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Insurance Industry Practice
Property & Casualty Actuarial Services

Province of Ontario
Ministry of Finance

**Automobile Insurance
Transparency and Accountability
Expert Report**

Interim Report

Final Release: April 14, 2014

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April 14, 2014

Dear Mr. del Castillo,

It is our pleasure to submit our report titled Automobile Insurance Transparency and Accountability Expert Report – Interim Report. This is the first of three reports that the Ministry of Finance engaged KPMG LLP to prepare as per the Auto Insurance Cost and Rate Reduction Strategy that was part of the 2013 Ontario Budget.

We look forward to working with you on the preparation of our next report.

Sincerely,

A handwritten signature in black ink that reads 'KPMG LLP' in a stylized, cursive font. A horizontal line is drawn underneath the signature.

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Glossary

AB: Accident benefits coverage.

AB-DI: Accident benefits disability income coverage.

AB-Non DI: Accident benefits other than disability income coverage.

ACIA: Associate of the Canadian Institute of Actuaries.

ALAE: Allocated loss adjustment expense.

ASB: Actuarial Standards Board.

ASP: Automobile statistical plan.

CAS: Casualty Actuarial Society.

CANATICS: Canadian National Insurance Crime Services.

CIA: Canadian Institute of Actuaries.

CRA: Canada Revenue Agency.

DCAT: Dynamic Capital Adequacy Testing.

DCPD: Direct compensation property damage.

DRS: Dispute resolution system.

FCAS: Fellow of the Casualty Actuarial Society.

FCIA: Fellow of the Canadian Institute of Actuaries.

FSCO: Financial Services Commission of Ontario.

GISA: General Insurance Statistical Agency.

GTA: Greater Toronto Area.

HST: Harmonized sales tax.

HCAI: Health Claims for Auto Insurance.

IBC: Insurance Bureau of Canada.

LAE: Loss adjustment expenses.

KOSCHI: King's Outcome Scale for Childhood Head Injury.

MCT: Minimum Capital Test.

Glossary

MfAD: Margins for adverse deviation.

MIG: Minor Injury Guideline.

MOF: Ministry of Finance.

MSA Research Inc.: Market Security Analysis & Research Inc.

OHIP: Ontario Health Insurance Plan.

ORSA: Own Risk Solvency Assessment.

OSFI: Office of the Superintendent of Financial Institutions.

P&C: Property and casualty.

PfAD: Provision for adverse deviation.

PhysD: Physical damage coverage.

PPA: Private passenger automobile or personal lines automobile.

ROE: Return on equity.

RUTAC: Rating and Underwriting Technical Advisory Committee at FSCO.

SABS: Statutory Accident Benefits Schedule.

TMJ: temporomandibular joint is the joint of the jaw.

TPL: Third party liability coverage.

TPL-BI: Third party liability bodily injury coverage.

TPL-PD: Third party liability property damage coverage.

ULAE: Unallocated loss adjustment expenses.

WSIB: Workplace Safety and Insurance Board.

1 EXECUTIVE SUMMARY

1.1 Purpose of the Report

In September 2010, the Government of Ontario (Government) introduced major reforms (Reforms) to the Ontario automobile insurance system with the intent to control insurance costs, increase choices available to consumers, and simplify processes in the automobile insurance system. Further to these Reforms, the Government initiated the Auto Insurance Cost and Rate Reduction Strategy (Strategy) as part of the 2013 Ontario Budget¹ (2013 Budget).

As part of the Strategy and with the goal to increase transparency and accountability, the Ministry of Finance (MOF) engaged KPMG LLP (KPMG) to prepare independent annual Automobile Insurance Transparency and Accountability Expert Reports (Annual Reports) in 2014 and 2015. In addition to the first Annual Report expected to be produced in the summer of 2014, the MOF requested KPMG to prepare an interim report (Interim Report) to address some specific issues. This report is the Interim Report.

1.2 Scope of the Annual Reports and Interim Report

The Annual Reports will review the impact of the Reforms and the Strategy on automobile insurance claim costs and rates, comment on the effectiveness of the auto insurance marketplace in providing affordable premiums to consumers, and where appropriate, make recommendations to the Government on further actions that may be required by the Government and the insurance industry to meet the Government's claim costs and average automobile insurance rate reduction targets proposed in the 2013 Budget.

The Interim Report reviews changes experienced to date in automobile insurance claim costs, rates, and premiums as a result of the Reforms and the Strategy, and discusses the action steps suggested by some of the insurers² who provide private passenger automobile (PPA) insurance in Ontario. The Interim Report summarizes quantitative and qualitative analyses that were designed to:

- Address how the PPA insurance claim costs and premiums are affected by the Reforms at the industry level;
- Estimate the decrease in claim costs following the Reforms and provide an overview of how the decreases are distributed;

¹ The Government of Ontario, Ministry of Finance, "2013 Ontario Budget Chapter IV: Tax, Pension and Financial Services", last modified May 2, 2013. Accessed on March 13, 2014, <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2013/ch4.html#ch4c>.

² In this report, the term "insurers" is defined as organizations that provide insurance coverage, such as a stock insurance organization or a mutual insurance organization, including both Canadian domiciled and branches of foreign organizations.

- Determine whether any decreases in claim costs have resulted in decreases in automobile insurance rates as a result of the Reforms;
- Comment on the effect that the uncertainty within the Ontario automobile insurance system has on the system at the industry level, particularly with regards to automobile insurance premiums;
- Address how the PPA insurance claim costs and premiums are affected by the Strategy at the industry level; and
- Provide a progress report and suggested action steps.

1.3 Organization of the Interim Report

In addition to Appendices A to F, this report is organized in the following seven parts:

- Executive summary;
- Introduction;
- Statement of the issue;
- Approach;
- Ontario automobile insurance performance;
- Survey results; and
- Progress and suggested action steps.

1.4 Complete Interim Report

This executive summary is an integral part of the complete Interim Report and should not be distributed separately from the entire report. The report contains critical information regarding distribution and use restrictions as well as a complete description of our approach. Appendices are also included to document the findings presented in this report and to provide background on the automobile insurance industry. The appendices are an integral part of the Interim Report. Judgments about the conclusions drawn in this Executive Summary should be made only after considering the report in its entirety. Any use or reliance on the Interim Report by any third party is done at their own risk. KPMG will not be liable for the consequences of any third party acting upon or relying upon any information or conclusions contained in this report. We remain available to answer any questions that may arise regarding our report. We assume that the user(s) of this report will seek such explanation as to any matter in question.

1.5 Approach

To support the quantitative and qualitative findings, the Interim Report was prepared using the following three approaches:

- Analysis of property and casualty (P&C) insurers financial statements as at December 31, 2013;
- Analysis of the most recently available General Insurance Statistical Agency (GISA) data, as at June 30, 2013; and
- Survey of major insurers that provide automobile insurance in Ontario.

1.6 Rates vs. Premiums

As part of the Strategy, the Government committed to a target reduction of the average Ontario PPA insurance rates of 15%. To ensure that the target is clearly understood, it is important to distinguish between a reduction in insurance rates and a reduction in premiums. Each Ontario automobile insurance policyholder pays a premium that reflects its specific risk characteristics (e.g., the type of vehicle insured, intended use of the vehicle, and driving record) and its selected coverage levels (e.g., deductibles and limits of coverage). As such, the premium paid by each policyholder is based on an average rate, modified to reflect the potential risk of the policyholder in each specific policy period. As the risk characteristics and coverage level purchased by each individual policyholder may vary from one policy period to the next, the change in premium from one policy period to the next may not be the same as the change in rate.

1.6.1 Implementation of Rate Changes

It should be noted that any rate change implemented by insurers on the Ontario PPA insurance product can take up to two years to become fully reflected in earned premium data for the industry. For example, a rate change implemented on July 1, 2010 will apply to policies that are written on or after July 1, 2010. Under this example, policies with an effective date prior to July 1, 2010 will only be affected by the rate change at the time of their next renewal (i.e., a policy that became effective on June 15, 2010 for a term of one year would only be affected by this rate change at the time of renewal on June 15, 2011). Assuming that PPA insurance policies are sold with a term of one year, policies written in June 2011 will not be fully earned until June 2012. Therefore, a rate change that was implemented on July 1, 2010, would not be fully earned and reflected as such in the financial statements or GISA data until two years later.

Figure 1.1: Illustration of Delay between Rate Change and Premium Earned



Figure 1.1 illustrates how rate changes can take up to two years to be fully reflected in earned premiums. In this example, Policy A was issued for a one-year term one day prior to the effective date of the rate change that was implemented on July 1, 2010. The premium charged for the “2010 contract” of Policy A would have been set at the “old rate” level in effect at that time. This premium

remained in effect for the duration of the contract (i.e., one year). When Policy A expired on June 30 2011, it would have been renewed at the “new rate” level for the first time and the premium paid at renewal would have been reflected in the insurer’s written premiums as of June 30, 2011. Given that this “2011 renewal policy” also has a one-year term, it is assumed that it remained in effect until June 30, 2012. As premium is earned throughout the effective period of a policy, the premium for the 2011 renewal of Policy A would not have been fully earned until June 30, 2012. This illustrates how a rate change implemented on July 1, 2010 would not have been fully reflected in earned premiums until June 30, 2012.

1.7 Findings and Industry Suggested Action Steps

1.7.1 Change in Claim Costs and Premiums

Many of the insurers who agreed to participate in our survey provided information regarding their most recent estimates of the impact of the Reform for specific automobile insurance coverages. For the bodily injury portion of third party liability coverage (TPL-BI), insurers who represent about 64% of the industry reported that their latest estimates of the impact of the Reforms on claim costs would indicate an average increase of about 20%. Similarly, a total of 69% of the industry provided estimates of the change to accident benefit (AB) claim costs as a result of the Reforms. On average, these insurers’ most recent estimates of the impact would indicate a decrease of about 51% on AB disability income (AB-DI) claim costs, a decrease of about 39% on AB other than disability income (AB-Non DI) claim costs, and a decrease of about 46% on the claim costs for AB in total.

Based on a review of insurers’ financial statements and GISA data, it appears that the total earned premium for Ontario PPA increased annually by approximately 4%, 7%, 6.5%, and 4% from 2008 through 2012. Furthermore, information gathered from the most recent financial statements (at December 31, 2013) show that earned premium increased by about 1.6% between 2012 and 2013. Looking more specifically at the total earned premium for Ontario PPA AB, it appears that AB earned premium increased by about 9% and 5% in 2011 and 2012 respectively, to a total of \$4.2 billion in 2012. The trend reversed between 2012 and 2013, with Ontario PPA AB earned premium decreasing by approximately 1%. As such, the increases observed in the overall Ontario PPA earned premium over the post-Reforms period of 2011 and 2012 could be explained, at least in part, by the increases in PPA AB premium.

One of the reasons that the overall rate level for AB did not decrease post-Reforms may be due to the uncertainty in the system post-Reforms. Furthermore, some of the reasons that AB premium increased for Ontario PPA insurance over this period, rather than remain unchanged or decrease, could include (but are not limited to):

- Increase in the number of insured vehicles at approximately 1.5% per annum;
- Deeply inadequate rates pre-Reforms that resulted in rate increases being implemented in 2010 and 2011; and
- Rate increases that were implemented pre-Reforms (i.e., prior to September 1, 2010) being earned up to August 31, 2012.

A review of financial statement and GISA data indicates that the rates underlying the premiums charged pre-Reforms were deeply inadequate. This can be seen in the AB claim ratios from 2008 through 2010, which were significantly over 110%³ for each year in this period, reaching as high as 150% in calendar year 2010 based on financial statements, and almost 140% for accident year 2010 based on GISA data.⁴ These high claim ratios triggered the implementation of rate increases for many insurers in the industry prior to the Reforms in September 2010. Taking into consideration the projected claim ratio, the expenses, the return on equity and the time value of money, the 2011 rate indications might have been expected to result in significant rate increases if the Reforms had not taken place.

1.7.2 Uncertainty in the Ontario PPA Insurance System

All of the respondents to our survey provided a list of uncertainties to explain why it is challenging for them to estimate past and future claim costs, namely:

- The erosion of the catastrophic impairment definition through case law (e.g., *Kusnierz v. Economical*⁵ and *Pastore v. Aviva*⁶), as well as the lack of clarity on how the catastrophic impairment definition will be addressed by the Government;
- The pressure for claimants to move outside of the minor injury limits, and the uncertain impact of Financial Services Commission of Ontario's (FSCO) arbitration decision in the case of *Lenworth Scarlett and Belair Insurance Company Inc.*⁷ (*Scarlett v. Belair*) on minor injury guideline;
- The mediation and arbitration backlog, as well as the unpredictable outcome from the dispute resolution process;
- Transfer of claim costs between AB and TPL-BI combined with the slow emergence of TPL-BI claims;
- Delays in the rate reviews⁸ performed by FSCO, and the application of FSCO benchmarks in rate reviews⁹;

³ Based on both financial statement and GISA data as of June 30, 2013, AB claim ratios were all over 110% for years 2008 through 2010.

⁴ GISA data as of June 30, 2013.

⁵ Court of Appeal for Ontario, "*Kusnierz v. Economical Mutual Insurance Company*", 2011. Accessed on April 9, 2014, <http://www.ontariocourts.on.ca/decisions/2011/2011ONCA0823.htm>.

⁶ Court of Appeal of Ontario, "*Pastore v. Aviva Canada Inc.*", 2012. Accessed on April 9, 2014. <http://www.ontariocourts.on.ca/decisions/2012/2012ONCA0642.htm>.

⁷ FSCO, "*Lenworth Scarlett and Belair Insurance Company Inc. Decision on a preliminary Issue*", March 26, 2013.

⁸ MOF indicated that it is their understanding that FSCO has specific service standards as part of its rate review process, and that many of the delays that occur are a result of incomplete data and information submitted by insurers to FSCO.

⁹ MOF indicated that it is their understanding that FSCO invites insurers to compare their experience to the benchmark and provide any supporting information for changes. Moreover, MOF indicated that they understand that there is an increased reliance by smaller insurers on the FSCO benchmarks in estimating costs and setting rates due to limited data and experience.

- The possible entitlement to optional benefits even in circumstances when endorsements are not purchased pre-accident; and
- Due to greater use of professional services, possible erosion of Regulation 347/13 effective February 1, 2014, which amended the attendant care coverage.

Discussions and written responses to the survey clearly indicate that all respondents recognize the existence of significant uncertainties in the Ontario PPA insurance system, and that the insurance industry sees the reduction of uncertainties as critical to bringing stability to the system. It is also the industry's view that reducing uncertainties is critical to ensure the long-term sustainability of the PPA insurance system in Ontario.

In the most recent rate filing cycle (i.e., starting fourth quarter of 2013), most insurers responding to the survey indicated that they were not permitted to reflect in their rate indications the various sources of uncertainty found in the Ontario PPA Insurance System to the degree they would have liked.¹⁰ Had they been permitted to do so, it is likely that the average rate reduction to date would not have been as large. Certain respondents think that reduced uncertainty has already been reflected in the rate filings as of the fourth quarter of 2013. As such, on a going forward basis, the impact of reduced uncertainty may be limited because insurers think that they have already been forced to file for rate changes that included future reductions in uncertainty.

1.7.3 Progress to Date

According to the survey, the P&C insurance industry has implemented a number of initiatives to support the Government's average rate reduction target for PPA insurance in Ontario. Almost all respondents to the survey are implementing rate decreases in 2014, and overall the industry has submitted filings, which have been approved by FSCO, for average rate decreases of 0.68% and 3.98% in the third and fourth quarter of 2013, respectively. In the second half of 2013, the insurance industry filed, and received approval, for total rate changes that will result in a decrease of 4.66% on average. The most recent required filing for new rates, at the fourth quarter of 2013, was a result of the authority given to FSCO from legislative amendments introduced in the 2013 Budget. FSCO exercised this authority and required some insurers to file for new rates.

Many of the insurers responding to the survey are also revising or introducing discounts to promote safer driving. Furthermore, insurers are enhancing their pricing and underwriting sophistication by rolling out predictive modeling and refining their expense model. Some insurers are investing in technology and developing innovative approaches that are expected to allow better segmentation of policyholders' risk propensity and pricing. Tools such as telematics (i.e., usage-based insurance) may contribute to rate reductions with an added benefit of perhaps influencing policyholders' driving behaviour.

From an operational perspective, some insurers indicated through the survey that they are seeking to gain efficiency by streamlining claim processes, increasing automation, or initiating functional re-

¹⁰ MOF indicated that FSCO's rate filing guidelines and technical notes do not mention that uncertainty cannot be reflected in insurers' rate filings. FSCO filing guidelines for auto insurance are available online: <http://www.fSCO.gov.on.ca/en/auto/filing-guidelines/Pages/default.aspx>.

organizations. In an effort to control claim costs, many insurers are pursuing anti-fraud initiatives and tools. Some insurers also identified dynamic management of preferred provider network, enhanced customer care, proactive dispute resolution, and clear litigation strategies as means to further contain claim costs.

In survey responses, P&C insurers stated that they are committed to participate in the development of a sustainable PPA insurance product. The general consensus among insurers is that the full 15% average rate reduction targeted by the Government is not sustainable unless significant and meaningful product reform takes place. The majority of the insurers who took part in our survey are actively participating in industry associations and forums. These associations and forums are working on formulating, evaluating, or proposing changes to the automobile insurance system.

In order to further reduce costs and uncertainty in the system post-Reforms, and therefore facilitate the reduction of rates, the Government has implemented a number of initiatives under the Strategy, including:

- Setting an average rate reduction target of 15% to be achieved by August 2015, with an 8% target to be achieved by August 2014;
- Providing the Superintendent of FSCO with the authority to require insurers to file for rates;
- Establishing a framework for the licensing of health care providers in the automobile insurance system, as recommended by the Anti-Fraud Task Force;
- Implementing regulatory amendments to act on other Anti-Fraud Task Force recommendations, such as sanctions for overcharging insurers for goods and services, and controlling uncertainty by clarifying the intent of amendments made during the 2010 Reforms;
- Appointing a former-Associate Chief Justice of the Superior Court of Justice to lead a review of the auto insurance Dispute Resolution System (DRS); and
- Introducing Bill 171 (*Fighting Fraud and Reducing Automobile Insurance Rates Act, 2014*) to act on the recommendations of the DRS review and enact additional anti-fraud and cost saving measures.

1.7.4 Industry Suggested Action Steps

This Interim Report summarizes the action steps suggested by the industry in response to the survey. Suggestions from the industry are geared towards promoting sustainable automobile insurance in Ontario.

Many insurers who responded to our survey advocated for significant and meaningful reforms to the Ontario automobile insurance product. The insurers want to actively contribute to the design of such reforms and believe that the process for such reform should include consultations regarding the following:

- Ensuring an alignment between the intent of the policy and the application of the regulation;
- Modifying the Ontario automobile insurance product; and
- Re-admitting certain predictive information for pricing and underwriting purposes.

In connection with the rate approval process¹¹, many insurers are advocating for more streamlined and responsive procedures, eliminating undue delays. These insurers also noted that the review process should be receptive to innovations and give the industry positive incentives to improve efficiency. To increase transparency in FSCO's rate and risk classification approval processes, as well as the benchmark setting process, insurers suggested that it may be valuable to create an advisory committee (composed of qualified actuaries and claim professionals from both FSCO and the automobile insurance industry) to give input and guidance to the processes.¹²

Many insurers also suggested that each rate filing should be reviewed on its own merit based on sound actuarial principles and taking into account the specific circumstances of each insurer. In addition, some insurers perceive that they are unable to have direct access to senior and experienced actuaries at FSCO. These insurers believe that the rate filing process would be improved if a fully qualified P&C actuary with relevant Canadian automobile pricing experience is directly involved and has an accessible and visible role in the review process of each rate filing. Insurers recognize that this individual should be supported by a team of rate reviewers (who may or may not be fully qualified actuaries) with relevant experience.¹³

On the anti-fraud front, most initiatives pertain to fraud detection and need to be prolonged and enhanced. For example, a better coordination of industry efforts could be promoted through tools and processes that the Government recently announced, such as exploring the establishment of a special investigation and prosecution unit on serious fraud, including automobile insurance fraud.

Law enforcement resources could be prioritized and strong synchronization between provincial and municipal forces could be promoted to support investigations and arrests. In addition to current programs concerning fraud detection, insurers felt that it would be necessary to develop and bring forward initiatives regarding fraud deterrence.

1.7.5 Recommendations and Observations

As part of our engagement with the MOF, we were asked to make recommendations on further actions to help achieve the average rate reduction targets set by the Government. With the work that has been performed as part of the Interim Report, we feel that it is still too early to provide recommendations for further action to reduce costs and rates as the survey conducted in preparation of the Interim Report focused exclusively on the views of P&C insurers operating in Ontario. As part of the 2014 Annual Report, we will expand the survey to seek input from other stakeholders in the insurance system who may have a different perspective to share with the Government.

¹¹ Section 9 - Appendix B presents a list of best practices for actuarial involvement in the rate regulatory review where the jurisdiction has active rate regulation such as in Ontario.

¹² Information provided by the MOF indicates that the Rating and Underwriting Technical Advisory Committee (RUTAC), comprised of company representatives and actuaries, regularly provides input to FSCO on its processes and proposed rate filing guidelines. An example of RUTAC's involvement was demonstrated in a bulletin released by FSCO in 2012 (<http://www.fSCO.gov.on.ca/en/auto/autobulletins/2012/Pages/a-05-12.aspx>).

¹³ MOF indicated that it is their understanding that during the most recent rate filings (i.e., fourth quarter of 2013), FSCO provided full actuarial reports to insurers in cases when FSCO's actuaries differed in opinion with insurers' actuaries. According to MOF, this provided for a transparent explanation of the differences.

The results of our survey to insurers identified a number of suggested action steps for consideration by the Government. It is clear from recent actions that the Government is aware of its role and the need to do more to reduce rates for consumers. It is also evident from the results of our survey that the insurance industry realizes it can have an impact on cost reduction, as some insurers are looking to gain efficiencies through initiatives such as better claim management and fraud prevention practices. This, combined with new initiatives such as telematics, could lead to reduced costs in the auto insurance system and continue to demonstrate that insurers have an important role in helping the Government meet the average rate reduction target. In addition to the Government and the industry, stakeholders outside the industry and government also have a role to play in ensuring rates are affordable for consumers by better managing costs.

1.8 Preview of 2014 Annual Report

The 2014 Annual Report is scheduled to be released in August 2014. The purpose of the 2014 Annual Report will be to continue to provide both quantitative and qualitative analysis of the Government's Strategy. The following approaches are proposed to be used in preparation of this report:

- Seeking input from other stakeholders in the Ontario PPA insurance system;
- Updating the quantitative analysis of GISA data with data as of December 31, 2013 if available;
and
- Performing an actuarial analysis of the estimated ultimate claim costs based on actuarial methods other than the incurred claim development method.

In preparation for the 2014 Annual Report, the input from other stakeholders in the insurance system will be sought with the goal to provide a balanced perspective when taken in conjunction with the findings from the Interim Report.

2 INTRODUCTION

In September 2010, the Government introduced Reforms to the Ontario automobile insurance system with the intent to control insurance costs, increase choices available to consumers, and simplify processes in the automobile insurance system. Further to these Reforms, the Government initiated the Strategy as part of the 2013 Budget. As part of the Strategy, and with the goal to increase transparency and accountability, the MOF engaged KPMG to produce three independent reports. The reports are the Interim Report, the 2014 Annual Report, and the 2015 Annual Report. This report is the Interim Report.

2.1 Distribution and Use

The Annual and Interim Reports were initiated by the Government in the 2013 Budget as a transparency and accountability mechanism. We understand that the Interim Report will be a publicly available document. We consent to such distribution on two conditions: (1) the Government will distribute this report in its entirety including all text and supporting appendices rather than any excerpt and (2) the Government will inform all recipients that KPMG remains available to answer any questions which may arise regarding the Interim Report. We assume that the user(s) of this report will seek explanation to any matters in question.

Any use or reliance on the Interim Report by any third party is done at their own risk. KPMG will not be liable for the consequences of any third party acting upon or relying upon any information or conclusions contained in this report. The appendices attached in support of our findings are an integral part of the Interim Report. These sections are prepared to aid readers better understand the insurance industry and the work of actuaries. Judgments about the conclusions drawn in this report should be made only after considering the Interim Report in its entirety.

3 STATEMENT OF THE ISSUE

3.1 Background

Chapter IV of the 2013 Budget states the following:

From 2006 to 2010, Ontario experienced a substantial increase in claim costs due to fraud in the system and overutilization of benefits. The significant increase in costs was primarily caused by increases in accident benefits claim costs (for example, exams and assessments, attendant care and housekeeping). While claim costs for repairs to physical damage to vehicles remained stable, claim costs for certain benefits more than doubled.

...

In September 2010, the government introduced major reforms to Ontario's auto insurance system to address the substantial increase in claim costs. The September 2010 reforms controlled costs, increased consumer choice and simplified processes in the auto insurance system. As a result of the reforms and ongoing government action, costs have been reduced and rates have stabilized, and are now starting to decline.¹⁴

The Government initiated the Strategy as part of the 2013 Budget. The key elements of the Strategy pertain to anti-fraud measures, an average automobile insurance rate reduction target of 15%¹⁵, licensing of health care providers in the automobile insurance system, transformation of the automobile insurance DRS, and creation of “a transparency and accountability mechanism in the form of an independent annual report by outside experts on the impact of auto insurance reforms introduced to date on both costs and premiums¹⁶.” The 2013 Budget also called for a requirement by insurers to offer lower rates for consumers with safe driving records.

It is important to note that the Government's Strategy includes a reduction target for the average automobile insurance rates. This is not analogous to a reduction in automobile insurance premiums

¹⁴ The Government of Ontario, Ministry of Finance, “2013 Ontario Budget Chapter IV: Tax, Pension and Financial Services”, Section C, last modified May 2, 2013. Accessed on March 13, 2014, <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2013/ch4.html#ch4c>.

¹⁵ Throughout this report, any phrases that relate to the Government's targeted automobile insurance rate reduction pertain to the Government's average automobile insurance rate reduction target of 8% by August 2014 and 15% by August 2015.

¹⁶ The Government of Ontario, Ministry of Finance, “2013 Ontario Budget Chapter IV: Tax, Pension and Financial Services”, Section C, last modified May 2, 2013. Accessed on March 13, 2014, <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2013/ch4.html#ch4c>.

as the total premium paid by policyholders is dependent on the level of coverage purchased, which can change from one policy period to the next.¹⁷

3.2 Purpose and Scope of Interim Report

As part of a transparency and accountability mechanism, the MOF engaged KPMG to review industry costs and changes to premiums paid by Ontario drivers and to provide suggested action steps that may be required to meet the Government's average automobile insurance rate reduction targets proposed in the 2013 Budget. In addition to the Annual Reports to be produced in 2014 and 2015, the MOF requested KPMG to prepare this Interim Report in advance of the 2014 Annual Report to address certain specific issues.

The Interim Report reviews changes experienced to date in automobile insurance claim costs and premiums as a result of the Reforms and the Strategy, and discusses the action steps suggested by some of the insurers who provide PPA insurance in Ontario. The Interim Report summarizes quantitative and qualitative analyses that were designed to:

- Address how the PPA insurance claim costs and premiums are affected by the Reforms at the industry level;
- Estimate the decrease in claim costs following the Reforms and provide an overview of how the decreases are distributed;
- Determine whether any decreases in claim costs have resulted in decreases in premiums as a result of the Reforms;
- Comment on the effect that uncertainty within the Ontario automobile insurance system has on the system at the industry level, particularly with regards to automobile insurance premiums;
- Address how the PPA insurance claim costs and premiums are affected by the Strategy at the industry level; and
- Provide a progress report and suggested action steps.

The operations of the insurance industry are complex, as is the role of actuaries within the industry. To support the reader's understanding of the findings and suggested action steps documented in this report, Appendices C and D provide background information on the insurance industry and on the actuary's role in the insurance industry, along with a glossary of terms used in the Interim Report.

¹⁷ For example, when a policyholder increases the level of coverage purchased (e.g., by increasing the limits of coverage, or lowering the deductibles), the premium charged to that policyholder will increase, even if rates remain stable. Other factors, such as a change in the vehicle insured, could also affect the premium even if rates remain stable.

4 APPROACH

To conduct this assignment, our methodology incorporated the following three approaches:

- Analysis of P&C insurers financial statements as of December 31, 2013;
- Analysis of the most recently available GISA data, as of June 30, 2013; and
- Survey of major insurers that provide automobile insurance in Ontario.

4.1 Analysis of P&C Insurers Financial Statements

To assess the financial health of the insurance industry, we reviewed the statutory financial returns that are filed with insurance regulators such as the Office of the Superintendent of Financial Institutions¹⁸ (OSFI) or FSCO. The financial returns filed by Canadian domiciled P&C insurers are known as P&C-1, while foreign branches file the P&C-2 annual return. The contents of the P&C-1 and P&C-2 are generally consistent and similar. In this report, where we reference results summarized from the P&C-1, we include the results of foreign branches (filed in P&C-2 returns) unless stated otherwise.

Certain sections of the P&C-1 are available directly from the websites¹⁹ of insurance regulators. We also accessed financial returns for the insurance industry published by MSA Research Inc.,²⁰ which is an independent analytical research firm that provides access to the complete P&C-1 for about 90% of Canadian P&C insurance and reinsurance companies.

The P&C-1 contains traditional financial statements (e.g., balance sheet and statement of income) as well as insurance-specific statements such as the minimum capital test²¹ (MCT) and premium and claim summaries by class of insurance. Other information such as investment portfolio composition and expense and commission split by various sub-components are also reported through the P&C-1. The financial reporting nature of the P&C-1 means that data such as premium written and claims incurred by the insurance industry are generally presented in a calendar year format.

For the Interim Report, the latest available full-year financial statements are as of December 31, 2013. Our analysis of the industry aggregated P&C-1 for the Interim Report is as of this date.

¹⁸ OSFI, “Canadian Property and Casualty Insurance Companies Returns and Instructions”, modified date: 2014-02-26. Accessed on March 13, 2014. <http://www.osfi-bsif.gc.ca/Eng/fi-if/rtn-rlv/fr-rf/ic-sa/pc-sam/Pages/pc1.aspx>.

¹⁹ For example, OSFI, “Financial Data for Property and Casualty Companies”. Accessed on March 13, 2014. <http://www.osfi-bsif.gc.ca/Eng/wt-ow/Pages/FINDAT-pc.aspx>.

²⁰ MSA Research Inc.. Accessed on March 13, 2014. <http://www.msaresearch.com>.

²¹ For Canadian branches of foreign insurance companies, the P&C-2 includes the branch adequacy of asset test (BAAT).

4.2 Analysis of GISA Data

GISA²² is a statistical agency that collects P&C insurance statistics on behalf of insurance regulators across Canada. In general, the data collected by GISA are used by actuaries for purposes such as ratemaking and estimation of policy liabilities of insurance products. Every P&C insurer underwriting automobile insurance policies in Ontario is required to report its data to the Automobile Statistical Plan²³ (ASP). Data such as exposures (i.e., number of vehicles insured in a given period), premium written, claims incurred and paid are collected by GISA. Claim data are generally summarized on an accident year basis, which is one of the most common aggregation methods used by actuaries.

In summarizing claim data aggregated on an accident year basis, all claims for insured events that occur in the same year are combined regardless of when the claim is reported or paid and regardless of the effective date of the relevant policy. Claim data aggregated on an accident year basis have the advantage of being available more quickly than claim data aggregated on another basis such as by policy year.

GISA produces a number of industry reports based on the ASP data, including reports that contain raw claim data split by coverage (e.g., TPL, AB) and sub-coverage (e.g., bodily injury for TPL, disability income for AB) and reports that present a preliminary actuarial estimate of ultimate claims.

For the Interim Report, the latest available GISA data are as of June 30, 2013. Our analysis of GISA data is as of this date.

4.3 Survey and Interviews

To assess both qualitative and certain quantitative aspects in response to the scope identified for the Interim Report, we developed a survey to assist us in the collection of information. We distributed the survey, along with a request for an interview, to representatives of Ontario automobile insurers and the automobile insurance residual markets²⁴ (i.e., Ontario Risk Sharing Pool and Ontario Facility Association) in early January 2014. While we used the survey to guide discussions during the interviews (conducted in person and by telephone), some respondents preferred to submit written responses instead of participating in personal interviews. A double-blind option was available for respondents who wished to remain completely anonymous in their responses. By design of the double-blind option, we have no means of tracing the origin of the response for respondents who chose to reply to the survey using this option.

This report documents the aggregated results of the survey and the interviews. To ensure complete privacy and anonymity for each of the respondents, insurers are not identified individually, either in the Report or to the Government. Responses to the survey were generally received from senior

²² GISA. Accessed on March 13, 2014. <http://www.gisa.ca/en/>.

²³ GISA, "Automobile Statistical Plan". Accessed on March 13, 2014. <http://www.gisa.ca/en/pubs/ASP.asp>.

²⁴ Insurance Bureau of Canada, Facility Association, "Who is insured through Facility Association?". Accessed on March 13, 2014. http://ibc.ca/en/Car_Insurance/Introduction/Facility_Association.asp.

executives from claims, underwriting, and actuarial departments. Appendix E presents a sample of the survey that was sent to the Ontario automobile insurance industry.

In total, more than 78% of the Ontario PPA insurance industry, measured by 2012 direct premium written, participated in the survey²⁵.

²⁵ Exact participation percentage is not available due to the double-blind response option available to respondents.

5 ONTARIO AUTOMOBILE INSURANCE PERFORMANCE

The objective of this section is to review how the PPA insurance claim costs and premiums were affected by the Reforms at the industry level. Section 5.1 shows results on a calendar year basis using the financial statement data filed by insurers. Section 5.2 shows results on an accident year basis from data reported by GISA. Section 5.3 bridges the differences between the findings from the financial statements and the results generated using GISA's approach. The discussion presented in all sections of this Interim Report focuses on changes to the results of TPL and AB²⁶. Table 5.1 summarizes the differences between financial statements and GISA data.

Table 5.1: Highlight of Differences between Financial Statements and GISA Data

	Financial Statements	GISA Data
Data aggregation	Calendar year	Accident year
Health levy	Included	Not included
ULAE	Aggregated approach	By accident year
Prior year development	Included	Not included
Discounting	Included	Not included
Provisions for adverse deviation (PfAD)	Included	Not included
Multiple actuarial methods used	Yes	No

5.1 Financial Statements

This section reviews the financial data publicly available from the annual financial returns (the P&C-1 and P&C-2 statutory forms) of almost every insurer licensed to provide insurance in Ontario. The P&C-1 and P&C-2 forms include an insurer's audited financial statements, together with an independent auditor's report and a report of the appointed actuary on the policy liabilities included in the annual return. The key data are summarized as follows:

Table 5.2: Summary of Calendar Year Direct Premium and Claim from Financial Statements

(\$m)	Ontario PPA			Ontario Total Automobile		
	Earned Premium	Claim and Expense ²⁷	Claim Ratio	Earned Premium	Claim and Expense ²⁷	Claim Ratio
2008	n/a	n/a	n/a	9,630	8,129	84%
2009	n/a	n/a	n/a	10,030	9,093	91%
2010	n/a	n/a	n/a	10,716	10,663	99%
2011	9,995	8,237	82%	11,400	9,235	81%
2012	10,393	8,002	77%	11,860	9,044	76%
2013	10,547	7,852	74%	12,048	8,905	74%

²⁶ The Reforms were not expected to affect the other coverages significantly.

²⁷ Expenses include claim adjustment expenses only.

Reporting the results of PPA insurance separately from other automobile²⁸ insurance has been a requirement in the statutory forms since 2011. Thus the PPA information prior to 2011 is not available and no attempt has been made to backfill it. PPA premium and claim experience include the experience from automobile insurance residual markets (i.e., Ontario Risk Sharing Pool and Ontario Facility Association). Nevertheless, the 2011 through 2013 direct earned premiums show that Ontario PPA makes up approximately 88% of total Ontario automobile. For the years that the PPA information is available, the claim ratios for PPA and total automobile are similar. As the majority of the total premium and claims for total automobile stems from PPA, the impact of Reforms observed in the premiums and claim ratios for the total automobile historical experience should be a reasonable indicator of the impact of Reforms on PPA. In order to review changes pre- and post-Reforms based on financial statements, the “total automobile” numbers are used.

Total Ontario automobile results indicate an improvement in the calendar year claim ratio of 18 percentage points from 2010 to 2011. The improvement in the ratio is explained by a decline in claims and expenses of \$1.4 billion, together with a premium increase of \$0.7 billion. Similarly, the calendar year claim ratio has improved by 23 percentage points from 2010 to 2012, due to claims and expenses decreasing by \$1.6 billion while premiums were increasing by \$1.1 billion.

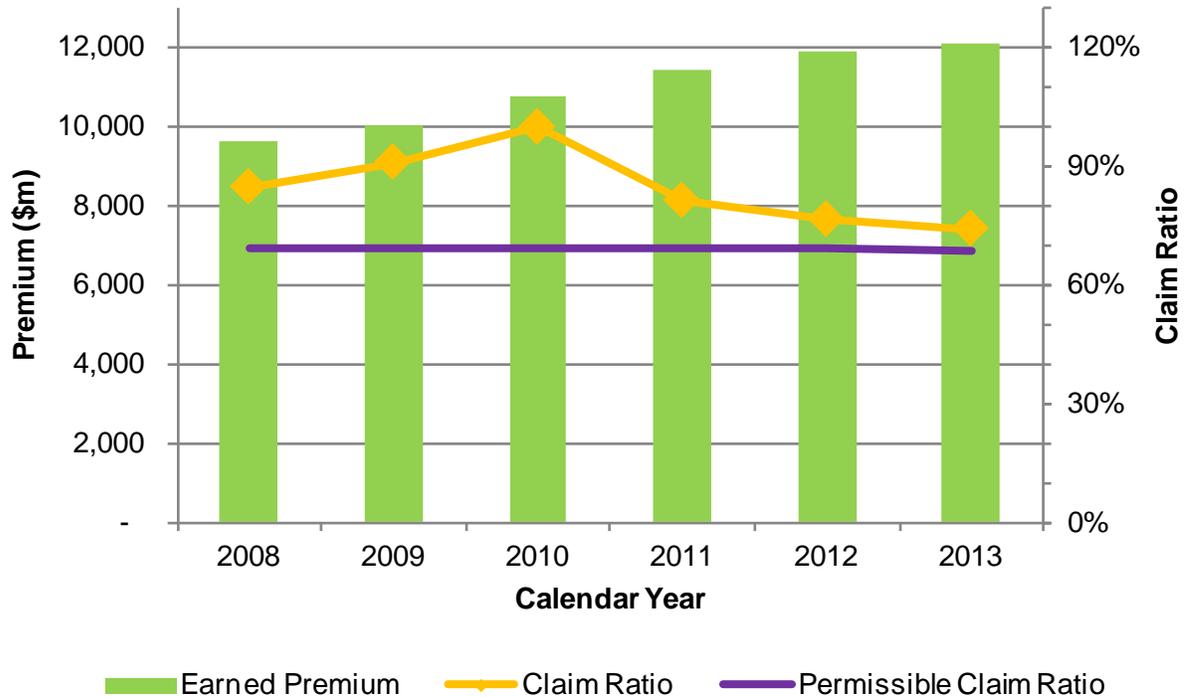
In 2013, premium increased by 1.6% from 2012, which is similar to the increase in the number of insured vehicles of approximately 1.5% per annum. The total amount of claims and expenses incurred in 2013 decreased by approximately 1.5%. These two changes lead to a decrease in the claim ratio of approximately 2 percentage points from 2012 to 2013, with the 2013 claim ratio being 74%.

Figure 5.1 summarizes Ontario total automobile direct earned premium and claim ratios extracted from financial statements by calendar year. The green bars represent premium, with the scale demonstrated on the left vertical axis. The yellow line and the purple line represent claim ratios and the permissible claim ratio²⁹, where the right vertical axis shows the claim ratio scale.

²⁸ Examples of other automobile are commercial automobiles, snow vehicles, and motorcycles.

²⁹ Permissible claim ratio is discussed in section 10.1.3 and included in this report for illustration purposes.

Figure 5.1: Ontario Total Automobile Direct Earned Premium and Claim Ratios from Financial Statements



A permissible claim ratio of 69% is estimated for illustration purposes in section 10.1.3. The claim ratios exhibited in Figure 5.1 are all greater than the estimated permissible claim ratio. Therefore, based on these statistics alone, it would appear that the Government’s average automobile insurance rate reduction target of 15% would likely be unsustainable without the implementation of significant additional initiatives.

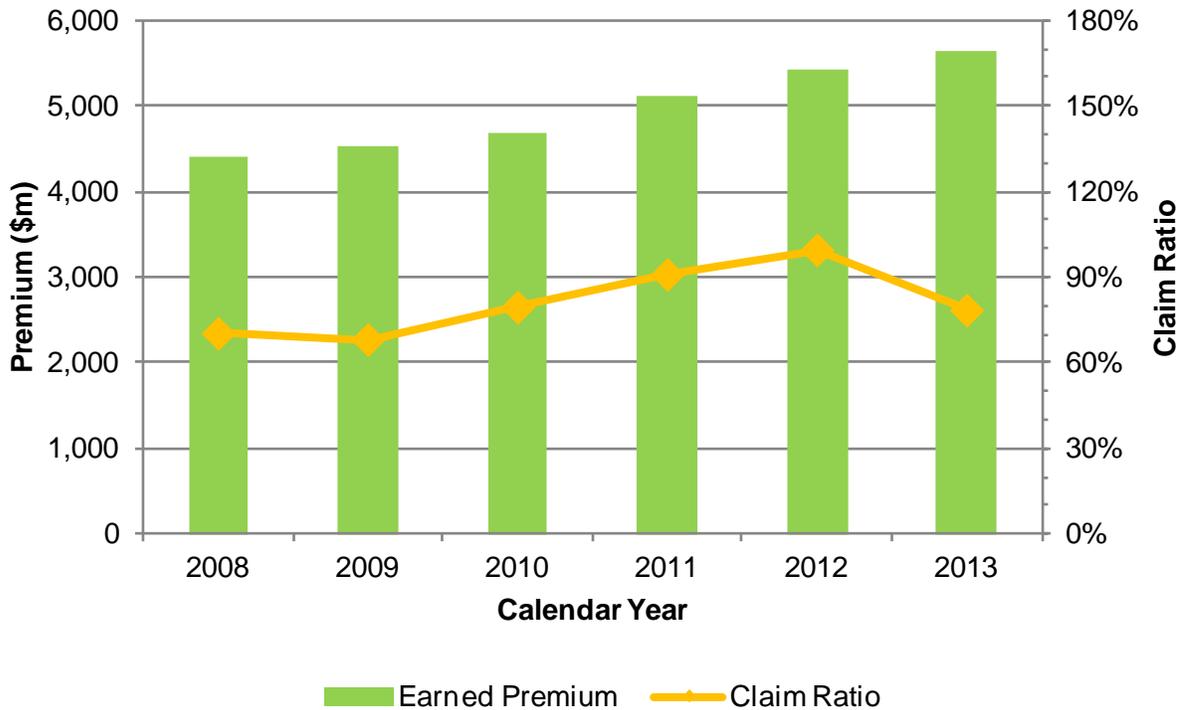
The Reforms were expected to have a different impact for different coverages. The following sections provide information and analysis of financial performance by coverage. The data summarized in this section is taken from P&C insurers’ financial statements, which only present the following automobile insurance split at the coverage³⁰ level: TPL, AB, and all other (Other).

5.1.1 TPL

Figure 5.2 summarizes TPL direct earned premium and claim ratios extracted from financial statements by calendar year. Similar to Figure 5.1, the green bars represent premium, with the scale demonstrated on the left vertical axis. The yellow line represents the claim ratios, where the right vertical axis shows the claim ratio scale.

³⁰ The P&C-1 and P&C-2 use the terms liability and personal accident. We use the equivalent terms of third party liability and accident benefit in this report.

Figure 5.2: TPL Direct Earned Premium and Claim Ratios from Financial Statements



The direct earned premium for TPL has increased by 9%, 6% and 4% in 2011, 2012, and 2013 respectively, to reach \$5.6 billion in 2013. The claim ratio deteriorated by 11 percentage points in 2011 and a further 9 percentage points in 2012 to reach 100%. The claim ratio at year end 2013 was 79%, which is a decrease of 21 percentage points from year end 2012. Based on these statistics, it appears that insurers have not yet achieved a breakeven state from the collected TPL premium (i.e., the 2013 claim ratio is still above the permissible claim ratio³¹).

The industry expected that the Reforms would shift a certain number of claims from AB to TPL. FSCO’s initial estimated impact of the Reforms on claim costs, as reported in March 2010 (FSCO Initial Estimates),³² for TPL-BI would be an increase of 26% from 2009 level (i.e., the benchmark estimate of claim costs adjustment factor was 1.26). As part of its Technical Notes, FSCO has prepared and published revised benchmark reform claim costs adjustment factors every six months since 2011. For TPL-BI, FSCO updated its benchmark additional cost estimate to 14% from 2009

³¹ Permissible claim ratio is discussed in section 10.1.3 and included in this report for illustration purposes.

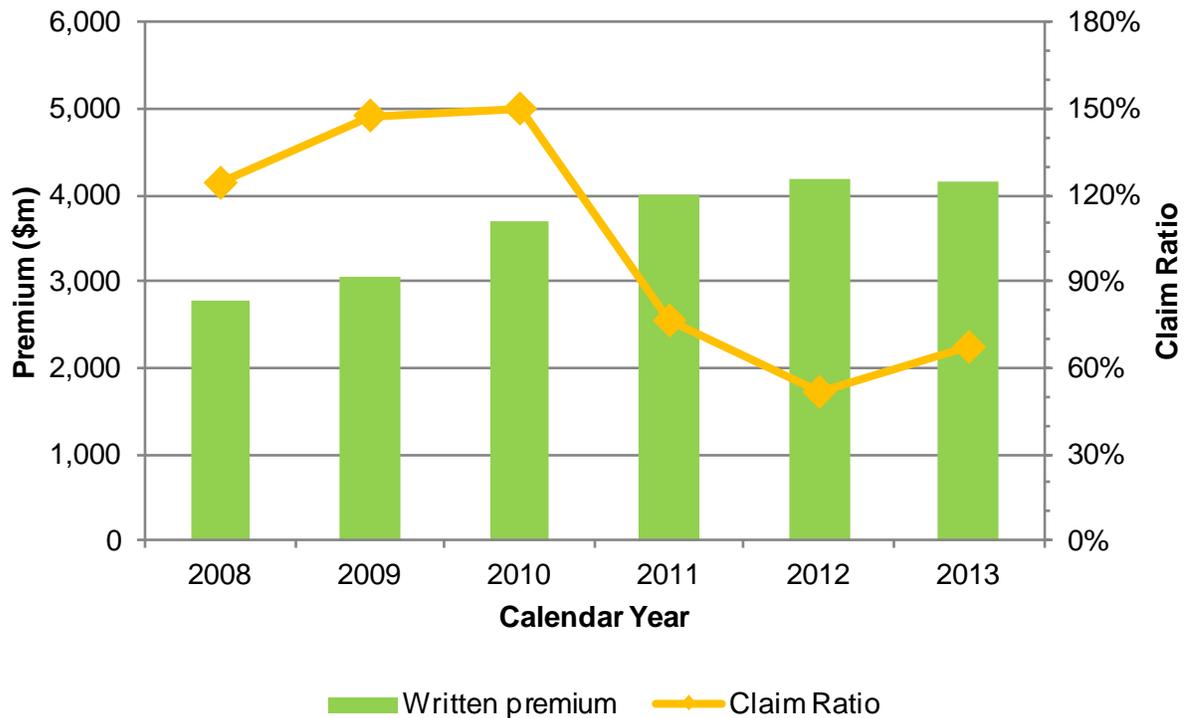
³² FSCO, “March 2010 Five-Year Review Reform PPA Simplified Filing Guidelines”, Appendix E Benchmark. Accessed on March 22, 2013. https://www.fSCO.gov.on.ca/en/auto/autobulletins/Documents/a-02_10-3.pdf.

level in its August 2012 Technical Notes,³³ and to 5% in the FSCO August 2013 Technical Notes for Automobile Insurance Rate and Risk Classification Filings (August 2013 Technical Notes)³⁴.

5.1.2 AB

Figure 5.3 summarizes AB direct earned premium and claim ratios extracted from financial statements by calendar year. The axes are presented on the same scale as Figure 5.2 (TPL) to facilitate comparison.

Figure 5.3: AB Direct Earned Premium and Claim Ratios from Financial Statements



The direct earned premium for AB increased by 9% and 5% in 2011 and 2012 respectively, and decreased by 1% in 2013, to a total of \$4.2 billion by 2013. The claim ratio reached 150% in 2010, and decreased to 76% and 52% in 2011 and 2012. In 2013 the claim ratio rose to 67%. According to the FSCO Initial Estimates, the Reforms were expected to decrease the claim costs of the AB coverage by 31% from 2009 level (i.e., the benchmark estimate of claim costs adjustment factor was 0.69). For the AB coverage, FSCO updated its claim cost saving estimate to 46% from 2009 level (i.e., the benchmark estimate of claim costs adjustment factor was 0.54) in its August 2012

³³ FSCO, “Technical Notes for Automobile Insurance Rate and Risk Classification Filings”, August 2012. Accessed on March 13, 2014. <https://www.fSCO.gov.on.ca/en/auto/filing-guidelines/Documents/Technical-Notes-Aug-2012.pdf>.

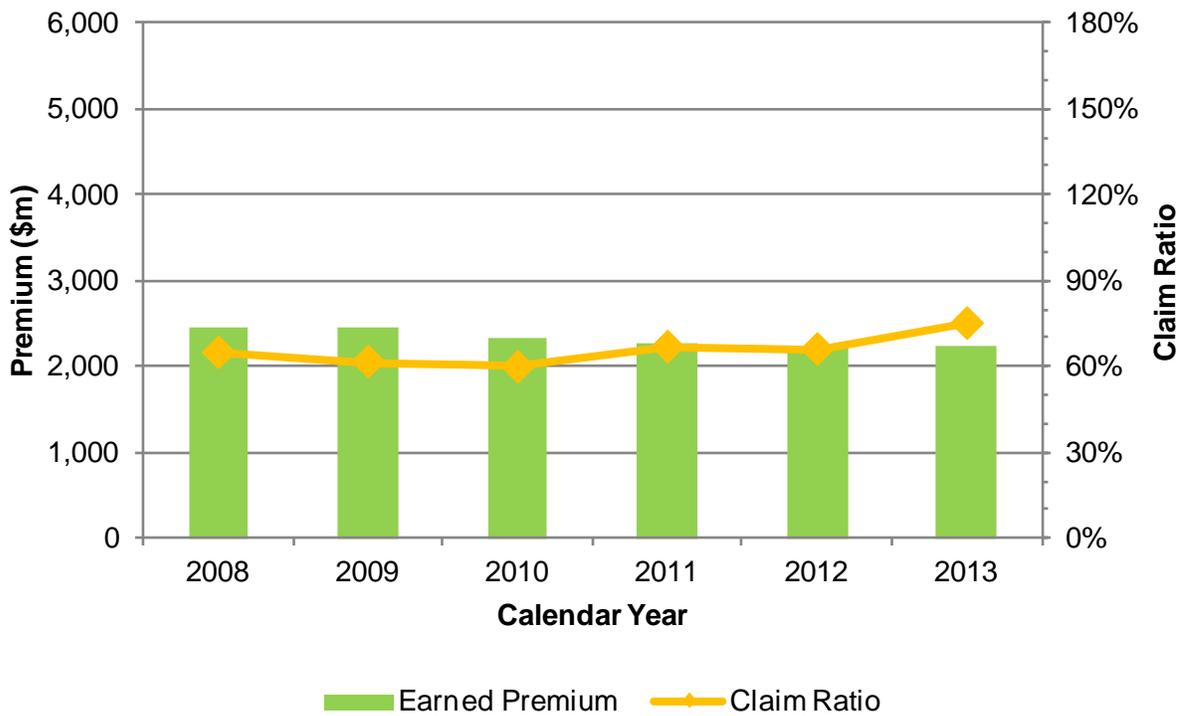
³⁴ FSCO, “Technical Notes for Automobile Insurance Rate and Risk Classification Filings”, August 2013. Accessed on March 13, 2014. <http://www.fSCO.gov.on.ca/en/auto/filing-guidelines/Documents/Technical-Notes.pdf>.

Technical Notes, and to 52% (i.e., the benchmark estimate of claim costs adjustment factor was 0.48) in its August 2013 Technical Notes.

5.1.3 Other

Similar to TPL and AB, Figure 5.4 presents direct earned premium and claim ratios extracted from financial statements by calendar year for Other.

Figure 5.4: Other Direct Earned Premium and Claim Ratios from Financial Statements



Other coverages include physical damage to the insured vehicle, such as collision and comprehensive coverages. The direct earned premium for Other has steadily decreased from 2008 through 2012. After a decrease of 2% in 2011 and 2012, the total earned premium increased approximately 1% in 2013 to reach \$2.2 billion. The claim ratio has fluctuated between 60% and 67% during 2008 to 2012, but increased to 75% in 2013. The Reforms were not expected to affect the Other coverages.

5.2 GISA Data

This section considers the industry data as reported by GISA. The dataset is net of the same data exclusions stemming from GISA's validation procedures.³⁵ This section uses the incurred claim development method³⁶ and claim development factors and other assumptions as selected by GISA. The overall results as at June 30, 2013 are summarized as follows:

Table 5.3: Summary of Accident Year Direct Premium and Claim based on GISA Data

Accident Year	Ontario PPA ³⁷			
	(\$m)	(\$m)	(\$m)	(\$m)
	Earned Premium	Incurred Claim and Expense ³⁸	Ultimate Claim and Expense ³⁸	Accident Year Claim Ratio
2008	8,055	6,052	6,294	78%
2009	8,401	7,052	7,510	89%
2010	9,065	6,896	7,662	85%
2011	9,683	4,909	6,005	62%
2012	10,082	4,328	5,988	59%
2013-H1 ³⁹	5,036	1,740	3,015	60%

Total Ontario PPA results indicate an improvement in the accident year claim ratio of 23 percentage points from 2010 to 2011. The improvement is explained by a decline in claims and loss adjustment expenses of \$1.7 billion, together with a premium increase of \$0.6 billion from 2010 to 2011. Similarly, the accident year claim ratio improved by 26 percentage points from 2010 to 2012, due to claim costs decreasing by \$1.7 billion while premium were increasing by \$1.0 billion. The very preliminary estimate for the 2013-H1 claim ratio seems to be in line with 2011 and 2012 results. Note that the claim development method is rarely used as a stand-alone method to estimate the ultimate claims or the impact of legislation changes. Other actuarial approaches to project the ultimate claims will be reviewed as part of the 2014 and 2015 Annual Reports.

While Table 5.3 shows decreasing claim ratios from 2009 to 2012, the uncertainty that is present in the PPA insurance system as elaborated on in section 6.4.1, together with the limitations of using the claim development method as the sole method to estimate ultimate claims, mean that there remains great potential for variability in the two or three most recent accident years' estimated claim ratios based on the GISA approach.

As discussed in section 5.1, the Reforms were expected to have a different impact for different coverages. The following sections provide an overview of the long-term trends for the TPL and AB

³⁵ I.e., the GISA data that we used in this report is consistent with the data that GISA publishes externally.

³⁶ Also known as the chain-ladder development method, this method is best suited for when there is a stable operational environment in both the historical observed data and in the future projection period.

³⁷ Similar to the summary from financial statements, the summary from GISA of Ontario PPA includes the results of the automobile insurance residual markets in Ontario.

³⁸ Expenses include loss adjustment expenses (LAE) only.

³⁹ Accident year 2013 is as at June 30, 2013 and is an incomplete year.

coverages, specifically by accident half-year from December 2001 to June 2013. We summarize the discussion of the long-term trends to facilitate comparison with the figures discussed in section 5.1.

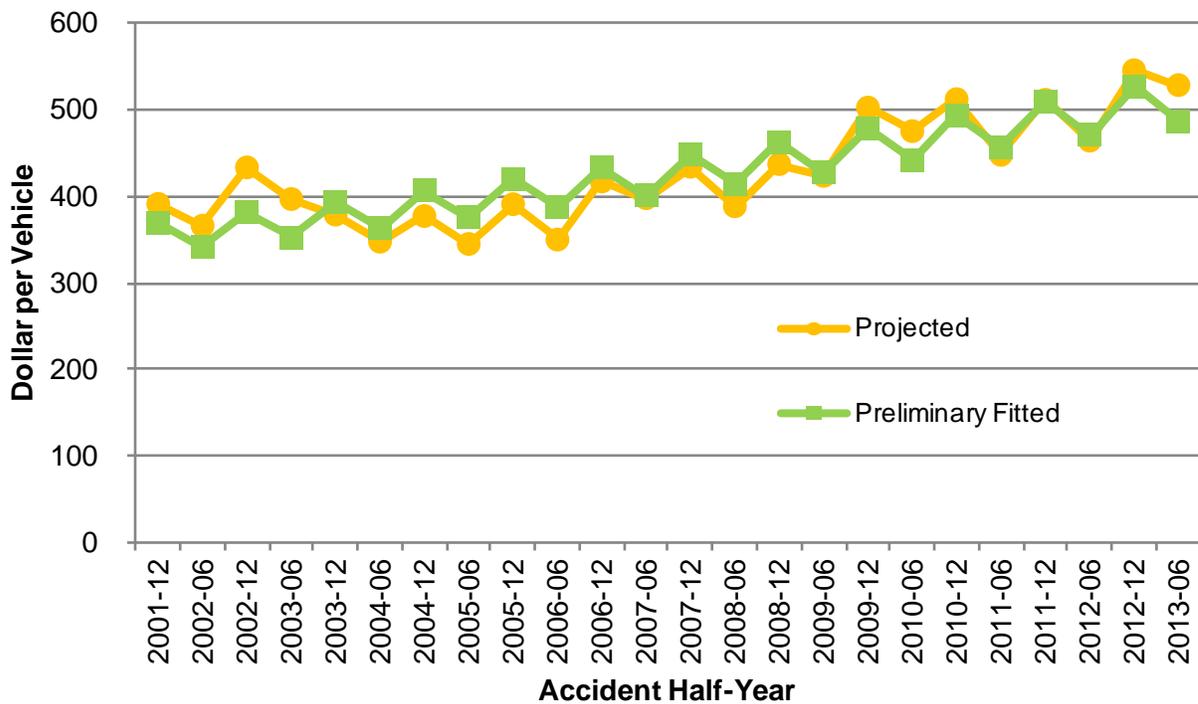
We performed preliminary trend analysis on projected ultimate claim frequency, claim severity and claim costs⁴⁰. There is inherent uncertainty in the projected ultimate claim frequency, claim severity and claim costs as these statistics are subject to the emergence of claims stemming from insured incidents that have already occurred but, in some instances, have yet to be reported. Another source of uncertainty pertains to the development of claims already known but not yet settled, which could be affected by incidences of fraud or the outcome of events that have not yet occurred such as future judicial and quasi-judicial decisions, public attitudes, and social/economic conditions. These sources of uncertainty tend to have a greater influence on the most recent accident years' statistics as they are the least mature (i.e., the true amount that is needed to dispose/close all claims incurred in the most recent years will only be known after the passage of time). In the course of time, the updated information may change the ultimate claim counts and costs as well as the indicated trends.

5.2.1 TPL

Figure 5.5 presents the projected claim costs and corresponding fitted claim costs for TPL. The yellow line is the projected claim costs based on data from GISA. The green line is the fitted claim costs based on the projected claim costs, taking seasonality differences into consideration.

⁴⁰ For the purpose of this report, we focus on the claim costs trends and do not show the graphical results of claim frequency and severity trending analyses.

Figure 5.5: TPL Projected and Fitted Claim Costs based on GISA Data



Based on the ultimate claims and loss adjustment expenses (LAE) projected using GISA selected development factors, it appears that the claim costs (i.e., average claim and LAE cost per vehicle) for TPL has consistently increased since 2005, after taking into consideration the seasonal nature of claim costs by accident half-years.⁴¹

TPL coverage is comprised of TPL-BI, property damage – tort (TPL-PD), and direct compensation property damage (DCPD). While the claim costs trends for TPL-PD & DCPD appear relatively stable, the preliminary estimates of claim costs trend for TPL-BI, based on a review of GISA data and assumptions, is estimated to be in line with the latest FSCO estimates. For TPL-BI, FSCO decreased its benchmark trend from 6.6% per annum as published in its August 2012 Technical Notes to 6.3% in its August 2013 Technical Notes.

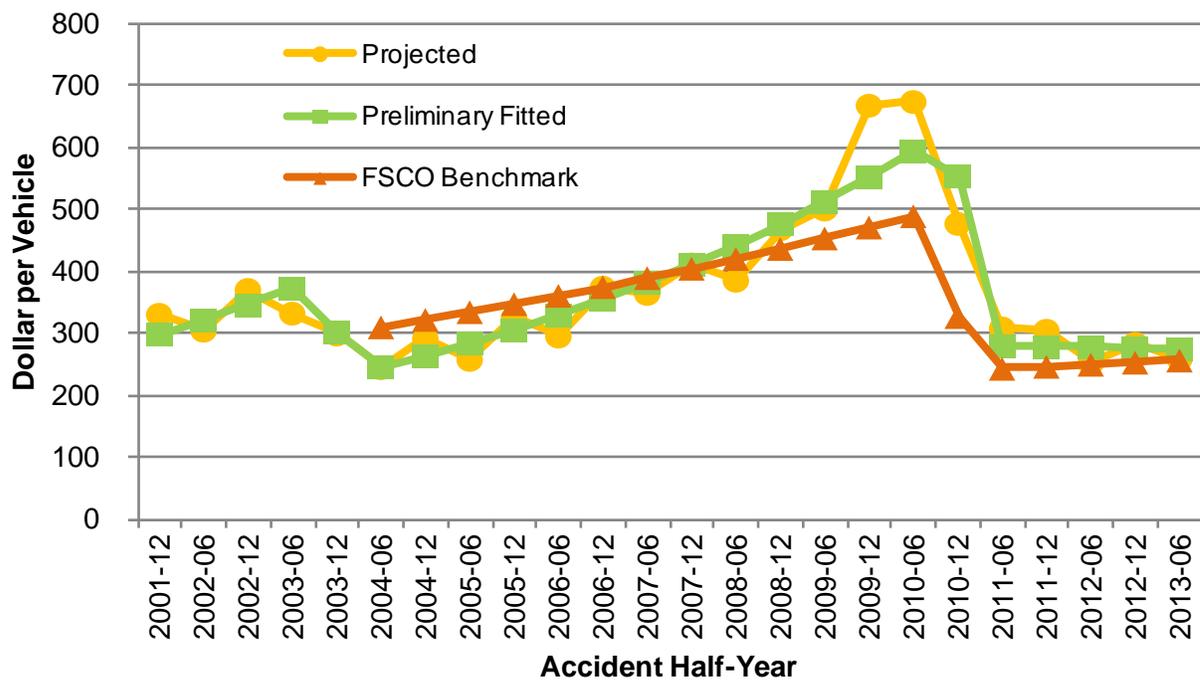
The full impact of the Reforms may not be completely developed yet as TPL-BI claims typically show slow reporting and settlement patterns. The main assumption of the claim development method used by GISA to determine the ultimate claim costs is that the same reporting and settlement patterns observed in the historical experience can help to determine the ultimate value of claims that remain to be settled (i.e., that the past is indicative of the future). However, in a post-reform environment, it is expected that the reporting and settlement patterns may be different than

⁴¹ GISA data is reported in accident half-years. For example, 2012-06 represents claim costs for accidents that occurred between January 1, 2012 and June 30, 2012; 2012-12 represents claim costs for accidents that occurred between July 1, 2012 and December 31, 2012.

in the pre-reform environment. Thus the main assumption of the claim development method is violated, making it less reliable. Additional sources of uncertainty stem from the backlog in mediation and arbitration as well as unexpected court decisions. As a result there is still much uncertainty in the current estimate of post-Reforms TPL ultimate claim costs and trends; and the full Reforms effects may be understated when relying only on the claim development method for accident years post-Reforms.

5.2.2 AB

Figure 5.6: AB Projected and Fitted Claim Costs based on GISA Data



Based on ultimate claims and LAE determined using GISA development factors, a significant positive trend is apparent in the AB claim costs between 2004 and 2010. As depicted by the yellow line in Figure 5.6, the acceleration of claim reporting in the two half-years preceding the Reforms is evident; and the AB claim costs seem to have stabilized post-Reforms. The historical trend is primarily driven by trends in four kinds of loss: medical benefits, rehabilitation, long-term care, and disability income.

The choice of methodologies, datasets, and assumptions can produce a wide range of trend estimates. For AB, FSCO decreased its benchmark pre-Reforms trend from 11.3% per annum in its August 2012 Technical Notes to 7.9% in the August 2013 Technical Notes. Alternate approaches that are equally acceptable, such as the green line in Figure 5.6, can result in a steeper slope (i.e., higher trend estimate pre-Reforms) than the FSCO benchmark.

In the August 2013 Technical Notes, FSCO estimated that the Reforms improved the AB claim costs by 52%. Based purely on a preliminary review of the data shown in the GISA reports, the

FSCO estimate would appear to be reasonable. However, the GISA reports estimate ultimate claim costs based on the claim development method, which assumes the same reporting and settlement patterns in the future as observed in the history. With the uncertainties in the PPA insurance system, the reporting and settlement patterns post-Reforms have not yet stabilized, and the recent history does not yet reflect possible outcomes from claims currently in the arbitration and mediation back-logs. Thus, similar to TPL-BI, there is still significant uncertainty in the current estimate of post-Reforms AB ultimate claim costs and trends. The ultimate value of the Reforms savings is likely to fluctuate from the current estimates. Only the passage of time will make the true effects of the Reforms known.

5.3 Reconciliation of Differences

This section attempts to reconcile the differences between the findings arising from a review of the financial information filed by insurers in the annual financial returns (as presented in section 5.1) and the results generated using GISA's approach (as presented in section 5.2). In comparing results from these two sources, a number of significant differences between the two sets of information should be taken into account, including but not limited to:

- **Basis of aggregation of data:** Financial statements data are presented on a calendar year basis while GISA data are aggregated on an accident year basis.
- **Other insurance claim-related costs:** Financial statements include charges for items such as health levy while the Ontario GISA data do not.
- **Valuation basis:** Financial statements are prepared in accordance with section VI of the Canadian P&C Insurance Companies Returns and Instructions,⁴² which state that the claims and adjustment expenses should reflect discounting and PfAD.⁴³ The general principles underlying present values and margins for adverse deviation (MfAD)⁴⁴ are outlined in section 2200 of Standards of Practice⁴⁵ promulgated by the Actuarial Standards Board⁴⁶ (ASB) for accepted actuarial practice in Canada. (For more information, refer to Appendices C and D). Consequently, the financial statement results are affected by changes over time in a number of underlying actuarial assumptions (i.e., undiscounted claim liabilities estimates, payment patterns, discount rates, and margins for adverse deviation). The GISA results do not include discounting and provisions for adverse deviation.

⁴² OSFI, "Canadian Property and Casualty Insurance Companies Returns and Instructions", modified date: 2014-02-26. Accessed on March 13, 2014. <http://www.osfi-bsif.gc.ca/Eng/fi-if/rtn-rlv/fr-rf/ic-sa/pc-sam/Pages/pc1.aspx>.

⁴³ Values that are discounted and include PfAD are considered to be on an actuarial present value basis. See section 10.2.1.

⁴⁴ PfAD is a dollar value whereas MfAD is a percentage that is used to calculate the PfAD

⁴⁵ Actuarial Standards Board, "Standards of Practice", February 2014. Accessed on March 13, 2014. <http://www.cia-ica.ca/docs/default-source/standards/sc020114e.pdf?sfvrsn=0>.

⁴⁶ The ASB was established by the Canadian Institute of Actuaries (CIA) as an independent body; the mission of the ASB is to develop, establish, and maintain Standards of Practice governing actuarial practice in Canada. Throughout this report, we use the abbreviation "SOP" to refer to Canadian actuarial Standards of Practice promulgated by the ASB.

- **Methods used for ultimate claim projections:** The estimates of ultimate claims underlying financial statement are the results of a combination of actuarial projection methods. GISA results stem only from the application of the incurred claim development method.

The following two sections comment on the differences observed for TPL and AB.

5.3.1 TPL

Figure 5.7 presents three charts. These charts are designed to bridge and explain the differences between calendar year and accident year claim ratios for TPL. The results of this analysis for the years 2010 to 2012 are presented here.

The left-most bar of each graph represents the calendar year claim ratio calculated from the financial statements. The right-most bar in each graph represents the accident year claim ratio estimated from GISA data. In between these two bars, the elements reconciling the difference between the two claim ratios are added and subtracted.

Claims reported in financial statements include charges for the health levy; the estimated claims based on GISA assumptions do not. The second bar adjusts for such difference and subtracts the charges from the calendar year claim ratios.

The second adjustment shown on the graphs relates to unallocated loss adjustment expenses (ULAE).⁴⁷ Financial statement results reflect the ULAE provision in the calendar year due to changes in methodologies, assumptions or exposures. On the other hand, the results based on GISA assumptions include the ULAE provision for the given accident year. The third bar of each graph adjusts for the difference in ULAE treatment.

As discussed previously, financial statement results use data aggregated on a calendar year basis, while results based on GISA data are aggregated on an accident year basis. This implies that the financial statement results include estimates of ultimate claim costs for the current accident year as well as changes in estimates of prior-year ultimate claim costs due to actual emergence of claim experience, and the change in reporting and settlement patterns. The fourth bar in each graph adjusts for these changes in prior-year ultimate claim costs. TPL has experienced unfavourable prior-year development over the three-year period. In other words, the estimates of ultimate claims have been revised upward as the experience emerged.

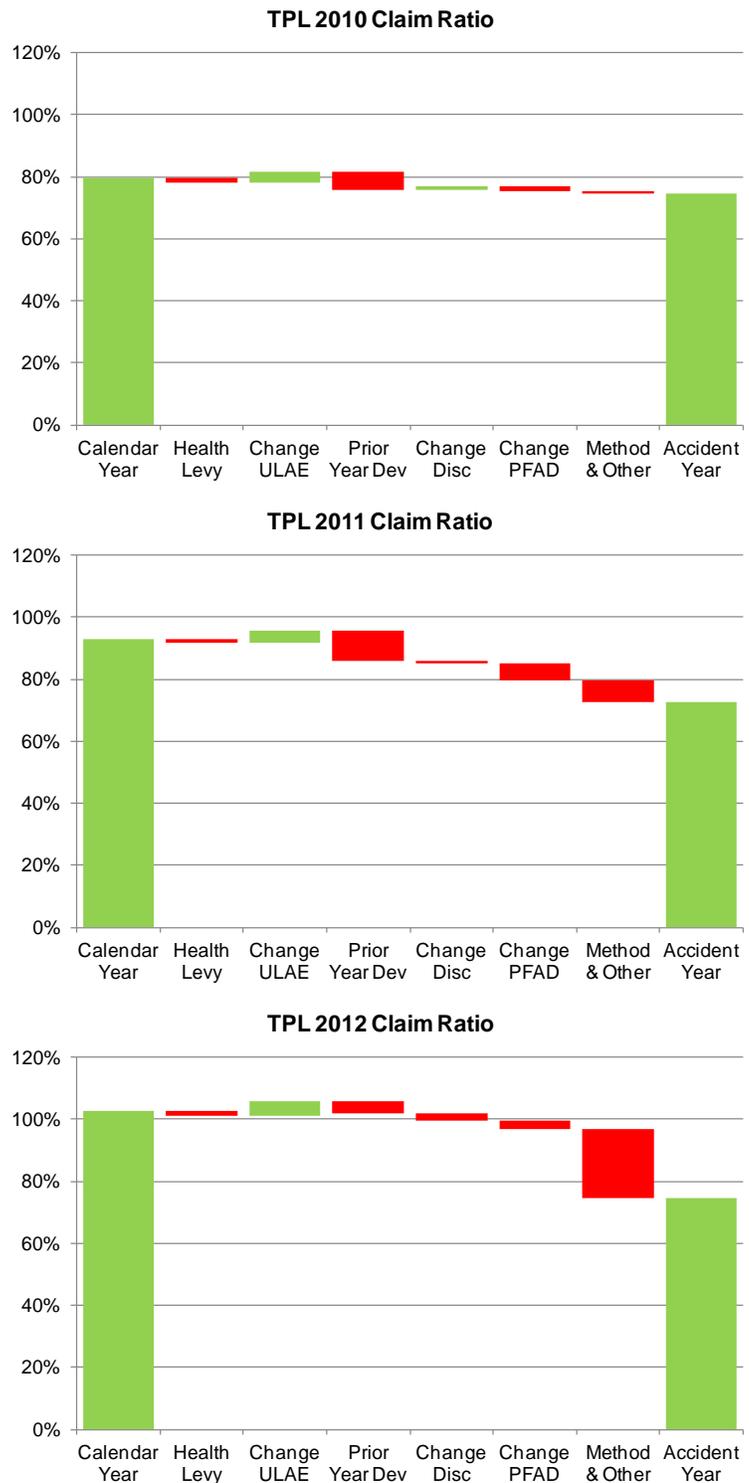
⁴⁷ As discussed in section 10.1.1.2, ULAE are claim-related expenses that cannot be allocated to a particular claim, such as salaries of the insurer's claim and actuarial departments.

While the results based on GISA data and assumptions are presented on an undiscounted basis, the financial statement results reflect the changes in discount amount, which is a function of the change in reserves, payment pattern assumptions and discount rate. As a high level indicator of the change in the discount rate, the yield-to-maturity of Canadian government bonds⁴⁸ generally increased in 2010 and decreased in 2011 and 2012, explaining the favourable impact on 2010 and unfavourable effect on 2011 and 2012 results, as demonstrated in the fifth bar in each graph.

The results based on GISA data and assumptions exclude PfADs. The financial statement results reflect the change in PfADs, which is a function of the change in reserves and the change in the MfADs. These margins tend to reflect the increased level of uncertainty due to the introduction of the Reforms, the mediation and arbitration backlogs, and the possible claim transfers from AB to TPL. The adjustment is made in the sixth bar for each graph.

The results based on GISA assumptions use only the incurred claim development method. As described earlier in this report, the development method assumes the same reporting and settlement patterns as observed in the past. It is expected that the reporting and settlement patterns may be different in any post-reform environment from that experienced in the pre-reform environment. The most recent

Figure 5.7: TPL Claim Ratios from 2010 to 2012



⁴⁸ Changes in medium-term Canadian government bond yield are used to illustrate the impact on discount amount year-over-year.

Reforms are not any different in this regard. In particular, the recent history does not yet reflect possible outcomes from claims currently in the arbitration and mediation back-logs. Following the most recent Reforms, similar to many other reforms, a majority of the actuaries have assigned significantly more weight to projection methods other than the claim development method, reflecting the increased heterogeneity in the claim data. The seventh bar of each graph represents this last adjustment.

5.3.2 AB

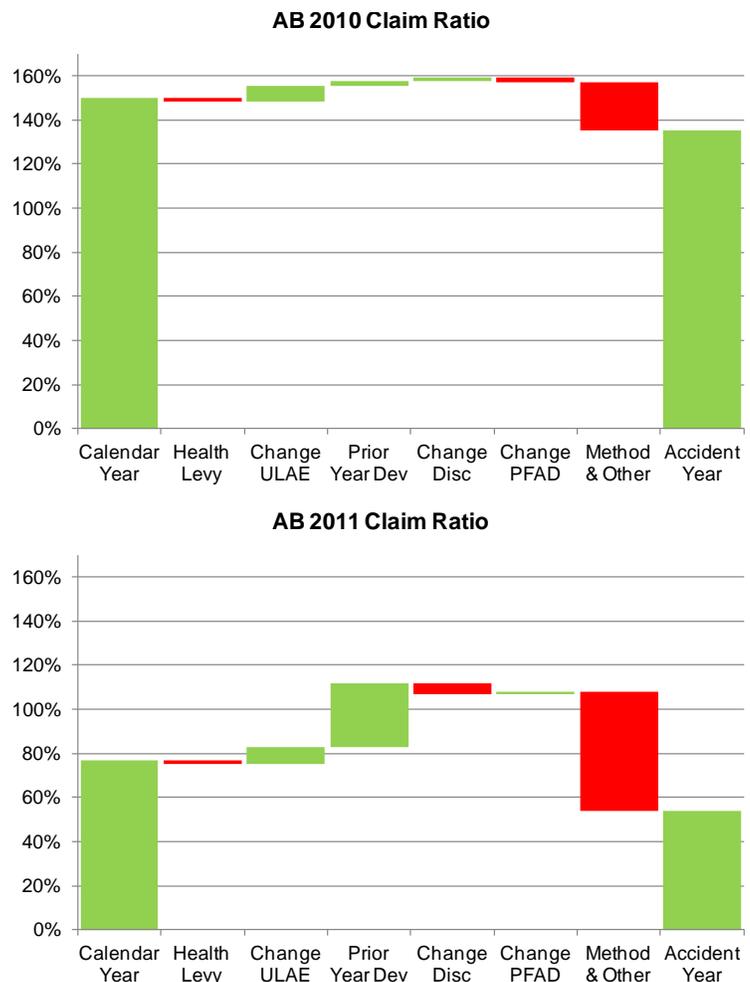
This section presents similar charts for AB to bridge and explain the differences between calendar year and accident year claim ratios. As explained in section 5.3.1, one of the differences between the calendar year and accident year claim ratio is the treatment of the health levy. The second bar adjusts for such differences and subtracts the health levy charges from the calendar year claim ratio. Similarly, the third bar of each graph adjusts for the difference in ULAE treatment.

Also similar to the discussion in section 5.3.1, the fourth bar of each graph adjusts for the changes in prior-year ultimate claim costs. However, unlike TPL, AB has experienced favourable prior-year development over the three-year period. In other words, the estimates of ultimate claims have been revised downward as the experience emerged.

The same yield-to-maturity is assumed for discounting future TPL and AB claims for financial reporting purposes. Therefore, a similar explanation applies to describe the favourable impact on 2010 and unfavourable effect on 2011 and 2012 results, as demonstrated in the fifth bar of each graph.

The sixth and seventh bars represent similar adjustments as explained in section 5.3.1. An adjustment for the PfADs that are included in the financial statements is made in the sixth bar, while the seventh bar represents the adjustment for the differences in selected actuarial method for projecting ultimate claims and other assumptions to reflect the increased heterogeneity in data post-Reforms. Similar to the estimates for

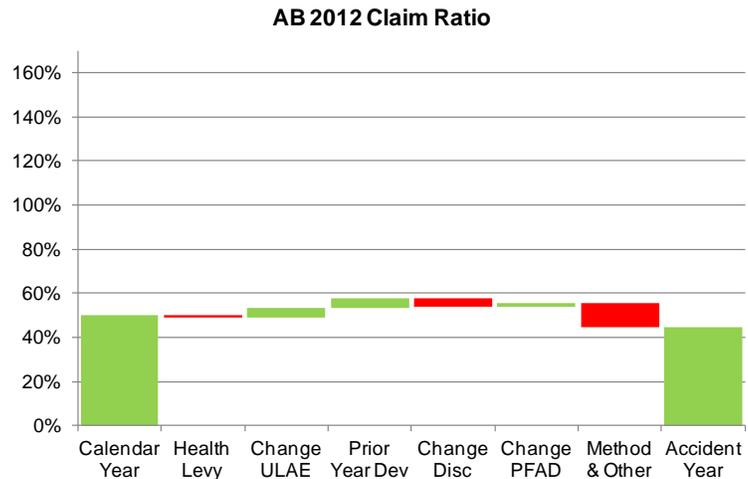
Figure 5.8: AB Claim Ratios from 2010 to 2012



TPL, following the Reforms, many actuaries have assigned significantly more weight to projection methods other than development method (e.g., similar practice as per any reforms that alter the predictiveness of historic data), reflecting the increased heterogeneity in data.

5.4 Observations

This section summarizes our observations of the premium and claim experience for Ontario PPA insurance based on discussions from sections 5.1 through 5.3.



5.4.1 Premium Experience

Table 5.2 and Table 5.3 summarize the historical earned premium for Ontario PPA and total automobile insurance. Both tables show that premium increased annually by approximately 4%, 7%, 6.5%, and 4% 2008 to 2012. Table 5.2 also demonstrates an increase in earned premium of about 1.6% from 2012 to 2013. Furthermore, as described in section 5.1.2, the overall AB premium increased by approximately 9% and 5% in 2011 and 2012 respectively, to a total of \$4.2 billion in 2012. More recently, AB premium decreased by about 1% between 2012 and 2013. As such, the increases observed in the overall Ontario PPA earned premium over the post-Reforms period of 2011 and 2012 could be explained, at least in part, by the increases in PPA AB premium.

One of the reasons that the overall rate level for AB did not decrease post-Reforms may be due to the uncertainty in the system post-Reforms. Furthermore, some of the reasons that AB premium increased over this period, rather than remain unchanged or decrease, could include but are not limited to:

- Increase in number of insured vehicles approximately 1.5% per annum;
- Deeply inadequate rates pre-Reforms that resulted in rate increases being implemented in 2010 and 2011; and
- Rate increases that were implemented pre-Reforms (i.e., prior to September 1, 2010) being earned up to August 31, 2012.

5.4.1.1 *Inadequate Rates Pre-Reforms*

A review of financial statement and GISA data indicates that the rates underlying the premiums charged pre-Reforms were deeply inadequate. This can be seen in the AB claim ratios from 2008 through 2010, which were significantly over 110%⁴⁹ for each year in this period, reaching as high as 150% in calendar year 2010 based on financial statements, and almost 140% for accident year 2010 based on GISA data.⁵⁰ These high claim ratios triggered the implementation of rate increases for many insurers in the industry prior to the Reforms in September 2010. Taking into consideration the projected claim ratio, the expenses, the return on equity and the time value of money, the 2011 rate indications might have been expected to result in significant rate increases if the Reforms had not taken place.

5.4.1.2 *Implementation of Rate Changes*

It is important to remember that any rate change implemented by insurers on the Ontario PPA insurance product can take up to two years to become fully reflected in earned premium data for the industry. For example, a rate change implemented on July 1, 2010 will apply to policies that are written on or after July 1, 2010. Under this example, policies with an effective date prior to July 1, 2010 will only be affected by the rate change at the time of their next renewal (i.e., a policy that became effective on June 15, 2010 for a term of one year would only be affected by this rate change at the time of renewal on June 15, 2011). Assuming that PPA insurance policies are sold with a term of one year, policies written in June 2011 will not be fully earned until June 2012. Therefore, a rate change that was implemented on July 1, 2010, as a result of the inadequate rates prior to the Reforms' effective date of September 1, 2010, would not be fully earned and reflected as such in the financial statements or GISA data until two years later.

As rate increases were being implemented up to August 31, 2010, it is reasonable for earned premiums to exhibit increases in 2012. As previously noted, total premium between 2012 and 2013 increased at a similar rate as the increase in number of insured vehicles, while the AB premium decreased by 1% during the same period.

⁴⁹ Based on both financial statement and GISA data as of June 30, 2013, AB claim ratios were all over 110% for years 2008 through 2010.

⁵⁰ GISA data as of June 30, 2013.

Figure 5.9: Illustration of Delay between Rate Change and Premiums Earned



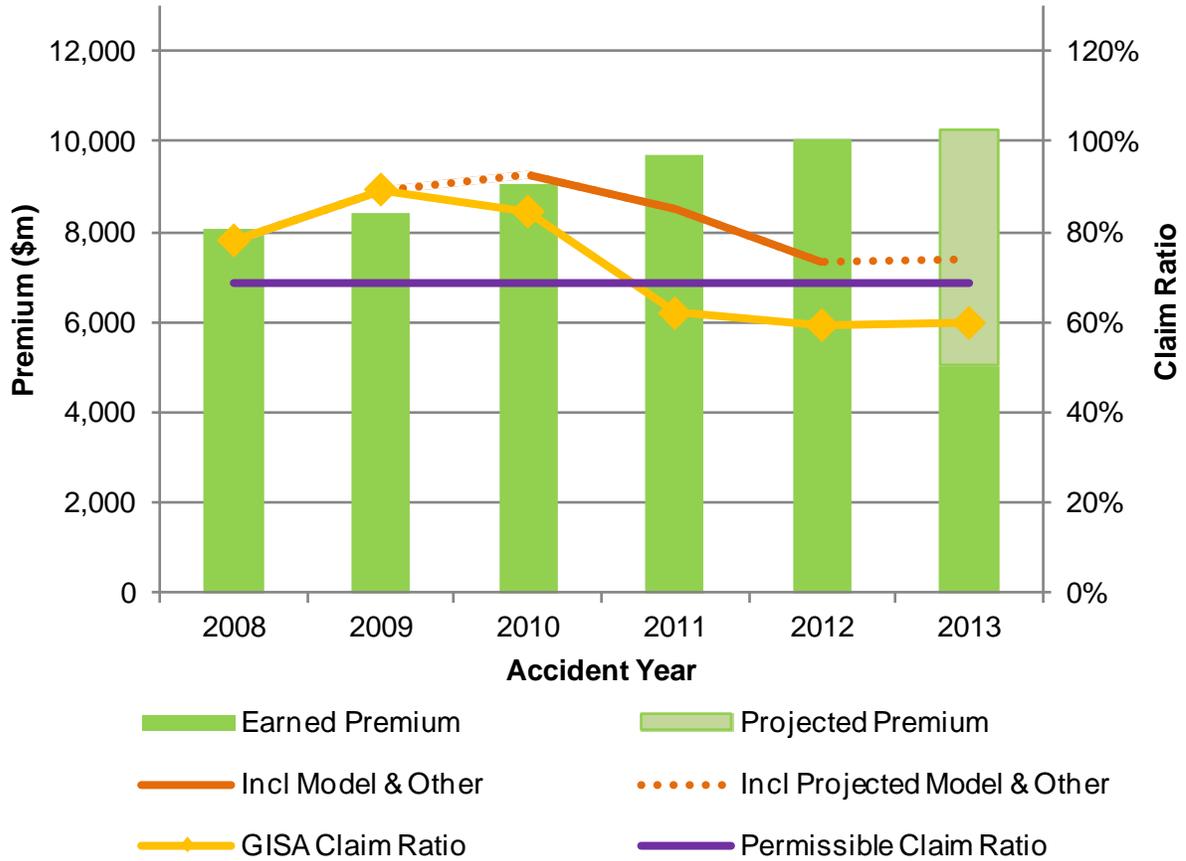
Figure 5.9 illustrates how rate changes can take up to two years to be fully reflected in earned premiums. In this example, Policy A was issued for a one-year term one day prior to the effective date of the rate change that was implemented on July 1, 2010. The premium charged for the “2010 contract” of Policy A would have been set at the “old rate” level in effect at that time. This premium remained in effect for the duration of the contract (i.e., one year). When Policy A expired on June 30 2011, it would have been renewed at the “new rate” level for the first time and the premium paid at renewal would have been reflected in the insurer’s written premiums as of June 30, 2011. Given that this “2011 renewal policy” also has a one-year term, it is assumed that it remained in effect until June 30, 2012. As premium is earned throughout the effective period of a policy, the premium for the 2011 renewal of Policy A would not have been fully earned until June 30, 2012. This illustrates how a rate change implemented on July 1, 2010 would not have been fully reflected in earned premiums until June 30, 2012.

5.4.2 Claim Experience

Figure 5.10 summarizes Ontario total PPA direct earned premium and claim ratios extracted from GISA data by accident year. The green bars represent premium, with the scale demonstrated on the left vertical axis. The yellow line represents GISA claim ratios while the purple line represents the permissible claim ratio⁵¹, where the right vertical axis shows the claim ratio scale. As discussed in section 5.2, the claim development method is rarely used as a stand-alone method to estimate the ultimate claims or the impact of legislation changes. The orange line (solid and dotted) represents possible estimates of ultimate claim ratios including adjustments for the difference in selected actuarial methods and other assumptions as discussed in section 5.3.

⁵¹ Permissible claim ratio is discussed in section 10.1.3 and included in this report for illustration purposes.

Figure 5.10: Ontario Total PPA Direct Earned Premium and Claim Ratios based on GISA Data



The permissible claim ratio of 69% is estimated in section 10.1.3 and included in this report for illustration purposes. The adjusted claim ratios exhibited in Figure 5.10 are all greater than the estimated permissible claim ratio. Therefore, based on these statistics alone, it would appear that the Government's average automobile insurance rate reduction target of 15% would likely be unsustainable without the implementation of additional claim costs and expense reduction initiatives.

6 SURVEY RESULTS

In consultation with the MOF, we developed a detailed questionnaire to assist in collecting information from insurers on their views of the effect of the Reforms and the Strategy on the Ontario automobile insurance industry. Due to the time constraints involved in producing the Interim Report, the survey was only distributed to executives from insurers providing PPA insurance in Ontario. It is important to note that the nature of the survey means that the results presented in this section generally represent the view of insurers only. For the subsequent Annual Reports we intend to seek input from other stakeholders in the insurance system.

To encourage participation in our research, individual responses to the survey are strictly confidential and will not be released to any parties other than the authors of this report. This report does not directly or indirectly identify individual insurers or their representatives. To ensure that anonymity is maintained throughout the survey process, insurers were offered an opportunity to respond to the survey in one of two ways. A double-blind option was available for respondents who wished to remain completely anonymous in their responses. However, most respondents chose to respond through the blind option, with their responses remaining anonymous to all parties (including the MOF) other than the authors of this report. To provide further feedback and background on their survey submissions, certain insurers who provided written responses to the questionnaire also met with us to discuss their views.

Appendix E presents a sample of the survey that was sent to insurers representing 98% of the Ontario PPA insurance market, measured based on direct written premium.⁵² In total, more than 78% of the industry participated in the survey. The exact participation rate cannot be determined as some respondents responded via the double-blind option.

This section of the Interim Report summarizes the results of our survey in order to separately address the industry's views on the effect of the Reforms and the Strategy on insurance claim costs and rates. Attention is drawn to the issues and uncertainties arising from the Reforms and the Strategy as identified by insurers who completed the survey. Finally, the section includes a discussion of the competitiveness of the Ontario PPA insurance market from the insurers' perspective.

6.1 Impact of the Reforms

The impact of the Reforms to date can be assessed from several different perspectives. Section 5 summarizes changes over time on some of the key statistics derived from financial statements and GISA data. Section 6.1 presents the views, gathered through the survey process, of individual P&C insurers' senior management on the impact of the Reforms to claim costs and rates.

⁵² Percentage of industry is measured as direct written premium from 2012. This basis of measurement is consistent throughout the report unless stated otherwise.

6.1.1 Insurance Claim Costs

Certain questions in our survey address the impact of the Reforms on claim costs by coverage, by kind of loss, and by injury type, as well as the shifts in claim costs between coverages.

6.1.1.1 By Coverage

The survey requested insurers to provide their latest estimates of the impact of Reforms on claim costs. Where possible, insurers were asked to show their estimated impact at the coverage or sub-coverage level. Table 6.1 summarizes the estimated impact of the Reforms for the following coverages and sub-coverages: TPL-BI, TPL-PD, AB-DI, AB-Non DI, PhysD. Some insurers chose to report the impact for AB on a combined basis only (i.e., these insurers did not estimate the impact on AB-DI separately from AB-Non DI).

Table 6.1: Estimated Change in Claim Costs by Coverage

Coverage	Percentage of Industry Represented	Weighted Average Estimated Change in Claim Costs	FSCO Benchmark Change in Claim Costs ⁵³
TPL-BI	64%	20%	5%
TPL-PD	49%	(1%)	n/a
AB-DI	29%	(51%)	(40%)
AB-Non DI	29%	(39%)	(55%)
AB	40%	(46%)	(52%)
PhysD	32%	0%	n/a

The first column of Table 6.1 shows the percentage of the total Ontario PPA insurance market included in each coverage's weighted average impact. The second column summarizes the estimates provided by insurers at the coverage or sub-coverage level by calculating a weighted average of the data received. Note that these calculated averages exclude statistical outliers.⁵⁴ Finally, to facilitate comparison with FSCO's latest published estimates of the Reform's impact, Table 6.1 also includes FSCO's benchmark claim costs adjustment factors released in August 2013. In comparing these last two columns, one should note that, as stated in the August 2013 Technical Notes, the "FSCO's benchmark factors are intended to apply to all insurers, on average." In contrast, the weighted average estimated changes in claim costs, shown in the second column, are derived from survey responses and represent only a portion of the market, as shown in the first column.

As can be observed from Table 6.1, many of the insurers who agreed to participate in our survey provided information regarding their most recent estimates of the impact of the Reform for specific automobile insurance coverages. For TPL-BI, insurers who represent about 64% of the industry reported that their latest estimates of the impact of the Reforms on claim costs would indicate an

⁵³ FSCO, "Technical Notes for Automobile Insurance Rate and Risk Classification Filings", August 2013, Exhibit 2, Page 2. Accessed on March 13, 2014. <http://www.fSCO.gov.on.ca/en/auto/filing-guidelines/Documents/Technical-Notes.pdf>.

⁵⁴ We consider responses that are more than three standard deviations from the mean to be statistical outliers.

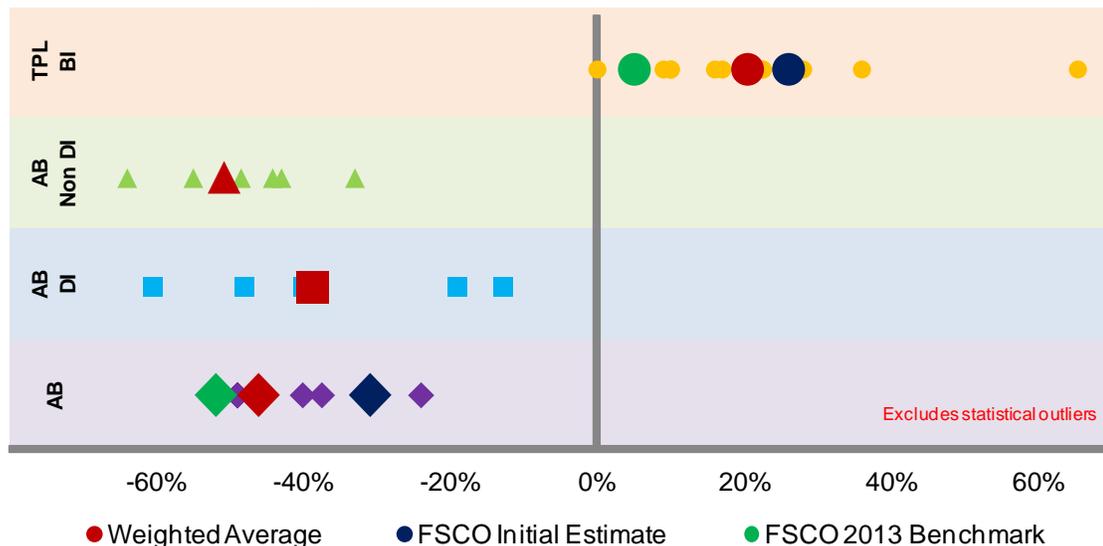
average increase of about 20%. Similarly, a total of 69%⁵⁵ of the industry provided estimates of the change to AB claim costs as a result of the Reforms. On average, these insurers' most recent estimates of the impact would indicate a decrease of about 51% on AB-DI claim costs, a decrease of about 39% on AB-Non DI claim costs, and a decrease of about 46% on the claim costs for AB in total.

Some insurers did not provide any estimated change in claim costs citing that they did not experience similar reductions in claim costs as the industry at large due to their low market penetration in the Greater Toronto Area (GTA). Other insurers stated that their initial estimated impact of the Reforms on AB claim costs is not dissimilar to that of FSCO, with the caveat that they believe it is still too early to finalize a quantitative impact of the Reforms.

In providing their estimated change in claim costs, certain insurers cautioned that a change in business mix and rating variables over the measurement period would result in estimates that do not solely represent the impact of the Reforms. Other insurers commented on the long-tail nature of both AB and TPL-BI coverages, which increases the inherent uncertainty in the estimates of claim costs and could result in ultimate claim costs that may differ significantly in the future. One insurer suggested that although claim costs have decreased overall since 2010, a significant portion of the decrease was achieved between accident year 2010 and 2011. This insurer reported that claim costs have in fact been increasing since 2011 for all coverages other than physical damage. The views of this insurer are echoed in other responses.

Some insurers also suggested that regardless of the initial estimated change in claim costs, it has been more than three years since the Reforms, and economic inflation alone will have eroded the estimated savings on AB claim costs.

Figure 6.1: Surveyed Change in TPL-BI and AB Claim Costs Resulting from 2010 Reforms



⁵⁵ I.e., 29% who provided changes in claim costs by AB-DI and AB-Non DI, plus 40% who provide AB in total.

Figure 6.1 illustrates the range of responses received from surveyed insurers regarding the change in claim costs for TPL-BI and AB sub-coverages. Similar to the weighted average calculation, the data presented in this chart excludes one observation considered to be a statistical outlier. For comparison purposes, Figure 6.1 also includes the weighted average change in claim costs per coverage presented in Table 6.1 above, FSCO's benchmark from the August 2013 Technical Notes, and the initial estimated change in claim costs documented in the FSCO Initial Estimates.

6.1.1.2 By Kind of Loss and Injury Type

The survey asked insurers if they had measured the impact of the Reforms on claim costs estimated at the kind of loss or type of injury (e.g., minor, non-catastrophic, catastrophic) level. Insurers representing about 35% of the industry have attempted to measure the impact of the Reforms by kind of loss, and about 8% of the industry attempted to measure the impact by type of injury. However, many of the insurers who attempted to estimate the impact by kind of loss warned that these estimates were based on immature data, and the specific impact from the Reforms by kind of loss was only provided by insurers representing about 27% of the industry. Table 6.2 summarizes the impact by kind of loss based on responses received.

Table 6.2: Estimated Change in Claim Costs by Kind of Loss

Kind of Loss	Estimated Change in Claim Costs
Medical	(50%) to (57%)
Rehabilitation	(10%) to (31%)
Cost of exams	(38%) to (67%)
Attendant Care	(10%) to (41%)
Housekeeping⁵⁶	(80%) to (92%)

Qualitative responses to this question suggest similar observed reductions by kind of loss. However, some insurers noted that the impact on AB catastrophic claims has an offsetting effect on benefits achieved through reduced claim costs. In particular, insurers noted that claim costs for medical, rehabilitation, and attendant care are trending upward due to non-catastrophic claims that are becoming catastrophic claims as a result of a weakened catastrophic threshold. A weakened catastrophic threshold also has the effect of deteriorating existing catastrophic claims.

In terms of frequency of claims, one insurer reported that the overall frequency of AB claims has decreased by 15%. However, the frequency of minor injury claims that settle below \$10,000 have increased. The same insurer reported a reduction in frequency for non-catastrophic claims. We illustrate the responses of this one insurer to provide a quantitative perspective on an observation that was made on a qualitative basis only by other respondents.

⁵⁶ Housekeeping is no longer a standard benefit.

6.1.1.3 Shifts in Claim Costs between Coverages

The survey asked insurers to comment about any observed shifts in claim costs between coverages or sub-coverages. Approximately half of the insurers who responded to this question reported that they observed shifts in claim costs from AB to TPL-BI; however, they noted that the amount shifted could not be quantified. These insurers represent about 38% of the industry.

Insurers who did not observe any shifts responded with the caveat that it is too early after the Reforms to conclude that there are no shifts in claim costs between coverages. These insurers expect that at some point a shift in claim costs between coverages will occur. Some insurers suggested that it can take up to 48 months after an accident before sufficient information is received to ascertain the severity of a TPL-BI claim. As such, insurers who have not observed any shifts indicate that it is still early to conclude that there will ultimately be no transfer of costs between AB and TPL-BI even though it has been three years since the Reforms.

While the insurers who participated in the survey suggest that the shifts in claim costs are difficult to quantify, these insurers indicate that generally, the frequency of AB claims is decreasing while that of BI claims is increasing.

6.1.2 Insurance Rates

The survey asked insurers to comment about rate changes implemented at the coverage level since the Reforms and also asked for comments on how the uncertainties in the Ontario PPA insurance market are reflected in their premiums.

6.1.2.1 Rate Change Experience since the Reforms

In Ontario, insurers cannot change their automobile insurance rates without the approval of FSCO. Prior to approving an insurer's rates, FSCO's task is to determine if the resulting premiums are reasonable and justified as compared to the insurers' projected future claim costs and expenses.

The majority of the insurers surveyed provided their approved rate changes by coverage since the Reforms. Table 6.3 summarizes the weighted average approved rate changes by coverage since the Reforms for the surveyed insurers, representing approximately 77% of the industry.

Table 6.3: Weighted Average Approved Rate Changes since the Reforms by Effective Year and Coverage

Coverage	2010	2011	2012	2013	2014
TPL-BI	16.5%	4.8%	2.1%	5.3%	1.9%
TPL-PD	1.4%	(2.5%)	(1.22%)	(1.4%)	(3.0%)
AB	(8.4%)	8.1%	0.6%	(2.6%)	(8.3%)
PhysD	(1.6%)	(3.3%)	(2.7%)	(1.9%)	(4.6%)

For comparison purposes, Table 6.4 summarizes FSCO post-Reforms approved rate changes⁵⁷ for the entire PPA insurance market, by year approved. The approved rate changes shown in Table 6.3 are only available for all coverages combined basis. Based on the FSCO data, as of the last quarterly filings from 2013, the post-Reforms cumulative approved rate changes for the entire PPA insurance market is an increase of 0.3% from rate filings received by FSCO between the second quarter of 2010 to the fourth quarter of 2013.

Table 6.4: Post-Reforms Approved Rate Changes for the Entire PPA Insurance Market

Year Approved	2010	2011	2012	2013
Rate Change	0.7%	4.9%	(0.3%)	(4.7%)

In general, the rate filing process in Ontario begins with an insurer’s actuary preparing an actuarial indication of the rate change needed to ensure that the insurer’s rates are adequate to meet future costs and return on equity requirements for providing coverage to policyholders. The rates that the insurer subsequently files with FSCO for approval may be different from the actuary’s indication depending on the insurer’s strategic business decisions. FSCO’s internal actuaries and/or external actuarial consultants review the insurer’s filing, and the rates that are approved may be different from either the insurer’s actuary’s indication or the insurer’s filed rates.

To illustrate the rate filing process through a specific example, one insurer surveyed provided information with respect to the indicated rate changes prepared by its actuary, the rates filed with FSCO, and its approved rate changes. In its most recent rate level change filing, the insurer’s actuary indicated that a rate increase of 1%⁵⁸ was required in order for the insurer to meet the projected future costs and return on equity requirements. However, this insurer responded that, in order to help achieve the Government’s targeted average rate decrease of 8% by August 2014, it filed for a rate decrease of 4.5%. Ultimately, this insurer reported that it was ordered by FSCO to decrease rates by 8%, and noted that this was a larger decrease than its original filing, as well as being significantly different than its actuary’s indicated rate change. Similar quantitative and qualitative examples were given by a few respondents.

Another insurer that provided its rate change history included other metrics such as its return on equity from 2009 to 2013. This insurer’s return on equity fluctuated between -15% and 15% over the past five years, with the five-year average being approximately 4.5%⁵⁸. The insurer reported that while return on equity is at adequate levels in recent years (i.e., between 2011 and 2013), the five-year average is well below the 11% FSCO benchmark and below acceptable levels to sustain the industry. The insurer provided this illustration to demonstrate that “further rate action must be accompanied by both short-term actions to reduce claim costs and medium-term actions to protect gains made in the 2010 reforms from eroding.”

⁵⁷ FSCO, “Auto Quarterly Rate Approvals”, last modified January 15, 2014. Assessed March 20, 2014. <http://www.fSCO.gov.on.ca/en/auto/rates/Pages/default.aspx>.

⁵⁸ Figures are rounded to the nearest 0.5% to maintain the company’s anonymity.

6.1.2.2 *Quantifying and Reflecting Uncertainty in Approved Automobile Insurance Rates*

As part of the survey, insurers were asked to describe uncertainties that exist in the Ontario PPA insurance market. Section 6.4 discusses the identified uncertainties in greater detail. In this section we summarize the insurers' responses to the survey's question that addresses the quantification of these uncertainties and how the uncertainties are reflected in automobile insurance rates.

More than half of the respondents, representing approximately 42% of the industry, attempted to specifically quantify the uncertainties in the Ontario PPA insurance market. However, most of the insurers who attempted to do so cautioned that the issue is complex and that the uncertainty cannot be reliably quantified. Examples that were given include the uncertainty in the claim process that resulted from the mediation and arbitration backlog, as well as the uncertainty that this poses for future TPL-BI claims. A more specific example, provided by one insurer, was that before the Reforms, TPL-BI claims were reported approximately 18 months after an accident; while after the Reforms, TPL-BI claims are reported 24 to 30 months after an accident. Another example which illustrates the complexity in quantifying the uncertainties is that it is often unclear if claims that are initially assessed to fall under the minor injury definition will ultimately close as minor injury claims.

Respondents who indicated that they had attempted to quantify the uncertainties reported that the quantification of some uncertainty is implied in the actuarial assumptions or judgment that form part of the ultimate claim estimation. Actuarial judgment is applied to the selection of inputs such as expected claim ratios and claim development factors. We observe that a few insurers who responded said that they did not attempt to specifically quantify the uncertainties reported and that they had applied similar actuarial judgment or assumptions in their ultimate claim estimations.

Other respondents reported that, although reliable quantification of the uncertainties is not possible, scenario analysis of various rate changes help the insurers' management understand the implication of varying levels of externally imposed rate reductions.

With respect to quantifying and reflecting uncertainty in the automobile insurance rates, a few insurers attempted to do so in their rate filings. However, none were successful in having the quantified uncertainty approved by FSCO. Had they been permitted to reflect the uncertainty, it is likely that the average rate reduction to date would not have been as large.

Other respondents stated that companies need to be conservative and prudent in their pricing approaches and there is a perception that the recent rate reduction target does not entirely allow for this. Most insurers did not attempt to specifically reflect uncertainty in premiums as they understood that these would be rejected by FSCO.

Some insurers indicated that a certain amount of uncertainty may be implied in selecting actuarial inputs that form part of the rate filing process. As such, on a going forward basis, the impact of reduced uncertainty may be limited because insurers think that they have already been forced to file for rate changes that included future reductions in uncertainty.

6.2 **Anti-Fraud Recommendations**

The survey sought comments related to the anti-fraud recommendations reported in the Automobile Insurance Anti-Fraud Task Force's (Anti-Fraud Task Force) November 2012 Final Report

(November 2012 Anti-Fraud Report).⁵⁹ This section summarizes responses on how anti-fraud recommendations affect automobile insurance claim costs and rates.

The survey asked insurers if they had implemented programs to combat automobile insurance fraud. Other than insurers who write policies for risks located predominantly outside of the GTA, all insurers who responded to the survey have anti-fraud programs in place. Insurers who write predominantly in rural Ontario noted that fraud is most prevalent in the GTA and anti-fraud initiatives have little impact on their results.

6.2.1 Program Description

As part of the survey, insurers were asked to describe their anti-fraud programs. The following is a list of the initiatives commonly addressed through these programs:

- Identification and investigation of fraudulent claims;
- Identification of underwriting fraud;
- Prevention and deterrence of fraud;
- Earlier detection and intervention in cases of potential fraud;
- Investigation of suspicious activities from clinics, practitioners, and towing companies;
- Recovery of claims from fraudulent activities; and
- Coordination with Insurance Bureau of Canada (IBC), FSCO, etc.

More than half of the respondents, representing approximately 40% of the industry, reported being involved with industry anti-fraud initiatives such as CANATICS.⁶⁰

6.2.2 Impact on Automobile Insurance Claim Costs and Rates

In responding to the question of whether the 38 recommendations made by the Anti-Fraud Task Force in November 2012 and the actions taken by the Government and industry have affected claim costs, respondents indicated that many of the Government's initiatives are either in the early stages or require additional resources. There was a consensus among the insurers that savings achieved from certain initiatives, such as invoice verification, have not significantly exceeded the costs of implementation of the initiatives and the operation of the new processes. As such, the savings on some of the initiatives are limited, especially given the amount of effort required to implement the initiatives and operate the new processes. Some insurers suggested that the implementation of the Reforms have reduced the potential for certain fraudulent claims by reducing the economic incentive to do so.

⁵⁹ Ontario MOF, "Ontario Automobile Insurance Anti-Fraud Task Force Final report of the Steering Committee", last modified November 22, 2012. Accessed on March 13, 2014. <http://www.fin.gov.on.ca/en/autoinsurance/final-report.html>.

⁶⁰ In 2013, Ontario's automobile insurance market formed the Canadian National Insurance Crime Services (CANATICS). Accessed on March 13, 2014. <http://canatics.ca/>. This initiative is an industry response to the Anti-Fraud Task Force's recommendation that *insurers should move aggressively to establish an organization that would pool and analyse claims data in order to identify potential cases of organized or premeditated fraud*. CANATICS is a not-for-profit organization that when operational by the end of 2014, will pool claims data and use sophisticated analytics to identify suspicious claims. The goal is that by identifying these claims early, a company will be able to focus its investigation resources and catch perpetrators of fraud before making any claim payments.

Insurers continue to look forward to the implementation of the key recommendations from the November 2012 Anti-Fraud Report as they perceive that the recommendations that have been implemented so far have only had a minor impact on claim costs. Specific key recommendations from the Anti-Fraud Task Force that were highlighted by some respondents include (not in any particular order):

- Develop evidence-based treatment protocols for minor injuries;
- Enhance the fraud-detection capabilities of Health Claims for Auto Insurance (HCAI) invoicing system to permit what was originally designed as a transactional database to be used effectively for fraud detection;
- License and regulate the business practices of clinics that treat auto insurance claimants and provide independent medical examinations;
- Enhance the authority of FSCO to conduct investigations, access relevant information, investigate more participants in the auto insurance system, and acquire the resources needed to do an effective job;
- Encourage a more robust and assertive FSCO to enter into information-sharing agreements with investigators at other provincial authorities engaged in providing medical benefits, in particular the Workplace Safety and Insurance Board (WSIB) and Ontario Health Insurance Plan (OHIP) so that information about suspected fraudulent activity in any one of these areas could be shared with investigators working in all of these areas. The Government should support such information-sharing protocols and explore the possibility of establishing such protocols with relevant federal government agencies such as the Canada Revenue Agency (CRA);
- Require insurers to disclose publicly how they choose and assess the performance of businesses and professionals they recommend to consumers or refer them to see, such as independent medical examiners;
- Require insurers to ensure their public information on how consumers may register a complaint is simple to understand and easy to locate;
- Address the current backlog of mediation cases before FSCO, and develop a more robust dispute resolution framework;
- Require claimants to confirm attendance at treatment facilities and receipt of goods and services billed to insurers;
- Require insurers to itemize the list of invoices they have received when they provide a benefit statement to a claimant every two months; and
- Insurers should have the ability to examine a claimant under oath, where this is necessary to determine which insurer should be responsible for coverage, without prejudice to the right for an examination under oath that now exists.

The survey asked insurers to comment on whether they have attempted to quantify the impact that anti-fraud measures have had on claim costs. Most insurers indicated that although there has been

a positive impact on claim costs, it is still too early to attempt to quantify the impact. Others suggested that the impact on claim costs to-date is too small to quantify. However, insurers did indicate that claim costs savings were achieved through internal programs.

One of the respondents suggested that three key initiatives, when implemented, may potentially lead to an aggregate reduction in rates of 2% to 3%. These initiatives are:

- Licensing of the towing industry;
- Licensing of health care clinics; and
- Advocating passage of Bill C-12.⁶¹

Another respondent shared that their estimated identified fraud loss paid in 2013 was 2.7% of premium. The respondent stated that this estimate is likely understated as their fraud identification capability is still limited. The same respondent also reported that the insurer was able to avoid payment of fraudulent claims that aggregated to about 2% of premium.

None of the insurers surveyed isolated the impact of anti-fraud initiatives for implementation in setting their automobile insurance rates.

6.3 Impact of the Strategy

While most insurers agree that the Government's current Strategy will reduce claim costs, a majority of the respondents are concerned with the mismatch in timing between the eventual decrease in claim costs and the mandated⁶² overall 15% average reduction in rates by August 2015. Insurers caution that the implementation calendar of the proposed cost reduction initiatives is not aligned with the rate reductions that the insurers are being mandated⁶² to adopt. Respondents suggested that it takes time for cost containment measures to flow through the entire system.

The respondents suggest that until there is clarity in the proposed changes, the claim costs savings are difficult to quantify. Insurers believe that it is challenging to reduce automobile insurance rates based purely on changes that are proposed and not tested in case law. There is also concern among the insurers that the Reforms were intended to reduce claim costs and stabilize rates, and that the Reforms were not necessarily meant to reduce rates. The insurers indicated that, to reduce rates, the Strategy would have to reduce claim costs further.

Respondents reported that, although the government driven fraud-related initiatives facilitate the ability of insurers to identify, investigate, and prosecute fraud, the costs to perform these tasks are borne by the insurers. As such, the insurers responding to the survey believed that a reduction in overall claim costs and expenses cannot come from anti-fraud initiatives alone.

In responding to the survey, some insurers stated that the Ontario automobile insurance product remains the most generous in Canada. In addition, insurers believe that there needs to be an

⁶¹ Bill C-12 received first reading in September 2011, but subsequently died on the orders table in September 2013.

⁶² The Government has set a target of 15% average rate reduction between August 2013 and August 2015. There is a perception by a majority of the insurers participating in the survey that the some portion of the target average rate reduction has been imposed on individual companies.

emphasis on reducing the administrative costs such as disbursements, assessments, and forms completion. Moreover, insurers stated that increased regulation in the automobile insurance system adds more costs to the system.

The majority of the insurers responding to the survey commented that because rate decreases are being mandated⁶² pursuant to the Strategy, rate reductions will inevitably occur. However, insurers cautioned that without a follow-through by the Government on timely and concurrent claim costs reductions, a lack of capacity and availability in the insurance market may result due to inadequate rates as a result of the mandated⁶² 15% average rate reduction.

6.4 Issues and Uncertainty as a Result of the Reforms and the Strategy

The survey asked insurers to identify the issues and uncertainties that they believe are present as a result of the Reforms and the Strategy.

6.4.1 List of Uncertainties

All of the respondents to our survey provided a list of uncertainties to explain why it is challenging for them to estimate past and future claim costs. We summarize of these identified uncertainties below.

6.4.1.1 Catastrophic Impairment Definition

Insurers noted that the existing catastrophic impairment definition continues to be eroded through case law such as *Kusnierz v. Economical* and *Pastore v. Aviva* in that these cases tended to broaden the interpretation of the definition and create additional exposure and uncertainty for insurers on existing and future claims. Some insurers noted that the possibility that the definition of catastrophic impairment could be changed by the Government and/or that the lack of clarity on how the catastrophic impairment definition will be addressed by the Government are additional sources of uncertainty.

6.4.1.2 Minor Injury Guideline (MIG)

The majority of the respondents agreed that the implementation of MIG⁶³ limitations is a key claim costs containment initiative of the Reforms which helped reduce AB claim costs. The respondents stated, however, that there is continual pressure from policyholders, service providers, and lawyers to broaden the minor injury limits. As an example, it was felt that many claimants and their legal counsel look for reasons, like pre-existing conditions and psychological reasons, to seek benefits outside the MIG. There also remains uncertainty with *Scarlett v. Belair*, as the case is still outstanding.

⁶³ MIG is a temporary measure until the release of a minor injury treatment protocol.

6.4.1.3 *Attendant Care*

Insurers participating in the survey noted continual uncertainties related to the definition of incurred expense, as well as the extent to which an expense is considered an economic loss. Survey participants note that case law is developing with mixed outcomes. Some insurers believed that the amendments to the Statutory Accident Benefits Schedule (SABS) from Regulation 347/13⁶⁴ that was effective February 1, 2014 should contribute to reducing claim costs related to attendant care. However, insurers anticipate that policyholders and legal counsel will make greater use of professional services following the amendments. According to the insurers, this will temper the anticipated reduction in claim costs.

At the time of the survey, some insurers also indicated that it is unclear if the amendments apply to pending claims as well as to claims that are incurred after February 1, 2014.

6.4.1.4 *Dispute Resolution Process*

Some respondents commented that while attempting to resolve the mediation backlog, a number of cases in dispute did not reach satisfactory consensus, leading to a large arbitration backlog. As a result, insurers reported that legal costs are increasing and there is continued uncertainty as the outcome of the arbitrations has the potential to impact other claims.

With the release of Justice Douglas Cunningham's final report and recommendations based on his review of the Ontario automobile DRS⁶⁵ (DRS Review), insurers indicated that they are eager to know which recommendations will be implemented. The timing of implementation was also of interest to the insurers. Some insurers commented that, until such time that the recommendations from the DRS Review are implemented, delays inherent in the current model and arbitration decisions that are seemingly at odds with the legislative intent will continue to bring uncertainty to the Ontario PPA insurance market.

6.4.1.5 *Transfer of Claim Costs between AB and TPL-BI*

Insurers indicated that the transfer of claim costs between AB and TPL-BI will continue to erode the savings in claim costs from the Reforms and create uncertainty in the estimation of the future claim costs associated with TPL-BI (thereby continuing the uncertainties in the Ontario PPA insurance market).

6.4.1.6 *Other*

Other uncertainties suggested by some insurers include fraud in the system, the current political environment, delays in FSCO rate reviews, and the use of FSCO benchmarks in rate reviews.

⁶⁴ "Ontario Regulation 347/13 made under the Insurance Act, published on e-laws December 17, 2013". Accessed on March 13, 2014. http://www.e-laws.gov.on.ca/html/source/regs/english/2013/elaws_src_regs_r13347_e.htm.

⁶⁵ Ontario MOF, "2014 Ontario Automobile Dispute Resolution System Review Final Report". Accessed on March 13, 2014. <http://www.fin.gov.on.ca/en/autoinsurance/drs-final-report.html>.

In regards to optional benefits, disputes are being raised throughout the industry in relation to the eligibility for claimants to claim these optional benefits, regardless of whether the coverage was purchased by the policyholder in the first place. Insurers are concerned that if claimants are successful in arguing that they are eligible for optional benefits even when they were not purchased pre-accident, this could have a significant impact on claim costs across the industry.

6.4.2 Issues Contributing to Uncertainties

The survey asked insurers to comment on issues that contribute to the uncertainties that they identified. The main issues that were suggested are listed below:

- **High benefit limits:** some insurers suggested that the Ontario SABS offers higher benefit limits and coverage over longer time periods than most of the other provinces. Moreover, the higher limits available on catastrophic claims may act as an incentive for policyholders, lawyers, and service providers to pursue their claims.
- **Complex insurance product:** as noted by a few insurers, the complexity of the insurance product leads to varying interpretations and disputes in claims.
- **Abuse and fraud:** certain insurers reported that there is a prevalence of unusually high escalation of reported injuries sustained from accidents, particularly in the GTA. The frequency is suggested to be much higher in the GTA than in the rest of the country.
- **Lack of post-Reforms arbitration or mediation decision:** most insurers commented that incurred claim amounts are difficult to estimate given that there has been a limited number of post-Reforms arbitration or mediation decisions.
- **Rate filing system:** A few insurers indicated that the current rate filing system creates uncertainty. Insurers added that the rate filing system has onerous requirements, and that the rate review process by FSCO often leads to unpredictable outcomes.

In general, insurers responded that these issues that pertain to the Ontario PPA insurance product design and process are either direct cost drivers (e.g., high benefit limits, and abuse and fraud) in setting rates, or friction in the PPA insurance system that add cost to premiums. Insurers stated that the impact on claim costs that some of these issues have are difficult to isolate. Moreover, as discussed in section 6.1.2.2, uncertainties cannot be specifically included in the premiums proposed in the most recent filings. Insurers did indicate that clarity in some of these issues will reduce uncertainty, and thus may result in actuarially estimated rates that are more in line with the rates that are currently approved.

6.4.3 Industry's Suggested Action Steps

As part of the survey, insurers were asked to identify action steps that could be taken to alleviate the uncertainty in the Ontario PPA insurance market. Appendix A includes a complete list of the specific suggestions received through the survey. The following list summarizes the main responses received:

- Revise catastrophic impairment definition so that interpretation and application of the definition is unambiguous;
- Introduce evidence-based minor injury treatment protocol to the MIG;
- Consider the recommendations in the DRS Review;
- Fully implement the recommendations of the Anti-Fraud Task Force;
- Stem the shift in claim costs from AB to TPL-BI;
- Shorten the long-tail nature of AB claims;
- Simplify the rate filing system and allow for a competitive market to function;
- Bring clarity to the uncertainties that the insurance industry is currently facing; and
- Clearly articulate rules for implementation of any future amendments to the SABS.

In the long-term, most of the insurers believe that the Government, the industry, and consumers should work together to examine the type of automobile insurance that is most appropriate for the people of Ontario. Most insurers suggested that there needs to be a complete overhaul of the automobile insurance product, rather than making incremental changes to the existing product.

6.5 Competitiveness of the Ontario PPA Insurance Market

In total, 74% of the respondents representing approximately 58% of the industry deem the current Ontario automobile insurance marketplace as being competitive with a negative outlook. Respondents provided us with certain measures of market competitiveness, including:

- The large number of insurers offering product quotes;
- The wide variance in premium quotes for a given driver's profile;
- The fact that there are insurers with a low return on equity; and
- The fact that insurers act independently from one another.

Respondents representing approximately 64% of the industry described the current automobile insurance market as inefficient. According to some respondents, the sources of market inefficiency may stem from:

- Heavy and onerous regulation;
- Generous product benefits attracting an excessive number of intermediaries with high fees and assessments;
- Additional costs due to fraudulent activities;
- Additional delays and outcome uncertainty from claims in mediation or arbitration (i.e., in DRS);
- Slow, opaque, and arduous rate filing process that limits insurers' actions and deters innovation; and
- Inability to charge what is believed to be an adequate rate.

Some respondents commented that these inefficiencies, combined with the flaws in the product design, threaten the sustainability of Ontario automobile insurance and by the same token the long-term competitiveness of the marketplace.

7 PROGRESS AND INDUSTRY'S SUGGESTED ACTION STEPS

7.1 Key Elements of the Strategy

The Government initiated the Strategy as part of the 2013 Budget.⁶⁶ The key elements of the Strategy pertain to anti-fraud measures, average automobile insurance rate reduction target of 15%, licensing of health care providers in the automobile insurance system, and the transformation of the automobile insurance DRS. In the spirit of the Strategy, a number of regulatory amendments were enacted or proposed. These are summarized as follows:

- Regulatory amendments⁶⁷ based on the final report of the Auto Insurance Anti-Fraud Task Force were enacted and were effective June 1, 2013. Designed to combat fraud and protect consumers, the amendments require insurers to inform the claimants on regular basis about benefits paid out on claimants' behalf. The amendments also request that claimants confirm their attendance at a health clinic. Furthermore, the amendments introduce sanctions for overcharging insurers for goods and services, and bans against asking consumers to sign blank claim forms.
- Schedule 8 of Bill 65⁶⁸ – Amendments to the Automobile Insurance Rate Stabilization Act was enacted in June 2013. It establishes an industry-wide target for an average insurance rate reduction and provides the Superintendent of FSCO with authority to require insurers to file for rates. It also established a framework for the licensing of health care providers in the automobile insurance system.
- Ontario Regulation 347/13⁶⁹ was enacted effective February 2014 to help control uncertainty and costs of automobile insurance. It clarifies the definition of pre-existing condition; it limits attendant care benefits to actual economic loss; and it asserts the irrevocability of the income-replacement election.
- Bill 171⁷⁰ – *Fighting Fraud and Reducing Automobile Insurance Rates Act, 2014* had its first reading in March 2014. It proposes to transform the DRS, taking into consideration the

⁶⁶ The Government of Ontario, MOF, "2013 Ontario Budget Chapter IV: Tax, Pension and Financial Services", last modified May 2, 2013. Accessed on March 13, 2014, <http://www.fin.gov.on.ca/en/budget/ontariobudgets/2013/ch4.html#ch4c>.

⁶⁷ The Government of Ontario, MOF, "Amendments to regulations under the Insurance Act based on Ontario Auto Insurance Anti-Fraud Task Force recommendations", last modified Feb 2, 2014. Accessed on March 13, 2014. <http://www.ontariocanada.com/registry/view.do?postingId=11863>.

⁶⁸ The Government of Ontario, "Bill 65 (Chapter 2, Statutes of Ontario, 2013)". Accessed on March 13, 2014. http://www.ontla.on.ca/bills/bills-files/40_Parliament/Session2/b065ra.pdf.

⁶⁹ The Government of Ontario, "Ontario Regulation 347/13 made under the Insurance Act", published on e-laws December 17, 2013. Accessed on March 13, 2014. http://www.e-laws.gov.on.ca/html/source/regs/english/2013/elaws_src_regs_r13347_e.htm.

⁷⁰ The Government of Ontario, "Bill 171 An act respecting insurance system reforms and repair and storage liens". Accessed on March 13, 2014. http://www.ontla.on.ca/bills/bills-files/40_Parliament/Session2/b171.pdf.

recommendations of Justice Cunningham's report⁷¹ such as moving the administration of the DRS from FSCO to the Ministry of the Attorney General's Licence Appeal Tribunal. It also proposes to update the prejudgment interest rate, to address vehicle storage issues, modernize the insurance agent and adjuster discipline process, and to establish a transition strategy for health services providers licensing.

7.2 Industry's Progress towards Achieving the Target Average Rate Reduction as Conveyed through the Survey

As the government enacted regulation amendments, the industry implemented a number of initiatives to support the average rate reduction target. The following sections describe the actions undertaken by the industry to date, industry planned initiatives for 2015, issues and challenges to meeting the 15% average rate reduction target, and some industry suggestions.

7.2.1 Industry Initiatives in 2014

The insurance industry is actively taking steps to contribute to the average rate reduction target of 15%. Almost all respondents to the survey are implementing rate decreases in 2014 (refer to section 6.1.2 for additional information) and revising or introducing discounts to promote safer driving. To support these rate decreases, respondents are further enhancing pricing and underwriting sophistication, rolling out predictive modeling, or refining their expense models.

Beyond rate changes, some respondents are investing in technology and developing innovative approaches that are expected to allow better segmentation of policyholders' risk propensity and pricing. Some proposed approaches could even influence policyholders' behaviour through tools such as telematics (i.e., usage-based insurance). From an operational perspective, some respondents are seeking to gain efficiency by streamlining claim processes, increasing automation, or initiating functional re-organizations. In an effort to control claim costs, many respondents are pursuing anti-fraud initiatives and tools (such as CANATICS) either developed in-house or in collaboration with the industry. Respondents also identified dynamic management of preferred provider network, enhanced customer care, proactive dispute resolution, and clear litigation strategies as means to further contain claim costs.

7.2.2 Industry Planned Initiatives for 2015

The respondents indicated that they are committed to participating in the development of a sustainable Ontario PPA insurance industry. Almost all respondents to the survey will continue developing pricing, underwriting, technology, and operational initiatives as discussed in section 7.2.1. Some insurers noted that the additional effort and costs required to achieve the 15% average rate reduction target will come at a diminishing rate of return.

⁷¹ "Ontario Automobile Insurance Dispute Resolution System Review", February 2014. Accessed March 13, 2014. <http://www.fin.gov.on.ca/en/autoinsurance/drs-final-report.pdf>.

The general consensus among insurers is that the full 15% average rate reduction targeted by the Government is not sustainable unless significant and meaningful product reform takes place. The majority of the respondents are actively participating in industry associations and forums. These associations and forums are working on formulating, evaluating, or proposing changes to the automobile insurance system.

7.2.3 Issues and Challenges

The insurance industry identified a wide range of issues and challenges that could prevent the achievement of the Government's 15% average rate reduction target. The first issue is related to the current measure of success, which does not take into consideration the approval and implementation timing of rate filings. It also ignores the effect of inflation and vehicle rate group drift, and does not address the time lag between the implementation of rate changes and the contract renewal cycle.

All survey respondents are concerned about the richness of the benefits underlying the automobile insurance product as the Ontario product is still seen to be the most generous when compared to other provinces. A secondary effect of the comparatively higher benefit levels is that this creates an incentive for excessive fraudulent activities. Respondents observed that the estimated cost savings from the Reforms are not commensurate with the Government's target 15% average rate reduction. The Reforms reduced claim costs and stabilized rates. To achieve a targeted average rate reduction of 15%, further reduction in claim costs will be necessary.

All insurers agree that the cost transfer from AB to TPL-BI coverage is challenging to assess. The emergence and development of bodily injury claims are typically slow, and the three years of experience since the Reforms are insufficient to evaluate the true impact. Furthermore, some insurers noted that the actual decrease in AB claim costs may be partially explained by the mild weather in 2011, 2012, and in the first half of 2013. Some insurers also discussed the resulting decrease in collision frequency, which would also affect bodily injury, thus partially accounting for the lower uptick than expected. The AB to TPL-BI cost transfer results in a greater uncertainty with regards to the estimated impact of the Reforms.

The great majority of respondents have also raised the issues arising from the backlog of mediation and arbitration, the high transactional costs, and the unpredictable outcomes affecting the settlement of AB claims. Insurers are concerned about adverse mediation, arbitration and court decisions that potentially undermine the original intent of the Reforms.

Additionally, respondents find the rate filing process to be burdensome. Many insurers said that the cycle from filing to approval has lengthened considerably in the recent quarters. Even though transparency in FSCO's benchmark setting has improved to some extent since last year, insurers think that it would be valuable for the industry to be involved in the analyses and give input to the process. In many instances, insurers commented on the fact that the 2014 approved rate decreases are greater than the indications resulting from the respondents' internal actuarial analyses. A common concern is that the disparity between the 2015 approved and indicated rate changes becomes even wider. Insurers believe that the consequences of these potentially deeper rate decreases are inadequate and unsustainable rates in the long-term, increase in market share for the automobile insurance residual markets, deterioration in solvency measures such as the MCT, and decline in overall insurance availability.

7.2.4 Suggestions from the Survey

The survey respondents proposed a wide range of suggestions to promote sustainable automobile insurance in Ontario. Note that the survey period ended on February 21, 2014 and thus responses do not include comments on Bill 171. We have not attempted to independently compare Bill 171 against Justice Cunningham's recommendations in his final report or the industry's suggestions received through the survey.

Regarding the measure of rate decrease, many respondents suggest reviewing the measure to better reflect the contract renewal cycle and the impact of inflation and vehicle rate group drift.

As for the insurance product itself, the great majority of respondents advocated for significant and meaningful reforms to the Ontario automobile insurance product. The insurers want to actively contribute to the design of such reforms and believe that the process for such reform should include consultations regarding the following:

- Ensuring an alignment between the intent of the policy and the application of the regulation, which include:
 - Defining catastrophic impairment in a clear and unambiguous language;
 - Clarifying the minor injury treatment protocol; and
 - Addressing the issue of psychological impairments in combination with other types of impairments to exit the MIG;
- Modifying the Ontario automobile insurance product, including:
 - Reviewing some of the components for medical and rehabilitation benefits in section 20 of the SABS;
 - Reviewing the adequacy of the SABS interest rate;
 - Amending prejudgment interest rate, currently at 5% per annum to a rate that more closely mirrors market returns;
 - Establishing limits on fees paid to lawyers and conditions where paralegals can represent AB claimants;
 - Increasing transparency as to the use of contingency legal fees for TPL-BI and AB claims;
 - Modifying the threshold for suing for excess health care expenses;
 - Reviewing the current legislation with regard to deductibles and cost awards for non-pecuniary damage; and
 - Making claimants financially accountable for missed medical assessments.
- Re-admitting predictive information for pricing and underwriting purpose such as the flag for not-at-fault accidents.

In addition to automobile insurance product design, the survey respondents recommended other options as worthy of consideration for modifications:

- Taxation, which includes the 3% premium tax, 26.5% corporate tax rate and 13% HST on most elements of claim costs; and
- Commission rates.

In connection with the rate approval process,⁷² many respondents are advocating for more streamlined and responsive procedures, eliminating undue delays. These respondents also noted that the review process should be receptive to innovations and give the industry positive incentives to improve efficiency. To increase transparency in FSCO's rate and risk classification approval processes as well as the benchmark setting process, insurers suggested that it may be valuable to create an advisory committee, composed of qualified actuaries and claim professionals from both FSCO and the automobile insurance industry, to give input and guidance to the processes.⁷³

Many insurers also suggested that each rate filing should be reviewed on its own merit based on sound actuarial principles and taking into account the specific circumstances of each insurer. In addition, some insurers perceive that they are unable to have direct access to senior and experienced actuaries at FSCO. These insurers believe that the rate filing process would be improved if a fully qualified P&C actuary with relevant Canadian automobile pricing experience is directly involved and has an accessible and visible role in the review process of each rate filing. Insurers recognize that this individual should be supported by a team of rate reviewers (who may or may not be fully qualified actuaries) with relevant experience.⁷⁴

On the anti-fraud front, most initiatives pertain to fraud detection, and need to be prolonged and enhanced. For example, a better coordination of industry efforts could be promoted through tools and processes that the Government recently announced, such as exploring the establishment of a special investigation and prosecution unit on serious fraud, including automobile insurance fraud.

Law enforcement resources could be prioritized and strong synchronization between provincial and municipal forces could be promoted to support investigations and arrests. In addition to current programs concerning fraud detection, insurers felt that it would be necessary to develop and bring forward initiatives regarding fraud deterrence.

⁷² Section 9 - Appendix B presents a list of best practices for actuarial involvement in the rate regulatory review where the jurisdiction has active rate regulation such as in Ontario.

⁷³ Information provided by the MOF indicates that the Rating and Underwriting Technical Advisory Committee (RUTAC), comprised of company representatives and actuaries, regularly provides input to FSCO on its processes and proposed rate filing guidelines. An example of RUTAC's involvement was demonstrated in a bulletin released by FSCO in 2012 (<http://www.fSCO.gov.on.ca/en/auto/autobulletins/2012/Pages/a-05-12.aspx>).

⁷⁴ MOF indicated that it is their understanding that during the most recent rate filings (i.e., fourth quarter of 2013), FSCO provided full actuarial reports to insurers in cases when FSCO's actuaries differed in opinion with insurers' actuaries. According to MOF, this provided for a transparent explanation of the differences.

7.3 Progress Achieved through Government Action

The industry has submitted filings, which have been approved by FSCO, for average rate decreases of 0.68% and 3.98% in the third and fourth quarter of 2013, respectively. In the second half of 2013, the insurance industry filed, and received approval, for total rate changes that will result in a decrease of 4.66% on average. The most recent required filing for new rates, at the fourth quarter of 2013, was a result of the authority given to FSCO from legislative amendments introduced in the 2013 Budget. FSCO exercised this authority and required insurers to file for new rates.

Further to the regulatory amendments listed in section 7.1, the Government has taken certain key steps in carrying out the Strategy:

- The review of the DRS led by the Honourable J. Douglas Cunningham, a former Associate Chief Justice of the Ontario Superior Court of Justice. Justice Cunningham delivered an interim report in November 2013 and then held further consultations before submitting a final report on February 18, 2014;
- FSCO created a dedicated hotline that consumers can use to report suspected cases of automobile insurance fraud;
- A commitment to work towards developing a province-wide approach to oversight in the towing industry and exploring the establishment of a special investigation and prosecution unit on serious fraud;
- Taken action on addressing half of the recommendations made by the Anti-Fraud Task Force and continues to review the remaining recommendations;
- Committed to base auto insurance benefits on medical evidence and calling on FSCO to reduce the return on equity benchmark used in rate filings; and
- Committed to including the investigation of additional new measures to reward safe driving and reduce costs and premiums, and conducting further study and consultation on other initiatives to reduce costs, including the amending the definition of catastrophic impairment in the SABS.

7.4 Recommendations

As part of our engagement with the MOF, we were asked to make recommendations on further actions to help achieve the average rate reduction targets set by the Government. With the work that has been performed as part of the Interim Report, we feel that it is still too early to provide recommendations for further action to reduce costs and rates as the survey conducted in preparation of the Interim Report focused exclusively on the views of P&C insurers operating in Ontario. As part of the 2014 Annual Report, we will expand the survey to seek input from other stakeholders in the insurance system who may have a different perspective to share with the Government.

The results of our survey to insurers identified a number of suggested action steps for consideration by the Government. It is clear from recent actions that the Government is aware of its role and the need to do more to reduce rates for consumers. It is also evident from the results of our survey that

the insurance industry realizes it can have an impact on cost reduction, as some insurers are looking to gain efficiencies through initiatives such as better claim management and fraud prevention practices. This, combined with new initiatives such as telematics, could lead to reduced costs in the auto insurance system and continue to demonstrate that insurers have an important role in helping the Government meet the average rate reduction target. In addition to the Government and the industry, stakeholders outside the industry and government also have a role to play in ensuring rates are affordable for consumers by better managing costs.

7.5 Preview of 2014 Annual Report

The 2014 Annual Report is scheduled to be released in August 2014. The purpose of the 2014 Annual Report will be to continue to provide both quantitative and qualitative analysis of the Government's Strategy. The following approaches are proposed to be used in preparation of this report:

- Seeking input from other stakeholders in the Ontario PPA insurance system;
- Updating the quantitative analysis of GISA data with data as of December 31, 2013 if available; and
- Performing an actuarial analysis of the estimated ultimate claim costs based on actuarial methods other than the incurred claim development method.

In preparation for the 2014 Annual Report, the input from other stakeholders in the insurance system will be sought with the goal to provide a balanced perspective when taken in conjunction with the findings from the Interim Report.

8 APPENDIX A – INDUSTRY’S SUGGESTED ACTION STEPS

This appendix lists various action steps that were suggested by one or more survey respondents. It is meant as a summary of the industry’s input and serves as a supplement to suggestions listed in section 7.2.4. The suggestions are grouped into two categories:

- Suggestions that pertain to PPA insurance product design; and
- Suggestions that affect the PPA insurance process.

8.1 PPA Insurance Product Design

The suggestions made by survey respondents regarding the insurance product design are classified according to the subject coverage: TPL-BI, AB minor injury, AB catastrophic impairment, AB varia⁷⁵, and all coverages.

8.1.1 TPL-BI

To control the erosion of verbal threshold, a respondent suggested amending s.267.5(7) of the Insurance Act to require the courts to consider the deductible when determining tort cost awards.

To reduce the cost of TPL coverage, a respondent suggested reducing the pre-judgment interest on BI general damages to 1.3% per annum.

To control the cost transfer from AB to TPL-BI, a respondent suggested amending the Insurance Act to prevent recovery of the following:

- Housekeeping and home maintenance expense not available under the SABS;
- Costs of assessments in excess of AB maximum amounts; and
- Health care expenses in excess of those available under the SABS.

8.1.2 AB – MIG

In order to stabilize the costs of minor injury, respondents suggested that the MIG be amended to:

- Implement an evidence based treatment protocol that prescribes the treatment of minor injuries;
- State that all claimants with a minor injury must be treated within the MIG unless contraindicated;
- Eliminate the escape for pre-existing conditions; and

⁷⁵ This references other suggestions that pertain to AB.

- Define “clinically associated sequelae” to include a list of common symptoms and conditions, such as temporomandibular joint (TMJ) disorders, headaches, dizziness, anxiety, and other specific conditions.

8.1.3 AB – Catastrophic Impairment

Many respondents suggested revising the catastrophic impairment definition. Variations of this recommendation include:

- Implementing the recommendations found in the Superintendent’s Report on the Definition of Catastrophic Impairment in Statutory Accident Benefits Schedule,⁷⁶ taking into account IBC’s comments;⁷⁷ and
- Amending the current catastrophic impairment definition to deal with issues resulting from *Kusnierz v. Economical*, and *Pastore v. Aviva* case decisions.

Some specific suggestions from the survey respondents include:

- Adopting the American Spinal Injury Association classification for spinal cord injury for assessment of impairment based on paraplegia or tetraplegia;
- Adopting the Spinal Cord Independence Measure for assessment of severe impairment of ambulatory mobility;
- Clarifying that blindness would include visual acuity of 20/200;
- Eliminating the Glasgow Coma Scale as a measurement tool for catastrophic impairment of adults and replacing it with the Glasgow Outcome Scale Extended for traumatic brain injury in adults;
- Specifying that physical impairments and psychological impairments are not to be combined for the purpose of determining whether the claimant has sustained a 55% or greater whole person impairment (pain disorders would not be included as a separate impairment);
- Adopting the Global Assessment of Function for assessment of catastrophic impairment due to psychiatric disorders; and
- Adopting the KOSCHI Category of Vegetative for assessment of traumatic brain injuries in children and raise the age defining pediatric claimants from under 16 years old to less than 18 years old.

In addition to the suggestions regarding the definition of catastrophic impairment, a wide spectrum of possible coverage changes was put forward for consideration:

⁷⁶ FSCO, “Superintendent’s Report on the Definition of Catastrophic Impairment in the Statutory Accident Benefits Schedule”, December 15, 2011, Accessed on March 13, 2014. <http://www.fin.gov.on.ca/en/autoinsurance/si-report.pdf>.

⁷⁷ IBC, “Consultation on Proposed Changes to the Definition of Catastrophic Impairment”, May 13, 2011, Accessed on March 13, 2014. <http://www.fSCO.gov.on.ca/en/auto/Catastrophic-Impairment/Documents/IBC.pdf>.

- Adding sub-limits into the catastrophic impairment coverage for renovations and rehabilitation/training;
- Eliminating catastrophic impairment from mandatory coverage;
- Increasing the industry health care levy;
- Treating catastrophic injuries in the public health care system; and
- Offering catastrophic impairment as an optional coverage.

8.1.4 AB – Varia

Survey respondents made a number of additional suggestions with the goal of reducing or controlling AB costs, including:

- Reviewing some of the components for medical and rehabilitation benefits in section 20 of the SABS;
- Reviewing the adequacy of the SABS interest rate;
- Allowing insurers to decline proposals for non-medical treatments;
- Allowing insurers to deny, without an Independent Medical Examination, the attendant care costs when the amount claimed is greater than the economic loss;
- Eliminating caregiver benefits when care is provided by a non-earner;
- Reviewing the service fee structure to ensure that it is reasonable, just and commensurate with the cost of the services provided;
- Reviewing Alberta's minor injury definition and cap to assess its potential relevance/applicability to the Ontario automobile insurance coverages;
- Streamlining the fees paid to healthcare providers with OHIP and WSIB schedules; and
- Adopting WSIB programs of care and eliminating fees for assessments.

8.1.5 All Coverages

For any new reforms or amendments, the implementation rules should be clearly articulated and should specify whether their application should affect pending claims or new claims only.

8.2 PPA Insurance Process

The suggestions made by survey respondents regarding the automobile insurance process in Ontario are categorized in three spheres of activities: DRS, anti-fraud measures, and the rate approval system.

8.2.1 DRS

At the time the survey was conducted, Bill 171 was not yet proposed. Respondents were eager to know which recommendations from Justice Cunningham's final report would be implemented.

A respondent emphasized that the rules regarding mediations could be strengthened to require an insured claimant to actively participate in the mediation process. This would ensure that the claimant is aware of all the claim invoices being advanced on his/her behalf. When claimants actively participate in, and are part of, the resolution process, they are able to work jointly with the insurer to improve the efficiency of the dispute resolution process and discourage potential abuse.

In addition to an overhaul of the DRS, a respondent suggested that the Government could enable more timely and consistent interpretation of the SABS through issuance of "Rules of Interpretation with Respect to Accident Benefits" as authorized under Section 121(1)(10.2) of the Insurance Act. Judicious issuance of rules of interpretations would ensure alignment between settlements and the legislative intent, and would safeguard the spirit of the regulations.

8.2.2 Anti-Fraud Measures

Some respondents suggested containing costs within the insurance system by employing active measures to control fraud. Examples of such measures provided by survey respondents include:

- Implementing the outstanding anti-fraud task force recommendations and legislative amendments;
- Eliminating the Regulation that prevents insurers from denying medical and rehabilitation benefits in instances where the claimant is deemed to have submitted a fraudulent accident benefits claim, or their policy is voided due to a deliberate disclosure issue;
- Amending the Ontario auto application to restrict the use of postal boxes or postal routes, and to require a street address as policyholder address;
- Prohibiting the seizing of vehicles when dispute arises over the rate of vehicle towing/storage and related charges (in excess of the rate allowed by the municipality);
- Permitting insurers to collect a cancellation fee for claimants who fail to attend a medical examination at the agreed time, without reasonable explanation or notice;
- Sanctioning individuals and organizations who request the vehicle owner to sign blank collision repair order, or blank tow/storage forms; and
- Integrating data confirming proof of automobile insurance with vehicle licensing data; and
- Eliminating Motor Vehicle Insurance Liability cards.

Furthermore, it was suggested that the Government could devote additional resources to the investigation and prosecution of insurance fraud, which would help reduce unnecessary expenses in the system.

8.2.3 Rate Approval System

Survey respondents identified the following desirable characteristics of a rate approval system: simple, agile, quick, and responsive. They suggested a broad range of changes to the current rate approval system that would allow for a competitive market to function efficiently, including:

- Simplified filings for increases within a pre-determined range, similar to the current model that is permitted for rate decreases;
- Developing a flexible approval process that promotes innovations, unlike the current Usage-Based Insurance Pricing bulletin;⁷⁸
- File-and-use approach; and
- Use-and-file approach in some circumstances to allow ‘simple’ changes to come to market faster.

Survey respondents also suggested a shift in focus for FSCO’s mandate towards:

- Reviewing the most important outcomes and cost trends instead of the individual assumptions and methodologies underlying rate filings;
- Monitoring effectively the level of competition versus the ability to make rates;
- Establishing metrics for measuring automobile insurance performance in preparation for a broad review of the product design and the market competitiveness and efficiency; and
- Monitoring the impact from societal and technological developments on automobile insurance.

8.3 Long Term

Some respondents suggested that an overhaul of the Ontario automobile insurance product would be preferable to making changes to the existing product. According to the survey, the determination of the automobile insurance product that would be most appropriate for Ontarians could include considerations such as:

- Reviewing features of automobile insurance products offered in other jurisdictions;
- Revisiting the position of the Ontario insurance product within the spectrum of no-fault to tort product;
- Increasing insurers’ latitude to offer more choices to consumers, built off from the standard product;
- Estimating the costs and benefits associated with different possible product definitions;

⁷⁸ FSCO, “Usage-Based Automobile Insurance Pricing in Ontario – Bulletin No. A-05/13”, October 2013. Accessed April 1, 2014. <http://www.fSCO.gov.on.ca/en/auto/autobulletins/2013/Pages/a-05-13.aspx>.

- Examining the role, costs, and benefits of auto insurance in the broader healthcare system;
- Devising initiatives to curb the propensity to claim in Ontario; and
- Promoting technological innovations in pricing and servicing the customers.

9 APPENDIX B – BEST PRACTICES FOR ACTUARIAL INVOLVEMENT IN THE RATE REGULATORY REVIEW

In March 2012, KPMG produced a research report titled “Research Report – Best Practices for Actuarial Involvement in the Regulatory Oversight of Property and Casualty Insurance Rates” (Best Practices Report). This report is now part of the syllabus for an actuarial exam offered by the Society of Actuaries.⁷⁹

The Best Practices Report identifies the following best practices for actuarial involvement in the rate regulatory review, given a jurisdiction with active rate regulation (i.e., prior approval or file and use)⁸⁰:

1. A fully qualified P&C actuary should play an important role in the review process of an insurer’s rate submission (i.e., rate filing). In Canada, a fully qualified actuary would have the designation of Fellow of the Canadian Institute of Actuaries (FCIA). Such designation would be gained either through completion of the basic education system of examinations of the Casualty Actuarial Society (CAS), and thus the designation of Fellow of the Casualty Actuarial Society (FCAS) or through another actuarial organization such as the Institute of Actuaries (UK) with credit for the general insurance course. “Play a role” does not necessarily mean that a fully-qualified actuary is required to review all rate filings; such actuary may set the framework for review including detailed requirements for review by a team which may include actuarial analysts who may not be fully qualified.
2. The actuary involved in the review of rate submissions on behalf of the regulator would have relevant ratemaking experience for the specific lines of business under review. Since automobile insurance is the only line of business currently with active rate regulation in Canada, an actuary working for the regulator, either as an employee or a consultant, would be required to have pricing experience in Canadian automobile insurance.
3. Relevant experience would include not only education gained through the actuarial credentialing process but also experience working in the ratemaking function.
4. As an FCIA, the actuary reviewing the submissions is required to be knowledgeable of and adhere to the CIA Professional Rules of Conduct.
5. Actuarial standards of practice and educational guidance specific to the ratemaking function exist.

⁷⁹ Society of Actuaries, “Financial and Regulatory Environment – Canada”, Spring 2014. Accessed on April 9, 2014. <http://www.soa.org/files/edu/edu-2014-fandre-syllabi-canada.pdf>.

⁸⁰ The identified best practices are from a regulatory review perspective and not from the viewpoint of the actuary preparing the rate filing.

6. As an FCIA, the actuary reviewing rate submissions is required to be knowledgeable of and adhere to Canadian actuarial standards of practice, both general standards and practice-specific standards.
7. The actuary involved in the review of rate submissions on behalf of the regulator is knowledgeable not only of the relevant actuarial standards of practice and expectations for professional conduct but also of the laws and regulations in the jurisdiction. The actuary should be knowledgeable of how to apply the relevant actuarial standards and principles within the context of the legal and regulatory environments of the jurisdiction in which he or she works.
8. The actuary would contribute in educating the regulator of the implications of legislation and/or regulation that might conflict with accepted actuarial practice in Canada.
9. The actuary reviewing the submission would act in accordance with the CAS “Statement of Principles Regarding Property and Casualty Insurance Ratemaking.”
10. When reviewing rates, the actuary would consider all of the objectives that rates are adequate, not excessive, and not unfairly discriminatory. One objective is not intended to outweigh or supersede other objectives.
11. Provincial legislation, regulation, or administrative orders should explicitly state that the objectives of rate regulation include ensuring that P&C insurance rates are adequate, not excessive, and not unfairly discriminatory.
12. The actuary’s review process and decision-making regarding the acceptability of a rate submission is independent of political considerations.
13. The reviewing actuary would have sufficient time and resources, both human resources and technological resources, to complete his or her work.
14. A goal of the actuary working on behalf of the regulator is to put the regulator in an informed position. In meeting this objective, the actuary would strive to educate the regulator about the ratemaking process and to identify key issues and cost drivers underlying a specific rate submission. To support the goal of informing the regulator, an actuary may choose to conduct sensitivity analyses to help the regulator gain perspective around key issues.
15. There should be a transparent interaction between the actuary working on behalf of the regulator and the actuary working on behalf of the insurance company submitting a rate application.
16. The actuarial review process is consistent from company to company and over time. In other words, within a jurisdiction, there should be similar standards applied to different companies regardless of the actuarial staff assigned to conduct the review.
17. The regulatory review process takes into consideration the fact that all actuarial work involves uncertainty and that there is a reasonable range of results in actuarial analyses. In communication with the regulator, the actuary would clearly recognize this inherent uncertainty and the potential ranges around actuarial estimates.

18. In competitive rate regulatory environments, publishing benchmark assumptions is valuable in the promotion of greater transparency. Benchmarks, however, should not be imposed if credible company experience supports other assumptions.
19. There should be recognition that a focus on the public interest does not necessarily mean that the lowest rate indicated should be required. Other key issues in the public interest include the long term financial strength and solvency of insurers operating in a jurisdiction and reasonable reflection of differences between classes of insureds.
20. If the reviewing actuary is an external consultant, re-evaluation and consideration of rotation after a set period of time. This would include rotation of individuals and possibly firms conducting such reviews. Such rotation is consistent with the requirements underlying actuarial external review set out in Guideline E-15 of the Office of Superintendent of Financial Institutions (OSFI). The goals of actuarial rotation include greater objectivity and maintaining necessary distance from the politicization of the review.
21. Use of a scorecard to measure and track success in achieving best practices within jurisdictions.

10 APPENDIX C – PRIMER ON THE P&C INSURANCE INDUSTRY

Unexpected events, such as a fallen tree that destroys a parked vehicle or a pedestrian being struck by a vehicle that is backing out of the driveway, often result in financial loss to the owner of the vehicle. In the first instance, in order for the owner of the vehicle to be restored to a state that is the same as before the damage from the tree, the owner of the vehicle needs to be reimbursed for the cost to repair the vehicle and to be compensated for any additional expenses incurred while the vehicle is being repaired. In the second case, in order for the pedestrian to be restored to a state that is the same as before being struck, the pedestrian needs to be reimbursed for costs such as the diagnosis of the injury and any subsequent treatment that may be required. In addition, the owner of the vehicle would also need to be reimbursed for the cost to repair damages to the vehicle itself in the collision, if any.

In the examples above, a physical damage insurance policy will provide protection against the financial loss that the owner of the vehicle incurs from the fallen tree. On the other hand, a casualty⁸¹ insurance policy will provide protection against the financial loss that the owner of the vehicle incurs should it be determined that his/her negligence contributed to the pedestrian being struck. The P&C insurance industry, often known as the general insurance or non-life insurance industry, offers both property and casualty insurance policies to protect policyholders against financial loss suffered from events that are accidental in nature. When similar risks are segregated into different pools, by analyzing the historic claim data of each pool, the P&C insurance industry can estimate the expected cost to provide protection to each policyholder. This pooling spreads the cost of claims across policyholders.

To offer the protection as promised, an insurer charges an insurance premium to the policyholder. This premium represents the price to provide the insurance protection. Similar to a supplier that sells non-insurance goods and services such as paper or lawn-maintenance services, the price should equal the cost of providing for the goods and services plus a return on equity. The difference between an insurance premium and the price of non-insurance goods and services is that the expected cost of providing the insurance protection is not known at the time of sale. This expected cost includes the ultimate amount that is expected to be paid by the insurer for claims against insurance policies that it has issued, plus expenses and return on equity that are required to operate the business.

This section briefly describes the cost and return on equity components of the insurance premium. It also briefly describes how insurers estimate the liabilities that are carried on their financial statements to pay for future claims.

⁸¹ Casualty insurance is often referred to as liability insurance.

10.1 Insurance Premium

10.1.1 Cost Component

The cost component of the insurance premium provides for claims and expenses that an insurer is expected to pay to protect its policyholders.

10.1.1.1 Claims

To estimate the expected cost of claim payments, often referred to as ultimate claims, actuaries analyze historical claim data segregated into similar types of risks. Ultimate claim can be defined as the final settlement value of a claim after the claim is closed and there is no further potential for the claim to be reopened where additional payments would be made.

Actuaries estimate ultimate claims on an aggregate basis by combining the historic data for claims from risks that are similar in nature. Claim data that actuaries usually rely on include claim payments and case estimates for claims that have been reported but are not yet closed. The ultimate amount that an insurer is estimated to pay for insured events that have occurred at a particular date and affect its policyholders include four main components:

- Cumulative claim payments;
- Case estimates for claims that have been reported but are not yet closed;
- Development on case estimates; and
- Estimate of the amounts needed for claims that have been incurred but have not yet been reported.

Claim data can be aggregated in many different ways. To estimate ultimate claims, claim data are most often aggregated on an accident year basis.⁸² Accident year claims are grouped based on the year in which the accident causing the claim occurred.

Accident year cumulative claim payments represent payments on all of the claims that occurred in a given accident year and have been paid as of a particular date. Typically, cumulative claim payments are summarized by the claim or finance department and are provided to the actuaries for use in the actuarial analysis.

Case estimates, also referred to as case outstanding or case reserves, represent the amounts that are still outstanding (i.e., that have not yet been paid) on the claims reported to date in order to completely settle and close those claims. These amounts are generally set by claim adjusters, on a claim by claim basis, when the claim is first reported and are then adjusted throughout the life of the claim, as more information becomes available. Accident year case estimates include case estimates as of a particular date for all of the claims that occurred during a given accident year.

⁸² For actuarial analysis of ultimate claims, data could be aggregated by policy year (claims are grouped based on the year in which the policy was issued), underwriting year (claims are grouped based on the year in which the policy was underwritten), or report year (claims are grouped based on the year in which the claim was first reported to the insurer).

Case estimates are generally not estimated by actuaries; rather they are estimated by the claim adjusters and are provided to the actuaries for use in the actuarial analysis.

Development on case estimates arises from the uncertainty inherent in the ultimate settlement value of claims. It is difficult to know the true final value of all of the future claim payments on any given claim, as many claims are not settled for several years after they have been initially reported. As new information regarding a claim becomes available, the adjuster changes the case estimate, and this change is known as development on case estimates. When data are aggregated on an accident year basis, development on case estimates arises from changes in the case estimates for all claims that occurred during a given accident year. For some claims, the period between when the accident causing the claim first occurred and when the claim is fully closed and settled can be many years. However, when estimating accident year ultimate claims at a particular point in time, actuaries need to estimate the future development on case estimates as part of their analysis. This analysis is performed on an aggregate basis.

The final component of ultimate claims is an estimate of the amount needed for claims that have incurred but have not yet been reported to the insurer. For claims aggregated on an accident year basis, this component is the most difficult to estimate due to the possible substantial time lag between when the claim first occurs and when it is reported to the insurer. Actuaries estimate the number of such claims that might exist for each accident year and how much each of those claims will ultimately settle for.

With the ultimate claims estimated, the cost per policyholder is estimated and forms a part of the cost component related to claims.

10.1.1.2 Expenses

Expenses can be divided into two main categories – claim-related expenses and other expenses. Claim-related expenses consist of allocated loss adjustment expenses (ALAE) and unallocated loss adjustment expenses (ULAE).⁸³ By definition, ALAE are expenses incurred in the defense and settlement of claims that can be directly attributed to a particular claim. Examples include defense attorney fees, expert witness fees, and fees for medical evaluations attributable to a specific claim. Actuaries generally include ALAE with claims when analyzing estimates of ultimate claims. However, it is also possible to analyze these expenses separately and add them to the estimate of ultimate claims at the end of the analysis. ULAE are claim-related expenses that cannot be allocated to a particular claim; they are more of a general nature. Examples of ULAE include salaries of the insurer's claim and actuarial departments, as well as other costs incurred in the process of handling claims but not attributable to a specific claim. By definition, ULAE expenses cannot be allocated to a specific claim and paid ULAE amounts are generally calculated on a calendar year basis. These amounts are often provided to actuaries by the finance department. Reviewing the historic ULAE data, actuaries estimate the amount that should be included in an insurance premium.

⁸³ ULAE can also be referred to as internal adjustment expenses (IAE).

Other expenses include those incurred by the insurer in marketing and selling insurance policies. These are reported in the insurer's financial statement as underwriting expenses and can be broken down into four main categories:

- Commission and brokerage fees;
- Other acquisition expenses;
- General administrative expenses; and
- Taxes, licenses, and fees.

Commission and brokerage expenses are fees paid to insurance agents and brokers to compensate them for bringing in new business and maintaining existing policyholders. These fees are generally calculated as a percentage of written premiums. Other acquisition expenses are all other costs associated with acquiring new business, such as advertisement expenses incurred in generating new business. General administrative expenses include all other overhead costs associated with the day-to-day operations of the insurer. Some examples include rent/lease of the head office, office supplies, and utilities. Finally, taxes, licenses, and fees include all taxes and miscellaneous fees excluding income taxes, such as premium tax and licensing fees.

To illustrate the distribution of underwriting expenses, Table 10.1 provides a breakdown of the different expenses incurred by insurers as a percentage of gross written premium for private insurers that primarily provide automobile insurance coverage as defined by MSA Research Inc. in 2012.

Table 10.1: Canadian Insurance Industry Expense Percentages⁸⁴ for Private Insurers Primarily Providing Automobile Insurance Coverage

Type of Expense	Percent of Gross Written Premium ⁸⁵
Commission and brokerage fees	14.8%
Other acquisition expenses	3.6%
General administrative expenses	6.5%
Taxes, licenses, and fees	2.9%
Total Underwriting expenses	27.8%

In the August 2013 Technical Notes, FSCO states that, “based on industry expense information, the average underwriting expense (excluding loss adjustment expense) is approximately 25% of premiums for the private passenger automobile insurance line in Ontario.”⁸⁶

⁸⁴ MSA Research Inc. Accessed on March 13, 2014. <http://www.msaresearch.com>. Percentages shown only include data from private insurers that primarily provide automobile insurance coverage as defined by MSA Research Inc.

⁸⁵ Gross written premium is used for comparison as expenses such as commission and brokerage are reported on a gross basis in the financial statements.

⁸⁶ FSCO, “Technical Notes for Automobile Insurance Rate and Risk Classification Filings”, August 2013. Accessed on March 13, 2014. <http://www.fSCO.gov.on.ca/en/auto/filing-guidelines/Documents/Technical-Notes.pdf>.

10.1.2 Return on Equity Component

Unlike other industries, the business model for insurance is based on an inverted production cycle. Premiums are based on an estimate of the actual cost to “produce” the insurance product, with the true cost of production not being known for many years after the policy is sold. As a result, there is an inherent risk in the pricing of insurance products (referred to as pricing risk) that the actual future costs associated with policies sold may vary from the expected future costs estimated at the time of sale, and that the premium collected will not be sufficient to cover both the cost of claims and expenses arising from those policies. The corresponding risk to policyholders is that the insurer may not be able to honour its promise to protect the policyholder in the event of a covered claim. In order to protect policyholders, the regulatory regime for insurance companies operating in Canada requires insurers to carry sufficient capital⁸⁷ to protect policyholders in the event of a wind-up of the insurance company. Factors that are to be considered in establishing the targeted internal level of capital for each insurer include the insurer’s net inherent risk profile (including an assessment of pricing risk in addition to other risks) and the operating environment.⁸⁸

Similar to other industries, insurance companies have shareholders who invest funds in the company and provide the capital needed to operate the company.⁸⁹ Shareholders invest on the expectation that their investment will generate a satisfactory profit or return on equity that reflects their assumed investment risk. As a result, in addition to other cost factors, actuaries include a return on equity provision in the calculation of actuarially indicated rates.

In the August 2013 Technical Notes, FSCO notes that it performed a review of the return on equity benchmark for automobile insurance rate filings and that “an 11% after-tax ROE [return on equity] has been determined to be reasonable.”⁹⁰ Note that a return on equity benchmark of 11% does not mean that insurance companies will achieve an 11% return on equity. Prior to August 2013, the FSCO after-tax return on equity benchmark was established at 12%.

Table 10.2 summarizes return on equity of Ontario and all GISA jurisdictions as published in GISA’s 2012 Automobile Insurance Financial Information Report⁹¹ (GISA Financial Report). The GISA Financial Report is published based on aggregated data collected from the insurance industry without interpretation by GISA. The GISA Financial Report was published for the first time in 2013 based on calendar year 2012 data.⁹²

⁸⁷ In this report, the terms capital and equity are often used interchangeably.

⁸⁸ OSFI, “Guideline A-4 Regulatory Capital and Internal Capital Targets”, January 2014. Accessed on March 31, 2014. http://www.osfi-bsif.gc.ca/Eng/Docs/a4_qd.pdf. OSFI sets the capital requirements for federally regulated insurance companies. However, the expectations for provincially regulated insurance companies are generally consistent with OSFI expectations.

⁸⁹ For mutual companies, policyholders supply the capital.

⁹⁰ FSCO, “Technical Notes for Automobile Insurance Rate and Risk Classification Filings”, August 2013. Accessed on March 13, 2014. <http://www.fsco.gov.on.ca/en/auto/filing-guidelines/Documents/Technical-Notes.pdf>.

⁹¹ GISA, “Bulletin GISA2013-11”. Accessed on April 9, 2014. <http://www.gisa.ca/en/techman/documents/GISA2013-11.asp>.

⁹² GISA notes the following in the report: “This is the first year GISA has collected and published automobile insurance industry financial information. Users are advised to use this information with caution, and be aware that this report contains only one year of data, and as such does not reflect the cyclical nature of the industry.”

Table 10.2: Return on Equity for PPA

Jurisdictions	PPA Return on Equity
Ontario	6.4%
Total GISA Jurisdictions ⁹³	6.8%

A study⁹⁴ performed by KPMG in 2013 (KPMG 2013 Study) estimated the return on equity for the automobile insurance industry in Ontario from 2008 to 2012. These results are presented in Table 10.3.

Table 10.3: Estimated Return on Equity for Ontario PPA from 2008 to 2012

Return on Equity	2008	2009	2010	2011	2012
Total Ontario Auto⁹⁵	(3.5%)	(6.1%)	(11.7%)	1.3%	4.0%
Ontario PPA	n/a	n/a	n/a	0.2%	3.3%

In theory, the capital that is carried by an insurer supports all the policies that the insurer has issued. However, where an insurer writes more than one line of business, in order to assess the return on equity for a particular line of business, it is necessary to make assumptions to allocate capital between lines of business. With respect to the data shown in Table 10.2, GISA states:

Some of the GISA Financial Information data elements were taken directly from the P&C Annual Returns submitted. Other data elements were required at a finer level of detail than is currently available, and often required insurers to determine an appropriate allocation methodology to comply with the GISA Financial Information reporting requirements. The overall results include a mixture of different allocation methods used by insurers.⁹⁶

In estimating the figures in Table 10.3, the authors of the KPMG 2013 Study also used similar assumptions, based on their professional judgment, to allocate the financial data available for the insurance industry as a whole. This is a prime reason as to why the estimated returns on equity shown in Table 10.2 and Table 10.3 in 2012 are not identical.

While the return on equity information from the GISA Financial Report and the information from the KPMG 2013 Study are not identical, the information from these two sources indicates that, from 2008 to 2012, the return on equity for the total Ontario automobile insurance and for Ontario PPA insurance was significantly below the 11% benchmark ROE level determined by FSCO.

⁹³ GISA jurisdictions include all Canadian provinces and territories except British Columbia, Manitoba, Quebec, and Saskatchewan.

⁹⁴ KPMG, Analysis of Ontario Private Passenger Automobile Insurance Results 2008 to 2012, April 11, 2013. Accessed on March 24, 2014. http://www.ibr.ca/en/Car_Insurance/documents/KPMG-Analysis%20of%20Ontario%20PPA%20Insurance%20Results.pdf.

⁹⁵ Total Ontario auto includes other automobiles such as commercial automobiles, snow vehicles, and motorcycles.

⁹⁶ GISA, "2012 Automobile Insurance Financial Information Report", October 18, 2013. Page 4.

10.1.3 Permissible Claim Ratio

As discussed in previous sections, insurers charge a specific premium to each policyholder so that in the aggregate, they are able to pay for claims and expenses incurred over the course of servicing and protecting all of their policyholders. The premium charged should also allow the insurer to earn a reasonable return on equity for the risk it assumes in providing the insurance coverage.

As noted in page 6 of the FSCO August 2013 Technical Notes, the profit allowance is calculated as:

$$\frac{\frac{\text{After Tax Return on Equity}}{1 - \text{Income Tax Rate}} - \text{Investment Return on Equity}}{\text{Premium to Equity Ratio}}$$

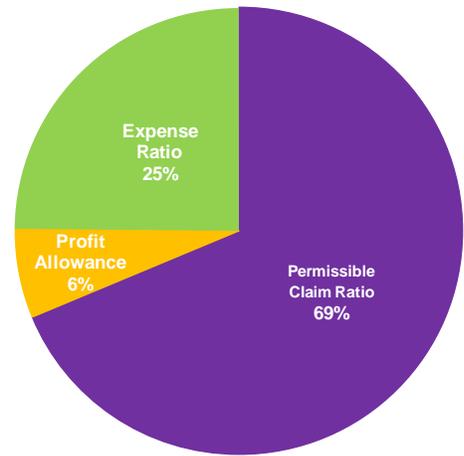
FSCO determined in the August 2013 Technical Notes that an 11% after-tax return on equity is reasonable. FSCO also determined that 1.7 to 1 is a reasonable premium to equity benchmark, and stated that the income tax rate was 26.5% as of July 2013. For illustration purposes, using an investment return on equity of 4.0% based on results from the KPMG 2013 Study, the profit allowance determined using the formula above would be approximately 6%.

The permissible claim ratio is the proportion of the premium allotted to claims and one of the generally accepted formulae defines it as follows:

$$\frac{1 - \text{Variable Expense Ratio} - \text{Profit Allowance}}{1 + \text{Fixed Expense Ratio}}$$

The average expense ratio for the industry is 27.8%⁹⁷. For illustration purposes, assuming that commissions and premium taxes are variable (i.e., 18%) and that the remaining expenses are fixed, the resulting permissible claim ratio would equal 69%. Figure 10.1 demonstrates the components of premium, where a premium that would result in a claim ratio of 69% is estimated to be sufficient to provide the insurer with sufficient cash flow to pay for claims and expenses, and achieve a reasonable after tax return on equity. The pie chart shows that for every one dollar of premium collected, 69 cents will pay for claims, 25 cents will pay for expenses, and the remaining would be considered as profit. The profit component will also be allocated towards any contingencies that may arise (e.g., a case where the ultimate claim ratio is higher than 69%). Note that Figure 10.1 shows a 25% expense ratio as it takes into account the flattening effect of fixed expenses as the denominator.

Figure 10.1: Premium Components



⁹⁷ As per Table 10.1.

10.2 Claim Liabilities

Claim liabilities are typically the largest figure on the liabilities side of an insurer's balance sheet. Section 10.1.1.1 presented the four components of ultimate claims. The paid portion of the reported claims is no longer considered a liability to the insurer. However, the remaining three components are yet to be paid and, in total, are referred to as claim liabilities. Claim liabilities can be viewed as ultimate claims minus cumulative paid claims.

10.2.1 Actuarial Present Value of Claims Liabilities

As required by the *Insurance Companies Act* of Canada and OSFI, insurers' valuations of policy liabilities are conducted in accordance with accepted actuarial practice in Canada, subject to any additional requirements and directions specified in OSFI's annual memorandum to Appointed Actuaries. In accordance with Standards of Practice promulgated by the Actuarial Standards Board⁹⁸ for accepted actuarial practice in Canada, this valuation takes into account the time value of money and includes PfADs.⁹⁹ Claim liabilities that are discounted and include PfADs are considered as being on an actuarial present value basis.

There are three categories of PfADs, which reflect uncertainty in the actuary's best estimate of claim liabilities:

- Claim development;
- Recovery from reinsurance ceded; and
- Investment return rate.

Claim development margin is added to the claim liabilities estimate to take into consideration the uncertainty associated with the environment of the insurer's operations, the data on which the estimates are based upon, and the lines of business for which the estimate is made.¹⁰⁰ This margin is generally selected to be between 2.5% and 20%, depending on the aforementioned criteria. Actuaries would select a higher margin for estimates that bear a greater uncertainty.

The margin for recovery from reinsurance ceded take into consideration the uncertainty underlying each insurer's reinsurance contracts and the health of the insurer's reinsurers. This margin is generally selected between 0% and 15%.

The last margin added to the claim liabilities is the margin for the investment return rate, which considers several different types of risk, including:

- Timing mismatch between payment of claims and availability of liquid assets;

⁹⁸ The ASB was established by the CIA as an independent body; the mission of the ASB is to develop, establish, and maintain Standards of Practice governing actuarial practice in Canada. Throughout this report, we use the abbreviation "SOP" to refer to Canadian actuarial Standards of Practice promulgated by the ASB.

⁹⁹ Canadian Institute of Actuaries (CIA), "Standards of Practice", Section 2250, last Modified January 1, 2014. Accessed on March 13, 2014. <http://www.cia-ica.ca/publications/standards-of-practice>.

¹⁰⁰ CIA, "Educational Note – Margins for Adverse Deviations for Property and Casualty Insurance", December 2009. Accessed on March 13, 2014. <http://www.cia-ica.ca/docs/default-source/2009/209138e.pdf?sfvrsn=2>.

- Error in estimating the payment pattern of future claims; and
- Asset risk including credit/default risk and liquidity risk.¹⁰¹

This margin is usually selected between 25 to 200 basis points.

Liabilities associated with ALAE and ULAE are included as part of the claim liabilities estimated by actuaries. As discussed in section 10.1.1.2, actuaries usually include ALAE in claim data, while ULAE liabilities are estimated separately from claim liabilities.

10.2.2 Claim Liabilities Carried in Financial Statements

As discussed in OSFI's annual memorandum to appointed actuaries, "for federally regulated companies, the provision for policy liabilities in the liabilities shown in the balance sheet of the Annual Return should be greater than or equal to the corresponding estimated policy liabilities on a discounted basis including PfAD calculated by the Actuary."¹⁰² As such, insurers in Canada generally carry claim liabilities at or greater than the actuarial present value of claim liabilities as estimated by their appointed actuaries.

¹⁰¹ Ibid.

¹⁰² OSFI, "2013 Memorandum for the Appointed Actuary's Report on Property and Casualty Insurance Business", last modified January 31, 2014. Accessed March 13, 2014. http://www.osfi-bsif.gc.ca/Eng/fi-if/rtn-rlv/fr-rf/ic-sa/pc-sam/Pages/PC_AA_Memo_2013.aspx.

11 APPENDIX D – ACTUARY’S ROLE IN THE INSURANCE INDUSTRY

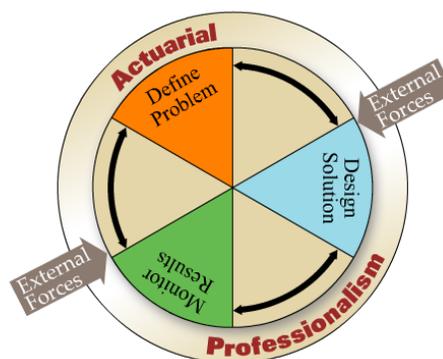
Actuaries play an important role in the insurance industry and are involved in various aspects of the operations of an insurer. For example, the *Insurance Companies Act* of Canada states that “the actuary’s valuation shall be in accordance with generally accepted actuarial practice.”¹⁰³

To become a fully qualified actuary in Canada (i.e., a Fellow of the CIA), one must pass a series of standardized professional exams. The CIA notes that “the actuarial profession is recognized for its integrity, high standards of practice, and quality of work.”¹⁰⁴ The CIA holds the duty of the profession to the public above the needs of the profession and its members.

This appendix describes the actuary’s role in the insurance industry.

11.1 Actuarial Control Cycle

Figure 11.1: The Actuarial Control Cycle¹⁰⁵



As depicted in Figure 11.1, actuarial work follows a continuous cycle and is always affected by external and internal forces, with all actuarial work being bounded by the actuarial professionalism standards. Every aspect of actuarial work is preformed with consideration of the external and internal forces, and by the rules governing actuarial work. In addition, actuarial work is intricately interconnected, as one type of actuarial work product might be the input for another type of work, or one actuarial result can lead to many other additional actuarial analyses. In the insurance context, actuarial input is always relevant, especially as it relates to uncertain future cash flows. Due to the uncertain nature of actuarial estimations, where possible, actuaries should rely on several models. Moreover, there is always an obligation to monitor the estimated results as the actuarial results may

¹⁰³ Government of Canada, “Justice Laws Website, Insurance Companies Act (S.C. 1991, c.47)”, last modified March 14, 2014. Accessed on March 25, 2014. <http://laws-lois.justice.gc.ca/eng/acts/i-11.8/page-125.html#docCont>.

¹⁰⁴ CIA, “Discipline”. Accessed March 24, 2014. <http://www.cia-ica.ca/about-us/the-institute/discipline>.

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vary from the expected results due to the inherent uncertainty in estimating the financial impact of future events that have not occurred yet.

11.2 Estimation of Policy Liabilities

One of the main roles performed by actuaries is estimating policy liabilities (i.e., reserving). As specified in *Insurance Company Act* of Canada, each company is required to appoint a fully qualified actuary to perform an analysis of the company's actuarial and other policy liabilities¹⁰⁶ as of the end of each fiscal year. In Canada, actuaries calculate the unpaid claim liabilities on an actuarial present value basis and that amount is carried in the insurer's financial statement as a liability. The process to determine that value is extremely involved and consists of many different steps.

The first step in the reserving process is generally collecting the data and reviewing them for consistency. The type and quality of the available data then determine the types of analyses the actuary is able to perform and the types of methods available to estimate the ultimate claims. Changes in the external or internal environment can make certain types of data inadequate without additional considerations. For example, if the insurer hired more experienced claim adjusters, claims might be closing and settling faster, making past paid claim data not suitable for projecting future claim payments without further adjustments.

After the actuary has gathered the data needed for the analysis, several claim projection methods are calculated and reviewed for appropriateness and consistency with each other. In the example of a change in claim adjusting personnel, a paid claim projection method might be deemed inappropriate due to changes in the claim settlement behaviour. The methods vary by the type of data they require, along with the types of assumptions that the methods are based on. Certain methods assume that past data will be predictive of the future, while other methods assume that past claim data are not applicable in predicting future claims. There are also methods that split the claim data into their components before deriving the ultimate claim amount. For example, ultimate claims for an accident year can be calculated by multiplying the estimated total number of claims expected for that year by the average cost of each claim. It is also possible to split the claim counts even further into its subcomponents and evaluate them before deriving an estimate of ultimate claim counts and then estimating the ultimate claims. In addition, there are methods that can be used to adjust the original data that might be deemed inappropriate for projecting ultimate claims in its original form and make the adjusted data usable. The process of developing various estimates of ultimate claims and analyzing them is very complex and involves actuarial professional judgment, experience, and knowledge of both the external and internal environments of the insurer.

After the actuary estimates the ultimate claims, the next step is to calculate the claim liabilities by subtracting cumulative claim payments from the estimate. As discussed in Appendix C, in Canada, actuaries are required to discount the claim liabilities and load them for PfADs. In addition, ULAE and other adjustments are added to the actuarial present value of claim liabilities to calculate the amount that is then reported in the insurer's financial statements. Other adjustments may include

¹⁰⁶ Policy liabilities include both claim and premium liabilities. Claim liabilities are defined as a provision for unpaid claims and adjustment expenses on the expired portion of policies and premium liabilities are defined as a provision for future obligations on the unexpired portion of policies.

amounts from various pools that the insurer is participating in, case estimates from much older accident years that are not included in the actuary's analysis of ultimate claims, or certain unique liability cases that are not part of the overall analysis.

11.3 Ratemaking

Another role that actuaries perform is ratemaking (i.e., pricing). Actuaries are integral to the ratemaking process, with the actuary's estimates being submitted to management and/or various regulatory bodies for approval. Ratemaking is the process of setting actuarially-based rates. The process involves many steps, ranging from collecting the data, to selecting various factors and trends, to gathering information from finance and management, and finally selecting the model and calculating the final rate.

Collecting data is the first, and in a way the most crucial step of ratemaking as it effects almost every other step of the analysis. Making sure that the collected data are accurate and complete is essential for the actuary to calculate an actuarially sound final indicated rate. In addition, the type and granularity of data available to the actuary determines the type of model an actuary can use and it also helps the actuary determine any supplementary information requirements. Data can be of two types – internal to the company or external. Internal data includes information such as earned premiums, paid and incurred claims, claim counts, and management projections regarding expenses and other various assumptions. In contrast, external data can include industry benchmarks regarding various factors and trend assumptions, and tax rates.

Once the actuary has gathered the necessary data and is satisfied that the data are sufficient and reliable for its intended purpose, the actuary starts analyzing it and projecting ultimate claims, as described in the reserving section (see section 11.2). As shown in the actuarial cycle diagram in Figure 11.1, actuarial work is very “circular” in nature and each component of actuarial work can be a start to another component.

After the ultimate claims are estimated, the actuary needs to adjust the claims such that they are at the same “level” as the claims would be in the future period for which the actuary is estimating the rates. This step essentially restates past claims into amounts that they would cost if they were to occur in the future (i.e., at the time for when these new rates would be in effect). Through the same logic, the premiums and/or exposures are restated to the same level as claims so that both can be compared while stated in the same cost level in the future.

The next step is for the actuary to look at the credibility of the experience under consideration. Additional data may be considered if it is determined that the initial data do not have sufficient credibility.

Then, based on the available data, the actuary selects the model used to calculate the final rate. There are two main pricing models available to the actuaries – an exposure based model and a premium based model. Depending on the data, the actuary selects a model and calculates the indicated actuarial rate. However, it is important to note that this is often not the rate that is used to eventually price the policies due to many internal and external factors such as operational constraints, regulatory constraints and marketing considerations. After the actuarially indicated rate is estimated, it is typically submitted to management for discussion. Management then reviews the indicated rate and checks it for consistency with the company's business strategy and operational

constraints, and signs off the proposed rate, which are filed to appropriate rate regulators. The role of rate regulators differs whether the jurisdiction has a prior approval, file and use, or use and file regime. In a prior approval regime, rate regulators would typically review the methodologies and assumptions underlying the indicated rates as well as rationale for the proposed rates. Rate regulators could request additional information and sensitivity analyses, suggest some modifications to the rate filings, and authorize the approved rates that may differ from the initial proposed rates.

11.4 Other

In addition to work in the reserving and pricing roles, actuaries often apply their experience to underwriting, claims, and capital management roles. Within the underwriting department, actuaries help with marketing and research. For example, actuaries might be asked to analyze which geographical sectors the company should be targeting in order to meet its strategic objectives. Actuaries are also often asked to perform a cost-benefit analysis or to price new products before management decides to go forward with their distribution. In the claim department, actuaries may be involved in helping claim adjusters set an initial case reserve amount for various types of claims.

In a capital management role, actuaries help to evaluate the insurer's risk appetite, reinsurance needs, or alternative risk transfer mechanisms. Actuaries also provide input into the overall capital level carried by an insurer. Insurers rely on actuarial tools such as DCAT analysis and stress testing, as well as actuarial input into the ORSA to determine the optimal capital level for an insurer.

12 APPENDIX E – SAMPLE QUESTIONNAIRE

- Has your company experienced reductions in claim costs as a result of the auto insurance reforms that were introduced in September 2010?

If so, could you please provide your latest estimates of the impact on claim costs of the 2010 reforms for the following coverages?

Coverage	Impact
TPL BI	
TPL PD	
AB – Non DI	
AB – DI	
Phys DM	

- Have you analysed the impact on claim costs of the 2010 auto insurance reforms by kind of loss? By type of injury (e.g., minor, catastrophic, non-catastrophic)?

If so, would you be prepared to discuss your findings? Would it be possible to provide the results of such quantification?

- Since 2010, and prior to the recommendations made by the Auto Insurance Anti-Fraud Task Force (Anti-Fraud Task Force) in its November 2012 report, has your company implemented a program to combat auto insurance fraud?

If so, could you please provide a short description of your program?

Have the recommendations made by the Anti-Fraud Task Force in November 2012 affected your claim costs?

Have you quantified the impact on claim costs of these anti-fraud measures? If so, could you please provide your latest estimates for the following coverages?

Coverage	Impact of Anti-Fraud Program Prior to Anti-Fraud Task Force Recommendations	Impact of Anti-Fraud Task Force Recommendations
TPL BI		
TPL PD		
AB – Non DI		
AB – DI		
Phys DM		

4. Has your company reflected the impact of the 2010 auto insurance reforms and the anti-fraud initiatives implemented since 2010 in your premiums by coverage? If so, please use the table below to summarize your rate change experience.

	2010 Chg1	2010 Chg2	2011 Chg1	2011 Chg2	2012 Chg1	2012 Chg2	2013 Chg1	2013 Chg2	2014 Chg1	2014 Chg2
Effective Date – New Business Effective Date – Renewals Reform or Fraud? TPL BI TPL PD AB – Non DI AB – DI Phys DM										

5. Based on your experience, does it appear that the 2010 auto insurance reforms are resulting in a shift in claim costs from one coverage to another?
6. What uncertainties do you see in the Ontario automobile insurance system that make estimating past and future claim costs challenging?
- What issues do you see as contributing to the uncertainty in the Ontario automobile insurance system?
7. Has your company attempted to quantify the uncertainty in the Ontario automobile insurance system?
8. How has your company reflected this uncertainty in the premiums set by your company?
9. Do you have any insight as to how these issues may be mitigated? Could you identify any action steps that could be taken to alleviate the uncertainty in the Ontario automobile insurance system?
10. As at December 31, 2013, what proportion of claims is in arbitration?

Accident Year	% of open counts	% of case reserve
Pre 2010		
2010		
2011		
2012		
2013		
All years		

11. As at December 31, 2013, what proportion of claims is in mediation?

Accident Year	% of open counts	% of case reserve
Pre 2010		
2010		
2011		
2012		
2013		
All years		

12. Have you considered the impact of the following recent appeal decisions:

- a. Scarlett v. Belair?
- b. Pastore v. Aviva?
- c. Henry v. Gore Mutual?

13. Do you believe that the Government's current Strategy will reduce your claim costs?

Do you believe that the Strategy will reduce premiums set by your company?

14. Do you believe that the auto insurance marketplace in Ontario is sufficiently competitive and efficient in providing affordable premiums to consumers?

15. What steps has your company taken to help achieve the Government's first-year average rate reduction target (average 8% reduction by August 2014)?

16. The Government has set an average rate reduction target of 15% for private passenger auto insurance by the end of August 2015. What is your company planning to do to help the Government reach this target?

17. With the recent experience, could you identify any issues that would prevent you from helping the Government reach its full 15% rate reduction target by August 2015?

13 APPENDIX F – REFERENCE SOURCES

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