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File No. 8888

June 15, 2012

SENT VIA EMAIL: commission.secretary@bcuc.com

British Columbia Utilities Commission
PO Box 250 – 900 Howe Street
Vancouver, BC V6Z 2N3

**Attention: Ms. Alanna Gillis
Acting Commission Secretary**

Dear Ms. Gillis:

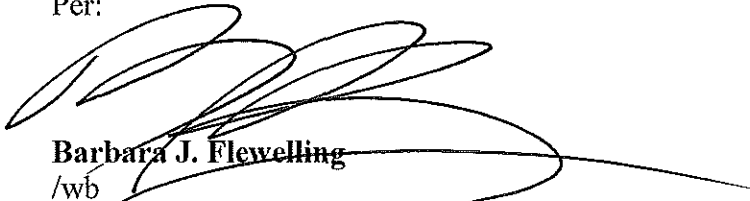
**RE: Insurance Corporation of British Columbia 2012 Revenue Requirement Application
Project Number 3698654**

We enclose for filing in electronic form the Submissions of The Automobile Insurance Committee (Canadian Bar Association, BC Branch).

Yours very truly,

SHEANE FLEWELLING

Per:



Barbara J. Flewelling
/wb
c.c. June Elder, Insurance Corporation of British Columbia
Leon Cheung, B.C.U.C.
Registered Intervenors

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**IN THE MATTER OF
THE *UTILITIES COMMISSION ACT*
R.S.B.C. 1996, Chapter 473, as amended**

and the

***INSURANCE CORPORATION ACT*
R.S.B.C. 1996, Chapter 228, as amended**

and

**AN APPLICATION BY THE
INSURANCE CORPORATION OF BRITISH COLUMBIA (“ICBC”) FOR APPROVAL
OF THE REVENUE
REQUIREMENTS FOR UNIVERSAL COMPULSORY AUTOMOBILE INSURANCE
EFFECTIVE FEBRUARY 1, 2012**

**SUBMISSIONS BY
THE AUTOMOBILE INSURANCE COMMITTEE
CANADIAN BAR ASSOCIATION
B.C. BRANCH**

June 15, 2012

1.0: INTRODUCTION AND OVERVIEW

ICBC has requested approval for a significant 11.2% increase in its Basic Insurance premiums. ICBC refers to this as the PY 2012 Indicated Rate Level Change (the "PY 2012 IRLC").

The components of the PY 2012 IRLC are outlined in Figure 3.2 on page 3-3 of ICBC's application. That figure is reproduced below.

Figure 3.2 – Overview of Impact on PY 2012 Indicated Rate Change

Line No.	Components	Impact	(percentage points of PY 2012 indicated rate change)
1	PY 2010 Loss Cost Forecast Variance		+5.5
2	Loss Trend to PY 2012		+1.9
3	Investment Income and Premium Financing Plan Revenue		+2.5
4	Impact of IFRS changes		+0.4
5	Operating Expense (excluding IFRS changes)		+0.0
6	Capital Provision		+0.3
7	Trend in Average Premium		+0.4
8	Other		+0.2
9	PY 2012 Indicated Rate Level Change		+11.2

As can be seen from that figure, a substantial portion of the PY2012IRLC is due to two components: the PY 2010 Loss Cost Forecast Variance; and, the Loss Trend to PY 2012. Together these components account for 7.4 percentage points or two thirds of the increase.

Based on a review of ICBC's response to information request 2012.1 RR BCUC.6.1, ICBC has defined these two components as follows:

- "PY 2010 Loss Cost Forecast Variance" – This is the difference between the basic loss costs projected in ICBC's current application for policy year 2010 and the basic loss costs projected in ICBC's 2010 streamlined revenue requirement application for policy year 2010.
- "Loss Trend to PY 2012" – This is the difference between the basic loss costs projected in ICBC's current application for the policy year 2012 and the basic loss costs projected in ICBC's current application for the policy year 2010.

Consequently, because of the key role that they play in calculating the PY 2012 IRLC, an assessment of how ICBC develops its projections of basic loss costs is a key part of examining

its revenue requirements application. This assessment must take place in the context of the direction from the BCUC to ICBC to ensure increases or decreases in basic insurance rates are phased in such a way that the rates remain relatively stable and predictable (Special Direction IC2).

According to ICBC, the primary reason underlying the need for this increase relates to rising claims costs for Bodily Injury ("BI") claims. In relation to each component, ICBC points specifically to the following factors:

PY 2010 Loss Cost Forecast Variance:	Higher BI claims frequency after 2008 and 2009
Loss Trend to PY 2012:	Increasing BI claims severity

Lastly, while ICBC continues to post large profits from its business as a whole, it transfers a large amount of those profits to the Government.

Therefore, these submissions will provide analysis regarding four issues:

- ICBC's methodology in forecasting or modelling Basic loss costs;
- Increased BI claims frequency;
- Increasing BI claims severity; and
- The transfer of profits from ICBC to the Government.

2.0 ICBC's FORECASTING METHODOLOGY

Basic loss costs consist of a number of personal and commercial claims categories: Bodily Injury, Property Damage, Accident Benefits, Death Benefits, and Manual Basic claims¹. ICBC's projections of basic loss costs are based on a set of twenty loss trend models. These models consist of ten "frequency" models that project frequency of claims, and ten corresponding "severity" models that project severity of claims. These models are listed in the following table.

¹ See ICBC's response to information request 2012.1 RR AIC.13.1.

Table 2.1: ICBC Loss Trend Models

Frequency Models	Severity Models
<ol style="list-style-type: none"> 1. Personal Bodily Injury Frequency 2. Personal Property Damage Frequency 3. Personal Medical Rehabilitation Frequency 4. Personal Weekly Benefits Frequency 5. Personal Death Benefits Frequency 	<ol style="list-style-type: none"> 1. Personal Bodily Injury Severity 2. Personal Property Damage Severity 3. Personal Medical Rehabilitation Severity 4. Personal Weekly Benefits Severity 5. Personal Death Benefits Severity
<ol style="list-style-type: none"> 6. Commercial Bodily Injury Frequency 7. Commercial Property Damage Frequency 8. Commercial medical Rehabilitation Frequency 9. Commercial Weekly Benefits Frequency 10. Commercial Death Benefits Frequency 	<ol style="list-style-type: none"> 6. Commercial Bodily Injury Severity 7. Commercial Property Damage Severity 8. Commercial medical Rehabilitation Severity 9. Commercial Weekly Benefits Severity 10. Commercial Death Benefits Severity

2.2 Review of ICBC's Approach to Model Development

ICBC's loss trend models are forecasting models that employ statistical procedures in their model development. The general approach followed by ICBC in developing its models consists of fitting different lines to historical data. It is important to note that ICBC's modelling approach includes (or excludes) a factor based only on the ability of the factor to improve (or worsen) the fit of the line. ICBC does not develop its models based on an underlying analysis of its business relationships or factors that are believed to have a causal link to its claim costs. Consequently, when future claim costs are found to be different from those forecasted, ICBC's models are not able to provide insight into what factors were responsible for the difference, the degree to which they were responsible or how those factors may affect future forecasts.

ICBC's approach is based on an ad-hoc selection of different time periods and different structural forms, both of which can change from rate application to rate application². As a result, ICBC's approach introduces forecast variability and uncertainty.

² For example, in the 2010 Streamlined Revenue Requirements Application an econometric model was used to forecast personal bodily injury claims frequency, however, in the current application, an exponential model was used to forecast the same variable.

At paragraph 14 of its Submissions, ICBC suggests that models should attempt to incorporate underlying factors, which would allow for deeper understanding of how changes in those factors affect claim frequency and severity. They state:

"ICBC's actuaries must give consideration to economic and social factors that help to explain features in past data and assist in the assessment of whether those features were unique or are of ongoing significant."

On p. 1, line 4 of Exhibit D.0, ICBC states:

"...frequency models should attempt to explain the underlying trend with explanatory variables other than time, as the passage of time is only an indirect cause of the change."

However, as summarized in the following tables only three out of the twenty models included in ICBC's application incorporate explanatory factors other than the passage of time (BI Frequency Models) and there are no other explanatory factors at all (other than the passage of time) in the BI Severity models.

Table 2.3: Frequency Models

Type of Claim	Model	Time Span	Variables Included						
			Date	Quarterly Indicators	Precipitation	GDP Growth	Proportion of BC Population Age 55 to 74	Proportion of BC Population Age 65+	Olympics
Personal Bodily Injury	Exponential	12 year (1996 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Personal Property Damage	Econometric	10 year (2001 to 2011)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Personal Medical Rehabilitation	Exponential	12 year (1996 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Personal Weekly Benefits	Econometric	10 year (2001 to 2011)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Personal Death Benefits	Exponential	10 year (2001 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Bodily Injury	Exponential	12 year (1996 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Property Damage	Econometric	10 year (2001 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
Commercial Medical Rehabilitation	Exponential	10 year (2001 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Weekly Benefits	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Death Benefits	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

Table 2.4: Severity Models

Type of Claim	Model	Time Span	Variables Included						
			Date	Quarterly Indicators	Precipitation	GDP Growth	Proportion of BC Population Age 55 to 74	Proportion of BC Population Age 65+	Olympics
Personal Bodily Injury	Exponential	6.25 year (2005 Q1 to 2011 Q1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Personal Property Damage	Exponential	7 year (2001 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Personal Medical Rehabilitation	No model selected								
Personal Weekly Benefits	Exponential	10 year (2001 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Personal Death Benefits	No model selected								
Commercial Bodily Injury	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Property Damage	Exponential	10 year (2001 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Medical Rehabilitation	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Weekly Benefits	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
Commercial Death Benefits	No model selected								

Source: ICBC's response to information request 2012.1 RR AIC.12.1

In contrast, ICBC's materials in fact show that while many explanatory factors were examined for other models, they were rejected based on an assessment of model fit³. As presented, the models suggest that ICBC believes very few factors have a quantitative effect on claim frequency or severity. Consequently, ICBC's approach provides little insight into what underlying factors may actually be affecting claim frequency or severity, or the manner in which changes (past or future) in those factors may affect claim frequency or severity.

As can be seen from Tables 2.3 and 2.4, the majority of ICBC models are exponential in structure, and rely only on the passage of time and on seasonal variables. The seasonal variables do not provide insight into what relationships may be affecting frequency and severity. Rather, the use of seasonal variables simply illustrates that severity and frequency appear different at different times of the year.

The exponential models simply project continued exponential change without any explanatory factors⁴. In other words, no factor other than simply the passage of time is believed to increase or decrease future frequencies of claims for seven of the ten categories of claims. No factor of any kind (other than the progression of time) is believed to affect the future severity of any category of claim.

³ A list of variables tested for each model is provided in Exhibit D.3.1 in ICBC's 2012 Revenue Requirements Application, and is provided as an appendix to these submissions.

⁴ Note that no model was selected for three of the ten types of claims severity.

The exponential models used by ICBC do not allow for analysis of underlying causative factors and can be heavily influenced by normal year to year variability in the data. As a result, the models may produce unstable and unreliable forecasts that fluctuate significantly from year to year.

The only three models that incorporate explanatory factors are:

- personal property damage frequency model
- personal weekly benefits frequency model
- commercial property damage frequency model.

These models include one or more of the following explanatory factors: total precipitation, GDP growth, proportion of BC population age 55 to 74, proportion of BC population age 65 and over, and the hosting of the 2010 Winter Olympics. If these factors do, in fact, affect claim frequency, it is difficult to understand how or why they would affect only these three claim categories. (For example, ICBC has stated that lower claim frequencies occurred in 2008 and 2009 as a result of the economic downturn⁵. If this were the case, one would expect to see a relationship between economic factors - such as GDP growth and unemployment rate - and most of the claim categories. However, ICBC believes GDP is an explanatory factor only for frequencies of personal property damage and for commercial property damage. ICBC has rejected unemployment as an explanatory factor for all claim categories.)

Similarly, ICBC has suggested that precipitation is an important explanatory factor. However, according to its models, ICBC believes precipitation is suitable as an explanatory factor for only two types of claims frequencies: personal property damage; and, personal weekly benefits. Again, it is difficult to understand how precipitation could affect only these two types of claim frequencies while not affecting other types of claim frequencies.

If, as ICBC contends, the greatest driver of the rate increase is BI frequency and BI severity, it is puzzling that their model did not apply explanatory factors to "Personal Bodily Injury" frequency or "Bodily Injury severity" other than time.

As has been pointed out, none of the severity models contain explanatory factors. Consequently, these models provide no insight into underlying factors that might affect past or future severity. Projections of future severity are based only on the passage of time. If severity projections later prove inaccurate, all that can be said is that they were in error. No quantitative assessment of why the projections were in error or how they could be improved to reflect changes in business, economic or social factors is possible.

ICBC's modelling approach is itself unstable in nature, as model structures may change from year to year (or rate application to rate application). This is illustrated by comparing the models used to forecast bodily injury frequency and severity in the current application to those used in the 2010 Streamlined Revenue Requirements Application (see Table 2.5). While the 2010 models for personal bodily injury frequency and commercial bodily injury frequency were

⁵ Exhibit D.0, p.2, line 11.

econometric models that incorporated explanatory factors, the models used in the current application are exponential models that contain no explanatory factors (other than time). As well, time periods used to develop the models also varied. As a result of changing model types and time periods, model forecasts will also change, even if no new data or information is obtained. A prime example of this is the fact that when ICBC used an econocentric model in assessing the PY 2010 Loss Cost Forecast Variance, it would result in a reduction in rate impact percentage points by 3.7%.

Table 2.5: Comparison of Loss Trend Models between Applications

Loss Trend Model	RRA	Model Type	Time Span	Variables Included					
				Date	Quarterly Indicators	Precipitation	GDP Growth	Proportion of Long Haul Delivery Vehicles in Fleet	Proportion of BC Population Age 55 to 74
Personal Bodily Injury Frequency	2010	Econometric	10 year (2000 to 2009)		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	2012	Exponential	12 year (1996 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Personal Bodily Injury Severity	2010	Exponential	5 year (2005 to 2009)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
	2012	Exponential	6.25 year (2005 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Commercial Bodily Injury Frequency	2010	Econometric	10 year (2000 to 2009)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
	2012	Exponential	12 year (1996 to 2008)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Commercial Bodily Injury Severity	2010	Exponential	15 year (1995 to 2009)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
	2012	Exponential	15 year (1996 to 2011)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				

Source: Exhibit D.0 of the 2010 Streamlined Revenue Requirements Application and the 2012 Revenue Requirements Application⁶

When developing forecast models it is the accuracy of the future forecast that is most important, rather than the ability of the models to fit data that is already known. Consequently, it is crucial to assess the ability of forecasting models to actually forecast (usually by measuring what is called out-of-sample forecast accuracy):

A forecasting assignment is not complete when the model has been fitted to the known data. The performance of the model can only be properly evaluated after the data for the forecast period have become available.⁷

⁶ Note: Time span estimates for models included in the 2010 Streamlined Revenue Requirements Application have been approximated according to figures provided in Exhibit D.0.

⁷ Forecasting: methods and applications. – 3rd ed/ Spyros Makridakis, Steven C. Wheelwright, Rob J. Hyndman, 1998, John Wiley & Sons, Inc.

In developing its models, it appears that ICBC has not fully tested or quantified the forecast accuracy of its models. This is an important point, as the quantitative assessment of forecast accuracy is crucial to the development of sound forecasting models.

As well, ICBC's forecasts are provided as point estimates (i.e., single values) instead of ranges of estimates that could be used to evaluate risk. The probability of future values falling into a specified range is not provided in ICBC's submission, making it difficult to assess the level of uncertainty in the forecasts. Providing ranges for future forecasts is considered desirable forecasting practice:

It is usually desirable to provide not only forecast values but accompanying uncertainly statements, usually in the form of prediction intervals. This is useful because it provides the user of the forecasts with "worst" or "best" case estimates and with a sense of how dependable the forecast is... Forecasts cannot be expected to be perfect and intervals emphasize this.⁸

One of the considerations in examining the forecast accuracy of a model is to examine the manner in which any explanatory factors that appear in the models are forecasted (because the models rely on forecasts of the explanatory factors). In the three models that incorporate explanatory factors, ICBC has used precipitation, GDP Growth, Proportion of BC Population Age 55 to 74, Proportion of BC Population Age 65 and over, and the 2010 Olympics as explanatory factors. The following summarizes how each of these factors is forecasted and used in the models:

- Precipitation: To project future precipitation ICBC uses average precipitation levels over the period 1971 to 2000⁹. These levels are then assumed to remain constant in the future. Consequently, even if precipitation helps to explain past claims frequencies it is of little help in forecasting future claims frequencies.
- GDP growth: ICBC uses forecasts from the Ministry of Finance¹⁰ as its forecast of GDP growth. Uncertainty in the GDP forecasts will, in turn, produce uncertainty in the model forecasts.
- Proportion of BC population age 55 to 74 and Proportion of BC population age 65+: One would expect these proportions to be increasing at a fairly slow rate, and over the short term, to be highly correlated with time¹¹. As indicated in Table 7.2, the time variable (i.e., date) is excluded from the model when these demographic factors are included, indicating that they are simply reflecting a slow growth pattern.

⁸ Forecasting: methods and applications. – 3rd ed/ Spyros Makridakis, Steven C. Wheelwright, Rob J. Hyndman, 1998, John Wiley & Sons, Inc.

⁹ Exhibit D.0, p.2, line 8.

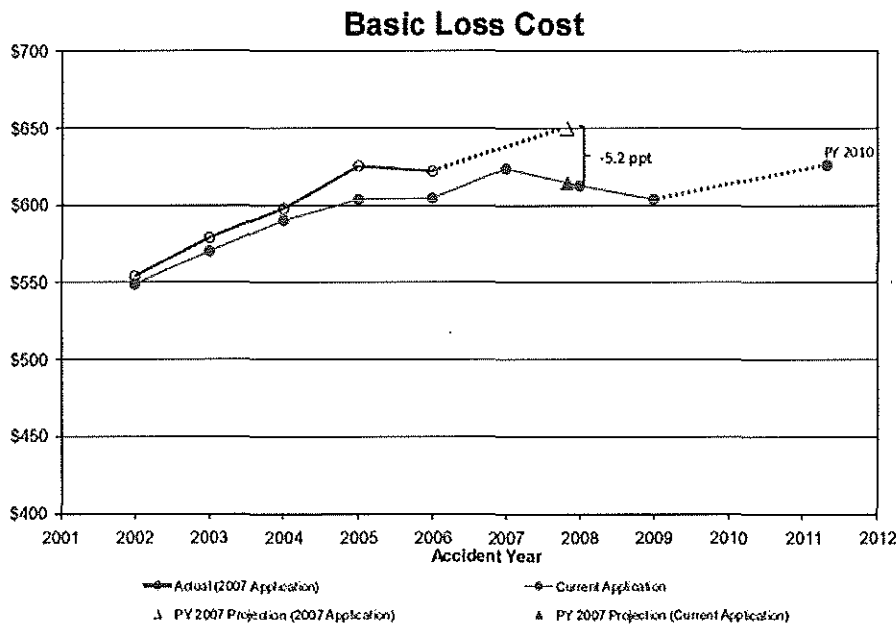
¹⁰ Exhibit D.0, p.2, line 8.

¹¹ Note that the models that include these variables (personal property damage frequency and personal weekly benefits frequency) exclude a variable for time (i.e., date).

- Olympics: While including a factor in the model for the hosting of the 2010 Olympics may help with the historical model fit, it does not provide an indication of what can be expected for future claims frequency.

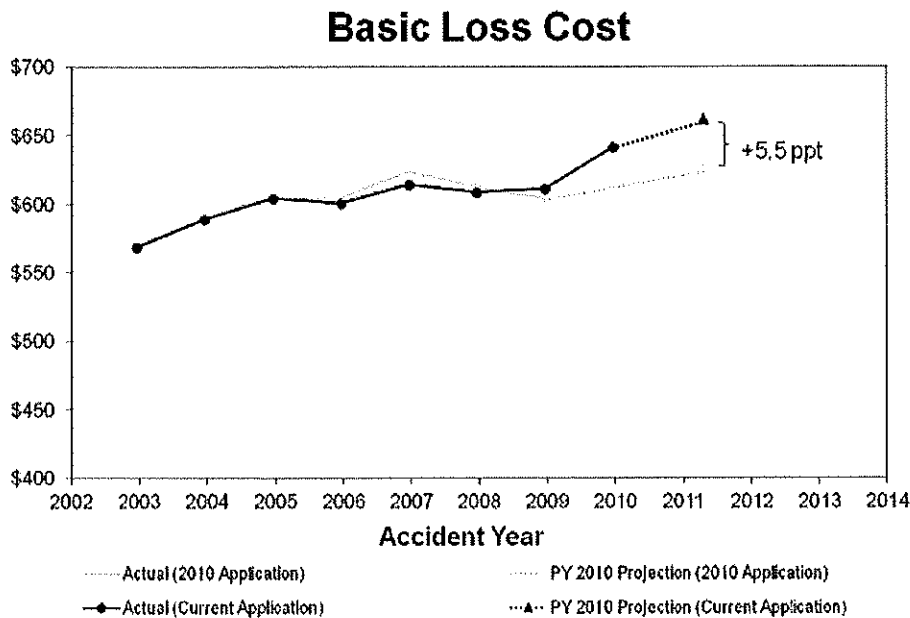
The overall instability in ICBC's forecasting approach is illustrated in the following two diagrams (submitted by ICBC). The first diagram from the 2010 Streamlined Revenue Requirements Application shows that ICBC's 2007 projection of PY 2007 Basic Loss Cost overstated the cost estimated at the time of the 2010 application by roughly 5%. The second diagram from the current rate application shows that ICBC's projection of Basic Loss Cost for policy year 2010 was, in contrast, understated compared to 2012 estimates by roughly the same amount. These overstatements and understatements appear to result, at least in part, because of the modelling approach followed by ICBC and not because of fundamental or long term changes in underlying factors.

Figure 3.3 – Basic Loss Cost



Source: Figure 3.3 from p. 3-7 of ICBC's 2012 Revenue Requirements Application

Figure 3.3 – Basic Loss Cost



3.0 INCREASED BI CLAIMS FREQUENCY

ICBC's application materials state that in the past the long-term trend of declining BI claims frequencies partially offset the increasing BI severity, but that this is no longer the case. The Corporation goes on to state that the BI frequency in 2011 in fact went above the lower long-term trend and was therefore no longer offsetting the increasing severity of claims.

If one refers to ICBC's response to AIC's information requests it would appear that the 2010 "Ultimate Frequency" was 1.46%. ICBC describes that frequency level in their application as a return to the long-term downward trend frequency faster than anticipated. In actual fact it was the 2nd lowest Ultimate Frequency since 2001 and only .03% higher than in the previous year. If one examines the "Frequency" graph on page 8 of ICBC's Revenue Requirements Application Public Workshop powerpoint materials dated January 23/12 the foregoing is evident¹²

ICBC states that "the frequency has bounced back rather quickly". A better description of what has occurred is that claims frequency has seen a minor increase since reaching an all time low in the recession of 2009, but remains at a rate lower than it was for the entire decade between 1997 and 2007.

Upon an examination of the tables, it appears that the reduction in claims frequency is generally remaining stable over the long term. However, ICBC in BCUC RR 5.1 states:

¹² ICBC's written submissions page 19, Figure 3 and 4

“the forecasted Basic loss cost for PY 2012 has increased. This is primarily driving by an increase in the forecast for bodily injury frequency, which has increased by .04 percentage points” (see RI 36.1 (BCUC))

ICBC states that “claims frequencies are influenced by weather conditions, as well as many other factors. Changes in the weather, in particular precipitation levels, have a strong relationship to changes in claims frequency.” (RR AIC.4)

However, ICBC has not performed any analysis at all beyond a simple correlation.

In effect, ICBC submits that precipitation and economic factors (the recession) must be the underlying reason that the Basic Loss Costs (affected by BI Frequency in particular) were low in 2008 and 2009. But they did not apply these factors to their Personal BI frequency and Personal BI severity models (see Table 2.3 and 2.4).

ICBC characterizes 2008 and 2009 as anomalous. However, the loss costs between 2005 and 2009 were relatively flat.¹³ It is interesting that in its 2010 application, ICBC viewed 2008 and 2009 as being typical. In the current application, it views them as anomalous apparently because 2010 and 2011 experienced higher claims compared to 2008 and 2009. However, it could also be just as likely that 2010 and 2011 are the anomalous years. Furthermore, if factors were present in 2008 and 2009 that resulted in those years being anomalous, why were those anomalies only factored into three of ICBC’s twenty forecasting models?

Another example of ICBC’s flawed approach in forecasting BI frequency is illustrated in paragraph 37 of its submissions:

“The unfavourable BI claims experience that has emerged since 2010 is due primarily to BI claims frequency emerging higher than was forecasted in the 2010 SSRA. ICBC has evidence of new counter-forces on the frequency trend that contributed to the variance: an increase in the number of claims involving non-motorists (cyclists and pedestrians) and low-cost property damage claims with injury.”

There is no modelling. There is no discussion of the factors underlying this assertion. There is no evidence to suggest whether or not this will continue to occur. It is not quantified. It is more properly characterized as speculation.

In paragraph 38 of its submission, ICBC states that they:

“observed a more dramatic drop in the BI claims frequency for 2008 and 2009 coinciding with less driving during the recession and drier than average weather.”

At paragraph 45, ICBC correctly relates the importance of using appropriate models for a *predictive* and opposed to *descriptive* purpose :

¹³ ICBC written submission Figure 1 at page 17

"Reliance on simple statistical measure, without sufficient regard for relevant social and economic factors, can lead to poor results."

The AIC agrees with this proposition and suggests that by choosing models based upon simple statistical data, this is precisely what had occurred. By using inappropriate models, they have achieved poor results in forecasting.

In paragraph 54, ICBC suggests that it should not be assumed that BI claims frequency levels will return to 2008 and 2009 levels due to an increase in claims involving non motorists. Again, this is speculation. There is no evidence upon which the Panel can identify the nature of the claims, the quantity of the claims or even any analysis as to whether it will persist in the future

4.0 INCREASING BI CLAIMS SEVERITY

ICBC attributes the Loss Trend to PY 2012 primarily to rising BI claims severities.

In it's actuarial analysis ICBC states (quite correctly) that in order to predict future events based on past, the many underlying values which impact trends have to be analyzed. It is not enough to simply look at the passage of time. For example, on p.1 , line 4 of Exhibit D.0, ICBC states:

...frequency models should attempt to explain the underlying trend with explanatory variables other than time, as the passage of time is only an indirect cause of the change.

However, ICBC has used models in predicting an increase in severity of claims which fails to include any explanatory variables other than the passage of time. By their own admission this will not result in an accurate prediction (above). See ICBC's response to information request 2012.1 RR AIC. 12.1.

ICBC appears to have selectively chosen only that variable which supports it's application for increased premiums and claims that the need is actuarially based while using a model that it has itself admitted and which is commonly known to be flawed as a predictor of future trends.

A simple projection model based only on time, without exploring the variables which cause fluctuations in trends, will produce forecasts which vary widely from actual from year to year and will fluctuate significantly. These will provide unstable and unreliable predictions. They could, for example, lead to the appearance of need for a rate decrease one year and a large swing the other way for an increase a year, or as here, two years later.

Basing premium adjustments on this type of flawed modelling will not lead to predictability or stability in rate levels over time.

In the models relating to personal property damage, personal weekly benefits and commercial property damage underlying factors were incorporated.

The models ICBC does use not only do not give undue "weight" to the results of 2008 and 2009, but they ignore them altogether. In fact, the types of events seen in 2008 and 2009 are not so out of the ordinary that they will not be repeated to some degree and leaving them out of the analysis skews the result in favour of the increase application.

In paragraph 6 of its written submission, ICC refers claims frequency rebounding in 2010 and 2011. But it is highly arguable that 2010 was an anomaly due to the Olympics and resulting increased driving traffic in the lower mainland. 2011 was also an anomaly due to the Stanley Cup run in Vancouver which also brought to a lesser extent increased traffic congestion and ensuing riots. These 2010 (and to a lesser extent 2011) anomalies are isolated events (or series of events) which are being used to justify a large portion of the rate increase for 2012. That is, the impact of anomalous events is being used inappropriately as a predictor of what will occur in 2012.

In paragraph 16 of its written submission, ICBC has argued that claims costs have emerged unfavourably since they filed their application. This may very well be true, but these costs are to a large degree within ICBC's control. If an edict is issued to settle a large number of cases in a hurry then claims costs are driven up. If an edict is issued to run a large number of cases to trial then the cost of defending claims is driven up. To the extent claims cost increases result from decisions internal to ICBC as opposed to claims frequency or other external factors, they should not be used to justify premium increases without a corresponding investigation and analysis of what internal decisions and actions are being taken by ICBC resulting in those increases.

5.0 TRANSFER OF CAPITAL (PROFIT) TO THE PROVINCE

At the BCUC Workshop related to the Corporation's application to increase the basic premium rates, a question was raised with respect to the justification of an insurance rate increase when it was announced in or around March 2010 that over the next 3 years from the date, the Corporation would be transferring \$778 million dollars of excess capital from their optional insurance to the Government. The plan was for ICBC to begin by transferring \$487 million to the province in 2010. Further, the Corporation's 2011 Management's Discussion and Analysis ("MD&A") report confirms that in 2011, \$101 million was transferred to the province and that in 2012, it is forecasted that \$181 million in excess capital will be transferred to the Government despite the Corporation indicating that it is suffering losses on the basic insurance side of the Corporation. By contrast, the Corporation forecasts net income of \$146 million in 2012, \$230 million in 2013 and \$229 million in 2014, a total of \$605 million.

Despite this forecast for excess income, the Corporation maintains that it continues to suffer losses, necessitating an 11.2% increase to basic premium. However, ICBC has indicated that optional rates are being reduced by 6% and that the customer who carries both basic and optional insurance will see a combined increase of a mere 2.1%. All BC insured drivers are required to purchase basic insurance through the Corporation, creating a monopoly on basic

insurance. By contrast, optional insurance can be obtained through a number of other companies who currently offer optional insurance in BC. Thus, if the Corporation increases their basic insurance rates, absent leaving the province, or no longer driving an insured vehicle, residents of BC have no recourse or alternatives. However, if the Corporation increased their optional rates, a resident of BC could begin searching for other companies who provide more competitive rates.

The Corporation is run as a single entity with profits and losses affecting that single entity. Yet when the suggestion came up at the Workshop that the Corporation should use some of their profits to offset the losses, rather than increasing rates, the Corporation stated that it operates the basic and optional insurance, essentially, as two separate entities and that there were no provisions to allow it to transfer money from the optional side (where significant profits are posted each year) to the basic side.

Despite this assertion, the Corporation, in its MD&A describes itself as follows:

“We operate as an integrated company providing Basic and Optional insurance products and services. Integrated operations provide benefits to our customers such as ease of service and savings achieved through economics of scale.

The majority of premium revenues and claims costs are specifically identifiable as Basic or Optional; however, certain costs are not tracked separately. For those revenues and costs that are not specifically identified as Basic or Optional, a financial allocation methodology, as approved by the BCUC, is used to allocate costs between the two lines of business. We operate and manage the company on an integrated basis as well as report our financial and performance results in the annual report on an integrate basis.” [Emphasis added]

If the Corporation is able to share costs between basic and optional insurance, why is it not able to share profits? It is suggested that it would be fiscally responsible for a company to use profits to offset losses, prior to transferring excess capital back to a Shareholder (the Government) rather than passing that cost on to its consumers who have no option but to pay the increase or choose not to drive. From a public policy standpoint, the BCUC should not accept a basic insurance rate increase, and the Corporation and Government should instead focus on off-setting losses and profits through fiscally sound balancing of the basic and optional insurance income and expenses.

6.0 SUMMARY

In summary, the AIC is of the view that the Panel should not grant the significant increase sought by ICBC and request that ICBC incorporate better modelling methodology in its forecasting so as to minimize the dramatic rate fluctuations that will be, and have been, characterized by its approach thus far. In particular, the AIC emphasizes the following points:

- The approach ICBC uses to develop its loss trend models introduces a substantial degree of instability into the forecasts.
- Very few models include explanatory factors other than time, and of those factors, few provide any predictive indication for the variable of interest.
- The forecasting ability of the models does not appear to have been tested or quantified by ICBC. This is a crucial step if stable and reliable models are to be achieved.
- The models appear to be based on a number of ad-hoc adjustments and modelling assumptions that introduce year to year model and forecast instability.
- ICBC's models produce point estimates, rather than a range of values, making it difficult to assess the level of uncertainty and degree of reliability inherent in the forecasts.
- The large forecast variances that, in turn, result in changes in annual revenue requirements may result, to some of the forecasting approach followed by ICBC, rather than the result of changes in underlying factors affecting claim frequency and severity. The modelling approach followed by ICBC is unlikely to produce stable and reliable forecasts over the long term.
- ICBC's modelling is not based upon a logical analysis, application and interpretation of factors underlying Basic loss costs and therefore their forecasts are unreliable and unstable. Accordingly, there is no basis upon which the Panel can conclude that Basic loss costs will increase to the extent suggested by ICBC.
- On just one aspect of the application alone, the PY 2012 Indicated Rate Change, changing to an econometric model would reduce the rate increase by 3.7% points (RR BCUC 150.1)
- ICBC should be required to utilize models that are not simply exponential and resubmit its request for an increase in basic insurance rate.
- While it is recognized that this may not be within the mandate of the BCUC, this committee suggests that some inquiry be made into the practice of large transfers of capital (profit) to the Government to determine if, under certain circumstances, more capital can be retained in the corporation to better stabilize insurance premium rates for basic insurance.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated: June 15, 2012



Barbara J. Flewelling, Chair
Automobile Insurance Committee,
Canadian Bar Association, BC Branch

Insurance Corporation of British Columbia

Exhibit D.3.1

Variables Tested and Included in the Personal Models

Item	Frequency					Severity				
	BI	PD	MR	WB	DB	BI	PD	MR	WB	DB
Time and Seasonality										
Decimal Date	X	X	X	X	✓	✓	✓	X	✓	X
Monthly Indicators	✓	✓	✓	✓	✓	✓	✓	X	✓	X
Weather Conditions										
Total Precipitation Amount	✓	✓	✓	✓						
Precipitation Indicator Any	X	X	X	X						
Precipitation Indicator Half mm	X	X	X	X						
Precipitation Indicator 1 mm	X	X	X	X						
Economic Indicators										
BC CPI - All Items	X	X	X	X		X	X	X	X	
BC CPI - Automobiles							X			
BC CPI - Auto Repairs							X			
BC CPI - Health Care						X		X		
BC CPI - Gasoline	X	X	X	X						
Effective CRIA Labour Rate							X			
CPI Inflation rate (BC)	X	X	X	X		X	X	X	X	
Gross Domestic Product (GDP)	X	X	X	X		X	X	X	X	
GDP Growth	✓	X	✓	✓		X	X	X	X	
Bank Rate	X	X	X	X		X	X	X	X	
US\$ Exchange Rate							X			
Demographic Indicators										
Labour Force	X	X	X	X						
Employed	X	X	X	X						
Unemployment Rate	X	X	X	X		X	X	X	X	
Participation Rate	X	X	X	X						
Average Wages						X			X	
BC Population Age 15+	X	X	X	X						
BC Population Age 15+ Growth	X	X	X	X						
BC Population Age 55 to 74	✓	✓	✓	X						
BC Population Age 65+				✓						
BC Population Age 80+	X	X	X	X						
Vehicle Safety Features										
Proportion of Vehicles with Airbags	X	X	X	X		X	X	X	X	
Proportion of Vehicles with Side Airbags	X	X	X	X		X	X	X	X	
Proportion of Vehicles with ABS	X	X	X	X		X	X	X	X	
Proportion of Vehicles with ESC	X	X	X	X		X	X	X	X	
ICBC Claims Initiatives										
<i>Policy Changes</i>										
Low Velocity Impact	X		X			X		X		
Soft Tissue Injury Management	X		X			X		X		
<i>Other</i>										
Crash Responsibility Charge		X					X			
Graduated Licensing Program (GLP)	X	X	X	X						
Intersection Safety Cameras	X	X	X	X						
Medical Rehab Policy				X				X		
AB Severity Practice Change								X	X	
Enhanced Enforcement	X	X	X	X						
Legal Representation Rate						X				
SCBC Tariff of Fees						X	X			
BI Initiatives						X				
BI Negate Percentage						X				
CCIC Savings						X		X	X	
Behaviour										
Vehicle Kilometers Driven	X	X	X	X						
Proportion of Motorcycles								X	X	

✓ Represents a variable that is selected.

X Represents a variable that is tested but not selected.

Variables Tested and Included in the Commercial Models

Item	Frequency					Severity				
	BI	PD	MR	WB	DB	BI	PD	MR	WB	DB
Time and Seasonality										
Decimal Date	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Monthly Indicators	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Weather Conditions										
Total Precipitation Amount	✓	✓								
Precipitation Indicator Any	X	X								
Precipitation Indicator Half mm	X	X								
Precipitation Indicator 1 mm	X	X								
Economic Indicators										
BC CPI - All Items	X	X				X	X			
BC CPI - Automobiles							X			
BC CPI - Auto Repairs							X			
BC CPI - Health Care						X				
BC CPI - Gasoline	X	X								
CPI Inflation rate (BC)	X	X				X	X			
Gross Domestic Product (GDP)	X	X				X	X			
GDP Growth	X	X				X	X			
Bank Rate	X	X				X	X			
US\$ Exchange Rate							X			
Demographic Indicators										
Labour Force	X	X								
Employed	X	X								
Unemployment Rate	X	X				X	X			
Participation Rate	X	X								
Average Wages						X				
BC Population Age 15+	X	X								
BC Population Age 15+ Growth	X	X								
BC Population Age 55 to 74	X	X								
BC Population Age 65+										
BC Population Age 80+	X	X								
Vehicle Safety Features										
Proportion of Vehicles with Airbags	X	X				X	X			
Proportion of Vehicles with Side Airbags	X	X				X	X			
Proportion of Vehicles with ABS	X	X				X	X			
Proportion of Vehicles with ESC	X	X				X	X			
ICBC Claims Initiatives										
<i>Policy Changes</i>										
Low Velocity Impact	X					X				
Soft Tissue Injury Management	X					X				
<i>Other</i>										
Crash Responsibility Charge		X					X			
Graduated Licensing Program (GLP)	X	X								
Intersection Safety Cameras	X	X								
Medical Rehab Policy										
AB Severity Practice Change										
Enhanced Enforcement	X	X								
Legal Representation Rate						X				
SCBC Tariff of Fees						X	X			
BI Initiatives						X				
BI Negate Percentage						X				
CCIC Savings						X				
Behaviour										
Vehicle Kilometers Driven	X	X								
Proportion of Short Haul Delivery	X	X				X	X			
Proportion of Long Haul Delivery	✓	✓				X	X			
Proportion of Light Commercial	X	X				X	X			
Proportion of Heavy Commercial	X	X				X	X			
Proportion of Bus	X	X				X	X			
Proportion of Taxi	X	X				X	X			

✓ Represents a variable that is selected.

X Represents a variable that is tested but not selected.

Insurance Corporation of British Columbia

Exhibit D.3.1

Variables Tested and Included in the Personal Models

Item	Frequency					Severity				
	BI	PD	MR	WB	DB	BI	PD	MR	WB	DB
Time and Seasonality										
Decimal Date	✓	X	✓	X	✓	✓	✓	X	✓	X
Quarterly Indicators	✓	✓	✓	✓	✓	✓	✓	X	✓	X
Weather Conditions										
Total Precipitation Amount	X	✓	X	✓						
Precipitation Indicator Any	X	X	X	X						
Precipitation Indicator Half mm	X	X	X	X						
Precipitation Indicator 1 mm	X	X	X	X						
Economic Indicators										
BC CPI - All Items	X	X	X	X		X	X	X	X	
BC CPI - Automobiles							X			
BC CPI - Auto Repairs							X			
BC CPI - Health Care						X		X		
BC CPI - Gasoline	X	X	X	X						
Average Weekly Wages						X				X
CPI Inflation rate (BC)	X	X	X	X		X	X	X	X	
Gross Domestic Product (GDP)	X	X	X	X		X	X	X	X	
GDP Growth	X	X	X	✓		X	X	X	X	
Bank Rate	X	X	X	X		X	X	X	X	
US\$ Exchange Rate							X			
Demographic Indicators										
Labour Force	X	X	X	X						
Employed	X	X	X	X						
Unemployment Rate	X	X	X	X		X	X	X	X	
Participation Rate	X	X	X	X						
BC Population Age 15+ Growth	X	X	X	X						
Proportion of BC Population Age 15+	X	X	X	X						
Proportion of BC Population Age 55 to 74	X	✓	X	X						
Proportion of BC Population Age 65+				✓						
Proportion of BC Population Age 80+	X	X	X	X						
Vehicle Safety Features										
Proportion of Vehicles with Airbags	X	X	X	X		X	X	X	X	
Proportion of Vehicles with Side Airbags	X	X	X	X		X	X	X	X	
Proportion of Vehicles with ABS	X	X	X	X		X	X	X	X	
Proportion of Vehicles with ESC	X	X	X	X		X	X	X	X	
ICBC Claims Initiatives										
<i>Policy Changes</i>										
Low Velocity Impact	X		X			X		X		
Soft Tissue Injury Management	X		X			X		X		
<i>Other</i>										
Crash Responsibility Charge		X					X			
Graduated Licensing Program (GLP)	X	X	X	X						
Intersection Safety Cameras	X	X	X	X						
Effective CRIA Labour Rate							X			
Medical Rehab Policy			X					X		
AB Severity Practice Change								X	X	
Enhanced Enforcement	X	X	X	X						
Legal Representation Rate						X				
SCBC Tariff of Fees						X	X			
BI Initiatives						X				
BI Negate Percentage						X				
CCIC Savings						X		X	X	
Behaviour										
Olympics		✓								
Proportion of Motorcycles								X	X	

✓ Represents a variable that is selected.

X Represents a variable that is tested but not selected.

Insurance Corporation of British Columbia

Exhibit D.3.2

Variables Tested and Included in the Commercial Models

Item	Frequency					Severity				
	BI	PD	MR	WB	DB	BI	PD	MR	WB	DB
Time and Seasonality										
Decimal Date	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Quarterly Indicators	✓	✓	✓	✓	✓	✓	✓	✓	✓	X
Weather Conditions										
Total Precipitation Amount	X	X								
Precipitation Indicator Any	X	X								
Precipitation Indicator Half mm	X	X								
Precipitation Indicator 1 mm	X	X								
Economic Indicators										
BC CPI - All Items	X	X				X	X			
BC CPI - Automobiles							X			
BC CPI - Auto Repairs							X			
BC CPI - Health Care						X				
BC CPI - Gasoline	X	X								
Average Weekly Wages						X				
CPI Inflation rate (BC)	X	X				X	X			
Gross Domestic Product (GDP)	X	✓				X	X			
GDP Growth	X	X				X	X			
Bank Rate	X	X				X	X			
US\$ Exchange Rate							X			
Demographic Indicators										
Labour Force	X	X								
Employed	X	X								
Unemployment Rate	X	X				X	X			
Participation Rate	X	X								
BC Population Age 15+ Growth	X	X								
Proportion of BC Population Age 15+	X	X								
Proportion of BC Population Age 55 to 74	X	X								
Proportion of BC Population Age 65+	X	X								
Proportion of BC Population Age 80+	X	X								
Vehicle Safety Features										
Proportion of Vehicles with Airbags	X	X				X	X			
Proportion of Vehicles with Side Airbags	X	X				X	X			
Proportion of Vehicles with ABS	X	X				X	X			
Proportion of Vehicles with ESC	X	X				X	X			
ICBC Claims Initiatives										
<i>Policy Changes</i>										
Low Velocity Impact	X					X				
Soft Tissue Injury Management	X					X				
<i>Other</i>										
Crash Responsibility Change		X					X			
Graduated Licensing Program (GLP)	X	X								
Intersection Safety Cameras	X	X								
Medical Rehab Policy										
AB Severity Practice Change										
Enhanced Enforcement	X	X								
Legal Representation Rate						X				
SCBC Tariff of Fees						X	X			
BI Initiatives						X				
BI Negate Percentage						X				
CCIC Savings						X				
Behaviour										
Olympics		✓								
Proportion of Short Haul Delivery	X	X				X	X			
Proportion of Long Haul Delivery	X	X				X	X			
Proportion of Light Commercial	X	X				X	X			
Proportion of Heavy Commercial	X	X				X	X			
Proportion of Bus	X	X				X	X			
Proportion of Taxi	X	X				X	X			

✓ Represents a variable that is selected.

X Represents a variable that is tested but not selected.