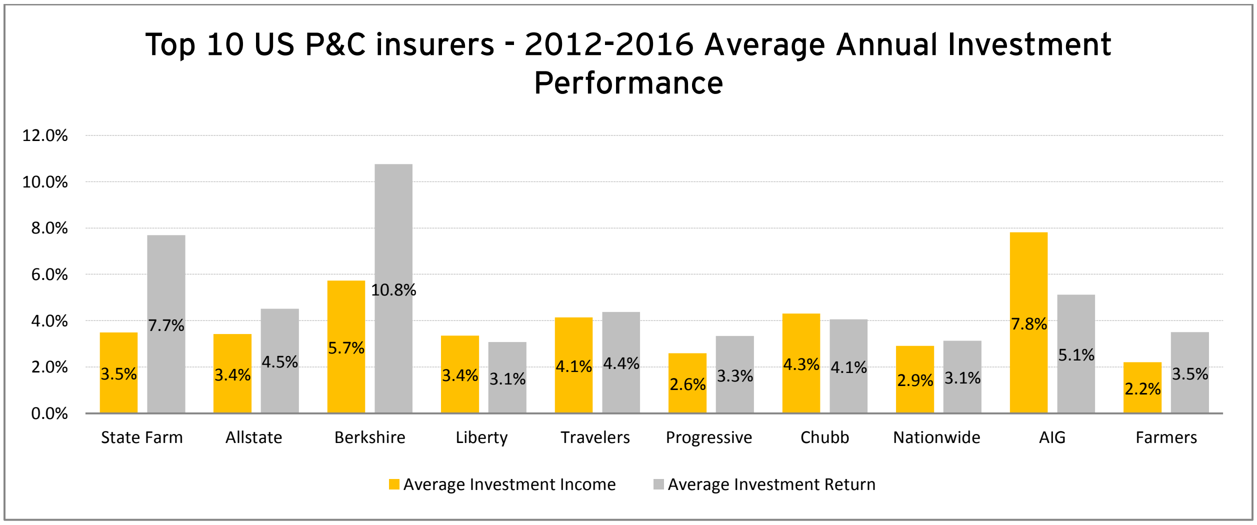


Key Findings

- Berkshire has only 4% of its assets in Bonds in comparison to the remaining insurers whose bonds portfolio comprise 54-91% of their asset base.

US Average annual investment performance

Chart 9: Comparison of average annual investment performance



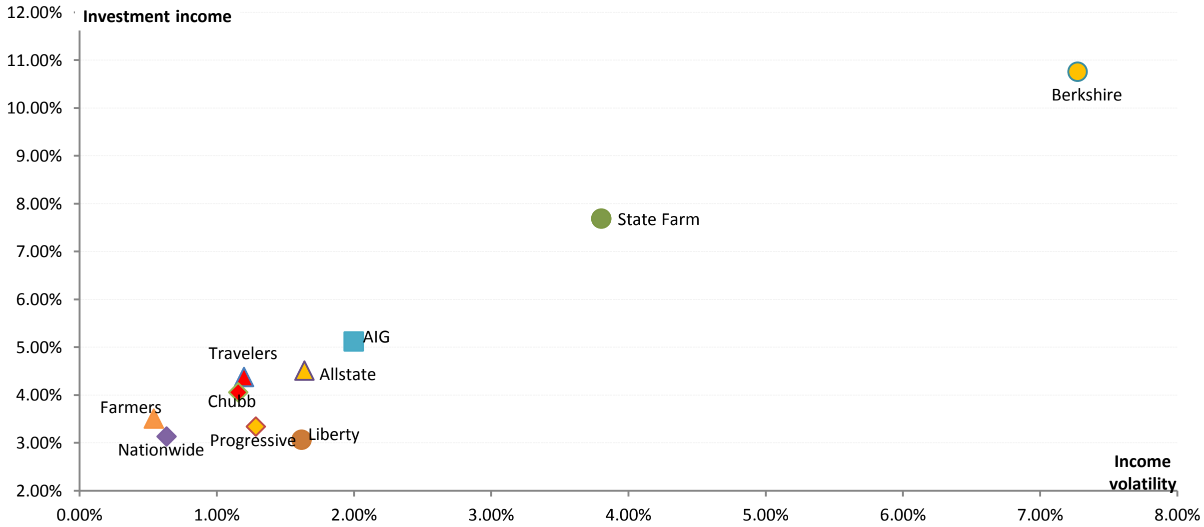
**Investment income is the ratio of the P&L investment income over average invested assets*
***Investment return is the ratio of the P&L investment income plus the change in unrealized capital gain over average invested assets*

Key Findings

- Average investment returns range from 3.1% for Liberty to 10.8% for Berkshire
- The difference between average investment return and average investment income is material for Berkshire and State Farm, as both invest heavily in common stocks, and unrealized capital gains do not flow to the P&L under current US statutory rules\

Investment Performance vs Volatility

Chart 10: Comparison of average Investment performance among Top 10 US insurers



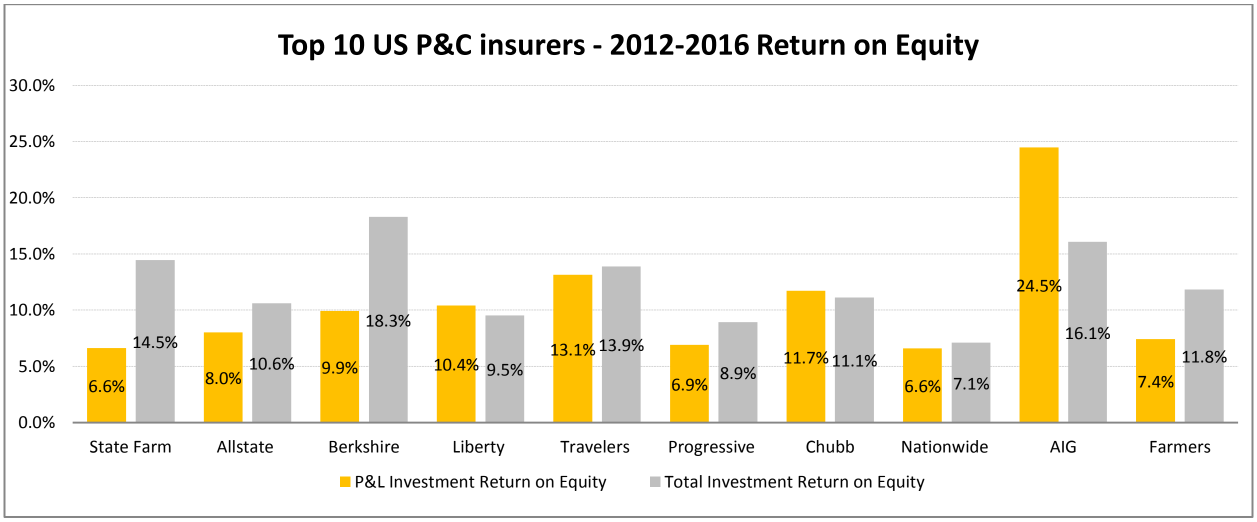
**The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk. Sharpe ratio = (average return – risk free rate)/ standard deviation of return.*
The risk-free rate is the average over the 2012-2016 period of the 1 year yield to maturity on federal government zero coupon bonds.

Key Findings

- Berkshire is ranked first on average annual investment return but has the worst Sharpe ratio among the top 10 US P&C insurers

Return on Equity

Chart 11: Comparison of average investment return on equity 2012-2016



Key Findings

- AIG has materially higher P&L investment ROE than the industry average and top 10 US P&C insurers
- Berkshire has the highest total investment ROE compared to average US P&C industry and top 10 US P&C insurers

Benchmark Conclusions

ICBC

- Over the previous 5 years (2012-2016) ICBC generated approximately $3.4 CAD billion from investment income, but lost approximately $2.2 CAD billion through its underwriting activities
- ICBC outperformed the total P&C industry and ranked 3rd (just behind Wawanesa and SGI) on P&L investment income and total investment return over the 2012-2016 period
- ICBC's 2016 MCT ratio is 120%, lower than its internal target of 177% (weighted 145% for Basic and 250% for Optional)
- ICBC's 2016 total capital required is approximately $2 CAD billion. Around 50% of the required capital is related to investment risks (market and credit risks)
- De-risking the investment portfolio (investing only on assets with no capital charge) would reduce the required capital to $1.1 CAD billion (after eliminating diversification benefits) and thus increase the MCT ratio to 204%
- However, de-risking the investment portfolio would also reduce the average investment return over the previous 5 years from 4.7% to something around 2.2% (based on Aviva's historical average return, given Aviva portfolio capital charge is almost nil). In this case, ICBC would generate only $1.6 CAD billion instead of $3.4 CAD billion (reduction of $1.8 CAD billion)
    - De-risking the investment portfolio will also decrease the expected investment return and thus increase insurance rates (as the investment discount becomes smaller)

Canadian P&C industry

- The risk profile of each insurer has a direct impact on its investment risk appetite and consequently on its asset allocation
- Insurance entities owned by large groups, such as Aviva, RSA, TD and Travelers, have little or no appetite for market risk (based on their MCT required capital)
- Both ICBC and Wawanesa have a very comparable asset allocation to equities (16% vs. 19%) and non-investment grade bonds (21% vs. 23%). Moreover, ICBC allocates higher percentage to mortgage loans (12%) compared to the P&C industry, while Wawanesa allocates more to "other loans and invested assets" (9%)

US P&C industry

- The average annual investment return over the historical period 2012-2016 is 5.15% for the US industry, compared to 2.81% in Canada. The US P&C better performance is due in part to the much higher stock market performance in US compared to Canada over the past five years
- The US P&C industry investment in common shares in 2016 is 30%, materially higher than the 6% observed in Canada
- The P&L volatility in US is materially lower than in Canada. No Fair Value Option is applied under US GAAP
- AIG and Berkshire seem to outperform the other top US P&C players but for the cost of materially higher investment performance volatility

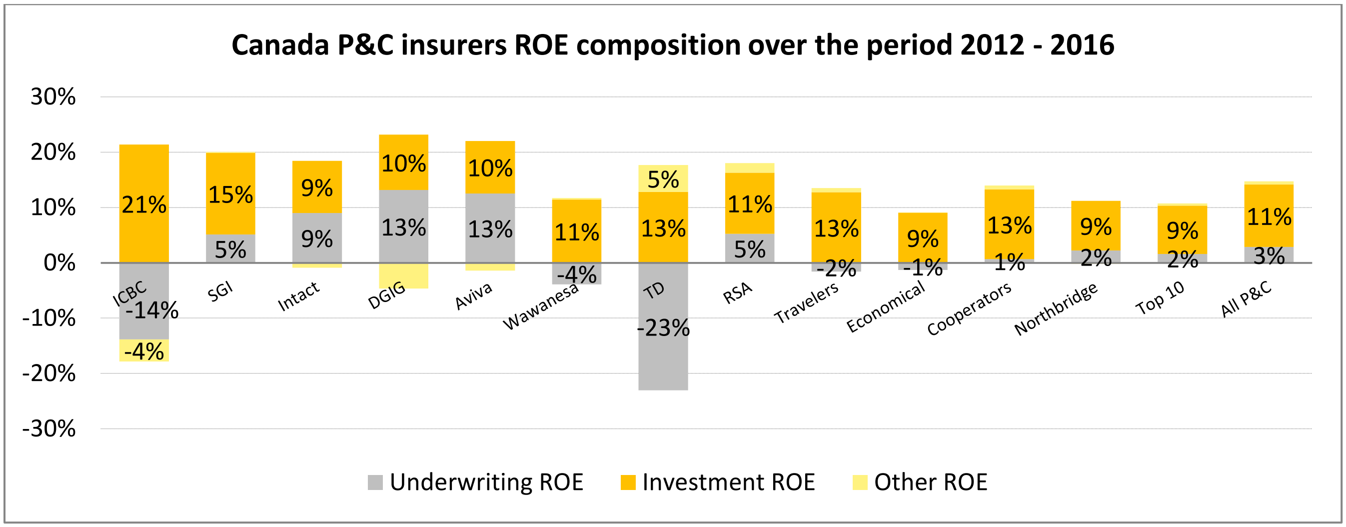
Section 3: Role of investments

What role do investments play for a P&C insurer?

- From a P&L perspective:
  - The main role of investments is to insure a high and stable P&L level
  - Strengthen the company's competitiveness by offering premium discounts and enhancing brand trust
- From a Solvency perspective:
  - Investing in riskier assets increases the required regulatory capital and generates excess return that could increase the available capital
  - An optimized investment strategy should ensure that the net investment impact on the solvency ratio (Minimum Capital Test, MCT) is positive

The common practice among Canadian P&C players is to account for the expected investment return on the matching portfolio in the pricing of insurance products

Chart 12: Composition of Return on Equity (ROE) over the historical period 2012-2016. ROE is calculated as the ratio of income over total equity



Key Findings

- ICBC's total ROE is 4%: the investment ROE is 21% and the underwriting ROE is -14%.
- Over the previous 5 years, 2012-2016, ICBC generated approximately $3.4 CAD billion from investment income, but lost approximately $2.2 CAD billion through its underwriting activities
- ICBC has the highest investment ROE, in part because of ICBC's low level of capital in recent years
- Only TD has lower underwriting ROE compared to ICBC, despite their higher capitalization

Section 4: Investment Management Structure and Process

A clear mission and a disciplined and structured investment approach are the basis for long term value creation.

ICBC Observations

- Based on the review of ICBC's documents and our interviews with key stakeholders, we understand that ICBC's current investment management process is:
    - Defined within the Statement of Investment Policy and Procedures related documents such as Statement of Investment Beliefs
    - Governed by the Board Investment Committee
    - Monitored through regular assessment of investment performance
    - Managed through the Strategic Asset Allocation (SAA) and ICBC's risk appetite for investment risks
- However, we observed that:
    - The Strategic Asset Allocation (SAA) optimization is outsourced to an external provider and conducted only once in 3-4 years
    - Performance measurement and reporting is conducted at regular basis by an external provider
    - Investment risk measurement and management is not very sophisticated. Produced risk metrics are in general considered as lagging indicators (i.e. standard deviation, Beta, tracking error, Sharpe ratio, etc.). More forward looking risk metrics (i.e. Value-at-Risk, Expected Shortfall, etc.) are not produced.

Recommendations

- We believe that ICBC's investment management process as current structured and formalized could be further improved by increasing in-house capabilities to:
    - Optimize the SAA internally and more frequently as needed
    - Produce internally performance measurement and reporting including performance and risk attributions
    - Produce internally prospective risk measures based on advanced techniques such as simulation Monte-Carlo and calibration of Economic Scenario Generator
- We believe a small investment risk management team (middle-office team of 3-4 experts) with appropriate tools (various investment risk management solutions exist on the market) would be very helpful in optimizing the risk taking and measuring the risk-adjusted performance.

Appendix 3: Terms of reference for the ICBC rate affordability review

1. Background

On December 19, 2016, the Honourable Todd Stone, Minister of Transportation and Infrastructure and responsible for ICBC, directed the ICBC Board of Directors (“ICBC Board”) to commission a comprehensive independent third party review (“Review”) of ICBC. This direction letter is attached as Appendix 1.

The Review is intended to provide options for ICBC and government’s consideration that would increase fairness and affordability related to Basic insurance, with the goal of future Basic rate increases being in line with the rate of inflation.

2. Current Context

Over the last several years, jurisdictions in North America, Europe and Australia have seen a significant increase in vehicle crash rates and claims costs, and are takings steps to mitigate these pressures. British Columbia (“BC”) has seen similar upward trends with crashes and claims costs, although some external pressures on Basic auto insurance costs in BC are more pronounced than in other jurisdictions, and the effects of the ongoing pressures are more magnified due to the unique nature of BC’s insurance model.

As the auto insurance landscape becomes more complex, government and ICBC have sought innovative solutions to respond to the increasing cost pressures. Over the past several years, government has introduced stricter fines for distracted driving, directed optional transfers of more than $1.4 billion since 2012 to reduce the increase for basic rates and help rebuild ICBC’s Basic capital, and continued to invest in a variety of road safety initiatives. Government has also indicated that it will forego an annual dividend from ICBC for each of the next three fiscal years.

During this time ICBC has transformed its management and technology systems, implemented various strategic sourcing initiatives, strategically managed investment income, recruited additional resources, implemented numerous management and operational cost saving measures which has allowed it to hold operating costs flat for five years, and initiated an extensive fraud prevention campaign.

However, all of these measures will still not be able to fully mitigate the underlying causes of accelerating cost pressures.

3. Objectives and Principles of the Review

Per the attached direction letter, the ICBC Board’s objective for the Review is to obtain recommendations from an independent consultant firm (“Consultant”) following a comprehensive examination of all key cost drivers impacting the affordability and sustainability of Basic insurance rates, and potential mitigation strategies. As well, the consultant should consider whether there are

revenue opportunities available to ICBC through investment management or ancillary business opportunities being deployed in other jurisdictions. The Review will include an assessment of the experiences from other jurisdictions, as well as ICBC business processes and operations.

The overarching principles of the Review are to maintain public ownership of ICBC, and to work within the current model in order to keep Basic automobile insurance as affordable as possible for British Columbians. As such, the Review will encompass ICBC's mandate, as provided through the *Insurance Corporation* Act, *Insurance (Vehicle) Act and the Motor Vehicle Act, which is to provide Basic auto insurance for all BC motorists*.

4. Qualifications and Approach

The Consultant will bring qualifications that include:

- Demonstrated knowledge, expertise and global experience in the Property & Casualty insurance industry, inclusive of:
- Expertise and knowledge of auto insurance experience in other jurisdictions (Canadian and global)
- Proven actuarial expertise and claims experience, with the ability to effectively evaluate performance of claims
- Experience in working with auto insurance companies to successfully help reduce and mitigate claims cost pressures
- Demonstrated knowledge, expertise and experience of the BC auto insurance market
- Demonstrated knowledge, expertise and experience in delivering viable change recommendations within BC's economic and public policy environments
- A strong understanding of how insurance products interface with claims, policy administration and other insurance related systems
- Demonstrated knowledge, expertise and experience in general business practices that could reduce administrative or back office costs, or improve general business efficiencies.

The Consultant is expected to incorporate the findings of analysis that has been carried out in previous external reviews conducted over the past five years, unless there has been significant change in the underlying environment.

The Consultant must demonstrate considerable internal capacity and expertise, a global presence, and access to external automobile insurance business expertise where needed.

Before beginning the Review, the Consultant will work with the Chair of the ICBC Board and any personnel tasked by the Board to establish a clear project scope, detailed roles and responsibilities, detailed milestones and deliverables, develop a detailed work plan, obtain validation of the work plan, and propose a high-level strategy to conduct each phase of the work.

5. Key Consultant Activities

Prepare a report that includes:

- Metrics which have been developed for measuring the performance of automobile insurance providers against specific elements of the business, to enable direct comparisons with the performance at ICBC
- A high level assessment of performance in 7-10 jurisdictions on selected aspects of the business, in order to identify those jurisdictions whose practices have delivered superior results and a deeper analysis of specific practices and results in the top 2-3 jurisdictions
- A summary of the Consultant's research findings
- A high-level assessment on the status of implementation of recommendations from previous independent operational reviews completed over the last five years
- Recommendations of actions to achieve the objectives of long-term Basic rate affordability and sustainability, including an assessment of implementation complexity, risks and rewards (e.g. potential savings)

6. Deliverables and Timeline

It is expected that the procurement process will be initiated on January 26, 2017, with the successful proponent selected and ready to begin work by March 24, 2017.

The Consultant will have worked with the Chair of the ICBC Board to establish the project scope, detailed roles and responsibilities, detailed milestones and deliverables, develop a detailed work plan, obtain validation of the work plan, and propose a high-level strategy to conduct each phase of the work.

By April 5, the Consultant will provide their first briefing on progress to date to the ICBC Board, and continue with monthly briefings over the course of the contract.

The Consultant will deliver a preliminary report to the ICBC Board not later than June 30, 2017.

7. Process

The review will be led by the Board Chair directly, and supported by a 3 person Committee of the Board of Directors, called the "ICBC Rates Affordability Review Committee". The Chair and Committee shall ensure that the review is in fact independent and comprehensive, and that decisions on scope will rest entirely with the Chair and Committee.

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