

Nova Scotia
Commercial Vehicles
Oliver Wyman Selected Loss Trend Rates
Based on Industry Data Through December 31, 2016

Selected Trend Rates - Summary

The following table presents our selected past and future annual loss cost trend rates as of December 2016. We discuss and present our methodology and assumptions in selecting our trend rates in this report.

Coverage	Past Loss Cost	Future Loss Cost
Bodily Injury	+0.0%	+0.0%
Property Damage	-2.0%	-2.0%
Accident Benefits	+0.0%	+0.0%
Collision	+2.0%	+2.0%
Comprehensive	+3.5%	+3.5%
Specified Perils	+3.5%	+3.5%
All Perils	+2.5%	+2.5%

Introduction

Loss trend rates are factors that are used to determine rate level indications. They are applied to the experience period incurred losses to adjust for the cost levels that are anticipated during the policy period covered under the proposed rate program.

The application of trend rates is, essentially, a two-step process. The data in the experience period under consideration must be adjusted to reflect changes in cost conditions that have taken place (i.e., “past trend”), and then the data must be further adjusted to reflect changes in cost conditions that are expected to take place between the present time and the time during which the new premiums will be in effect (i.e., “future trend”).

Therefore, past trend rates should reflect the underlying trend patterns that occurred during the experience period, which we have assumed to be the three to five years ending December 31,

2016. Future trend rates should reflect those same patterns that occurred during the experience period, as well as the likelihood that those patterns may change.

We select trend rates based on historical Industry Nova Scotia claim experience as published by the General Insurance Statistical Agency (GISA). The Industry data is organized by half-year, and in this report we refer to the first half of an accident half year as XXXX-1 or XXXX.1 and the second half of the accident year as XXXX-2 or XXXX.2. So, for example, the accident half-year spanning July 1, 2016 through December 31, 2016 is referred to as 2016-2 or 2016.2.

As our review is performed annually, for purposes of data stability, we typically review the data in annual accident year periods. We derive indicated annual loss trend rates based on an exponential regression model using Industry historical accident year loss and loss adjustment expense data that we project to ultimate cost level (when all claims are reported and settled) using the Industry loss development factors we select.

Estimation of Industry Ultimate Claim Counts and Loss Amounts

The Industry Nova Scotia experience upon which the loss trend rates are based must be adjusted to an ultimate claim count and claim amount level. We do so through the application of what are referred to as development factors to the reported claim counts and claim amounts as of December 31, 2016. We select development factors based on a review of the Industry Nova Scotia loss development patterns; we do this by coverage. Our selected development factors are generally based on the volume weighted average of the last twelve observed (accident half-year) development factors. The exceptions are as follows:

Bodily Injury	Claim Count	6-12; 60-ultimate	4 point weighted seasonal average; 1.00
Bodily Injury	Claim Amount	6- 36; 114-ultimate	6 point weighted average; 1.00
Property Damage & DCPD	Claim Amount	114-ultimate	1.00
Accident Benefits Excluding UM	Claim Amount	18-114; 114 -ultimate	All period average excluding high/low;100
Collision	Claim Amount	6-18	6 point weighted average
Comprehensive	Claim Amount	60-66	1.00
Specified Perils	Claim Amount	12+	1.00
All Perils	Claim Count	60-66	1.00
All Perils	Claim Amount	60-66	1.00

As described in our prior review, as part of the analysis we examined the claim count and claim amount development triangles for each of the top ten commercial automobile insurer groups in Nova Scotia and we identified one insurer with reported Bodily Injury claim counts and claim amounts over recent accident half-years that appeared to be inconsistent with its reported claim counts and claim amounts over prior accident half-years. We learned that the insurer (which we will refer to as Insurer A) changed the way it recorded (and reported to GISA) its Bodily Injury claims – essentially not reporting claims for which it was believed that no loss (indemnity or ALAE) amounts would be paid. This change began during the first half of 2015. In this review, as we see no evidence of a change in the subsequent Industry development patterns that could be attributed to this insurer, which may, in part be due to the limited volatile data, and as this information is not available to other insurers for their evaluation and assessment, we make no further adjustment to the selected development factors for this individual insurer.

We note that as a result of these selected development factors and the actual experience that has emerged, our estimated ultimate claim counts and ultimate claim amounts have changed from our prior estimates, and these changes contribute to the changes in our selected trend rates.

Exhibit 2, attached, presents our selected cumulative claim count and claim amount development factors.

Selection of Trend Rates

The identification of the underlying trend patterns over the experience period is challenging because factors such as statistical fluctuation in the data points, changes in the underlying exposure, or abnormal weather conditions, etc., can make the underlying trend patterns difficult to discern. For this reason, we model the data several different ways in an attempt to identify the underlying trends during the experience period - over time periods that are longer than the experience period as a means of increasing the stability/reliability of the data being analyzed, but at the same time being responsive to changes in patterns that may have occurred, and with and without certain data points to improve our understand of the sensitivity of the calculated loss trend rate to the inclusion or exclusion of those points.

Time Period Considered

We present the experience by accident year, spanning the period 2002 to 2016. In selecting past trend rates, due to the variability of the commercial vehicle experience, we give greater consideration to the measured trends over longer time periods.

Reforms

The purpose of a reform parameter is to isolate and, in a sense, remove the impact that reforms had on the level of claim costs so that the underlying claim cost trend can be identified. In this report we discuss our consideration of the following reforms:

- For Bodily Injury, we give consideration to the 2003 Minor Injury Regulations (MIR) which was then followed by Bill 52, the changes to the MIR in April 2010. Our selected trend rates are based on the time periods after the 2003 MIR and therefore no adjustment is made for the 2003 MIR.
- We give consideration to the Fair Act Insurance Reforms enacted on April 1, 2012, which introduced higher maximum benefit levels for Accident Benefits sub-coverages.
- Effective April 1, 2013, the DCPD coverage was introduced in Nova Scotia. We give consideration to this change in our selected trend rates for both Property Damage (which includes DCPD) and Collision.

Data Points

We give special consideration to data points that we consider to have a material impact on the measured trends. However, we note that for certain coverages there were large year-to-year swings in the loss cost (in some cases in excess of +/-50%), which makes the identification of outliers more difficult.

Consideration of Severity, Frequency, and Loss Cost Trend Patterns

We consider the observed severity, frequency, and loss cost trend patterns. In so doing we consider the results of statistical tests that we apply. Given the relatively low volume of data (for most coverages), if we find the statistical test results to be weak (low Adjusted R-square values, non-significant p-values, wide confidence intervals) for severity and/or frequency, we tend to consider loss cost trend patterns only. As respects the Adjusted R-square, we generally refer to

values of 80% greater to be “high,” values between 40% and 80% to be “moderate,” and values below 40% to be “low.” We consider p-values under 5% to be “significant.” The confidence interval range presented represents a 95% probability level range.

Future Trend Rates

In selecting future trend rates, if appropriate, we adjust our selected past trend rates after giving consideration to the reforms changes that have occurred over the recent past if there is evidence of new patterns emerging.

A discussion of our selected trend rates follows. The various trend patterns that we review and associated statistical results are summarized in Exhibit 3 for each of frequency, severity, and loss cost.

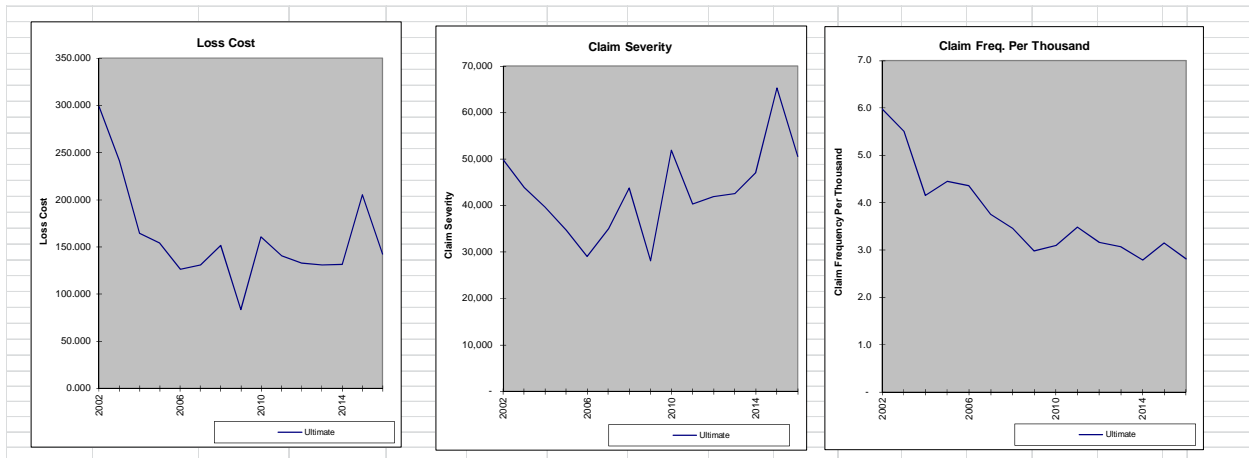
Selected Of Past Trend Rates

Bodily Injury

Based on data as of December 31, 2015, we selected a past loss cost trend rate of +0.0%.

We estimate that the 2016 loss cost is 30% less than the 2015 loss cost.

The following graphs display our estimate of the actual loss cost (average claim cost per vehicle), average severity (average claim cost per claim), and frequency rate (average claim incidence rate) over the period 2002 through 2016.



As depicted in the above graphs, Bodily Injury claim costs have exhibited considerable variability – particularly severity. Subject to this variability: severity has generally trended upward since 2005, including particularly sharp drop in 2009 and upward spike in 2015; frequency has exhibited a declining pattern over the last fifteen years, including a large decline following the 2003 reforms and a flatter (less steep decline) since 2009; and loss cost sharply declined following the 2003 reforms, and has since been relatively flat, including a relatively sharp decline in 2009 and a relatively sharp upward spike in 2015.

The high degree of loss cost variability can also be seen from the following January-December accident year-to-accident year loss cost changes based on the unadjusted¹ data:

¹ By the term “unadjusted” we mean before any modification to the data for the April 2010 minor injury reforms.

2006 to 2007:	+8%
2007 to 2008:	+14%
2008 to 2009:	-44%
2009 to 2010:	+93%
2010 to 2011:	-13%
2011 to 2012:	-7%
2012 to 2013:	-1%
2013 to 2014:	+1%
2014 to 2015:	+57%
2015 to 2016:	-30%

Although the introduction of Bill 52 in April 2010 would have affected the loss costs in 2010, we suggest the sharp increase (+93%) in 2010 is more due to data variability than to Bill 52, as the loss cost declined over each of the next three years.

Possibly due to the low volume of data (about 170 claims per year since 2007) and the variability in the data (which is likely attributed to the low volume), there is no statistical evidence of Bill 52 having an impact on claim costs as is the case for private passenger vehicles. As in our prior report, we make no explicit adjustment for Bill 52. Any change for in claims cost for Bill 52 is implicitly included within our measured trend rates.

The measured severity, frequency, and loss cost trends, associated Adjusted R-square values, p-values, and confidence intervals over various trend measurement periods (ending 2014, 2015 and 2016 due to the data variability and the uncertainty of our estimates), with and without the 2009 and 2015 data points (due to the large year over year changes noted above) are presented in Exhibit 3.

We make the following observations about these measured trends.

Given the noted low claim volume and data variability we consider the measured loss cost trend rates. Virtually all of the measured trends, with no exclusions, and also with 2009 and 2015 excluded, have p-values that are not significant for time and generally low Adjusted R-squares.

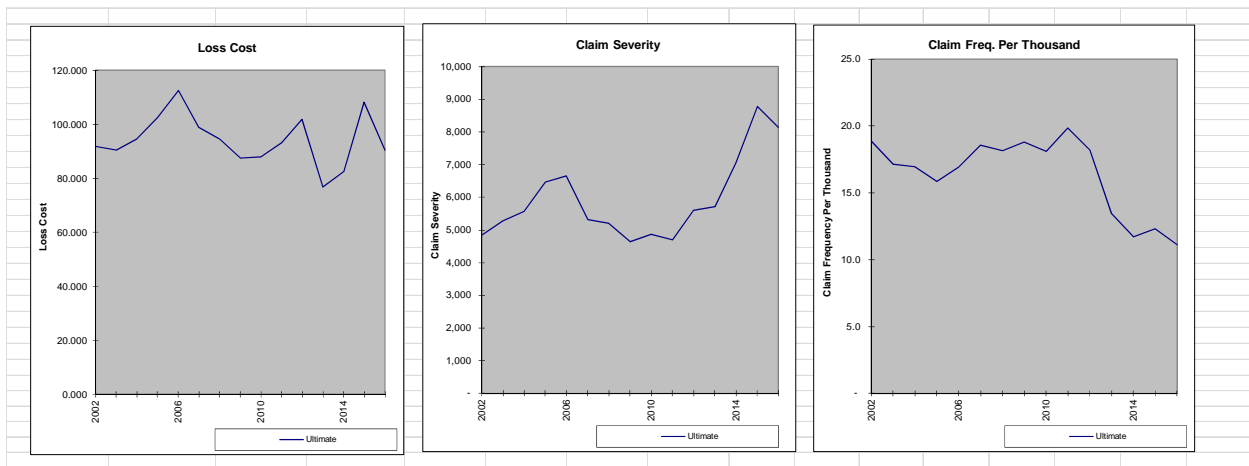
We, therefore, continue to select a loss cost trend rate of **0.0%**.

Property Damage (including DCPD)

Based on data as of December 31, 2015, we selected a past loss cost trend rate of -2.0%.

We estimate that the 2016 loss cost is 16% lower than the 2015 loss cost.

The following graphs display our estimate of the actual loss cost (average claim cost per vehicle), average severity (average claim cost per claim), and frequency rate (average claim incidence rate) over the period 2002 through 2016.



Subject to variability: severity has exhibited an upward trend since 2010/11, including the relatively large increases in 2014 and 2015 following the introduction of DCPD; following an upward trend from 2005 to 2011, frequency has declined since 2011 with relatively large declines in 2013 and 2014 following the introduction of DCPD; loss cost has exhibited a small downward trend, including a relatively large decline in 2013 following the introduction of DCPD, and a relatively large increase in 2015.

The loss cost variability can also be seen from the following January- December accident year-to-accident year loss cost changes:

2006 to 2007:	-8%
2007 to 2008:	-6%
2008 to 2009:	-7%
2009 to 2010:	+2%
2010 to 2011:	+4%
2011 to 2012:	+8%
2012 to 2013:	-24%
2013 to 2014:	+8%
2014 to 2015:	+32%
2015 to 2016:	-16%

The measured severity, frequency, and loss cost trends, associated Adjusted R-square values, p-values, and confidence intervals over various trend measurement periods ending 2016, with and without the 2015 spike, with and without a reform parameter at April 2013 (when DCPD was introduced) are presented in Exhibit 3.

We make the following observations about these measured trends.

Although the noted severity increase and frequency decrease following the April 2013 introduction of DCPD are each statistically significant, the level changes largely offset each other. We also note that the April 2013 reform parameter for loss cost is not significant except in a few cases when 2015 is excluded and the data points are relatively few in number. We, therefore, we assume the introduction of DCPD had no impact on loss cost and base our selection on the loss cost trends.

The measured loss cost trends over periods beginning 2004 and 2005 and ending 2016 (without the large spike 2015), with moderate Adjusted R-square and significant p-values, are approximately -2%.

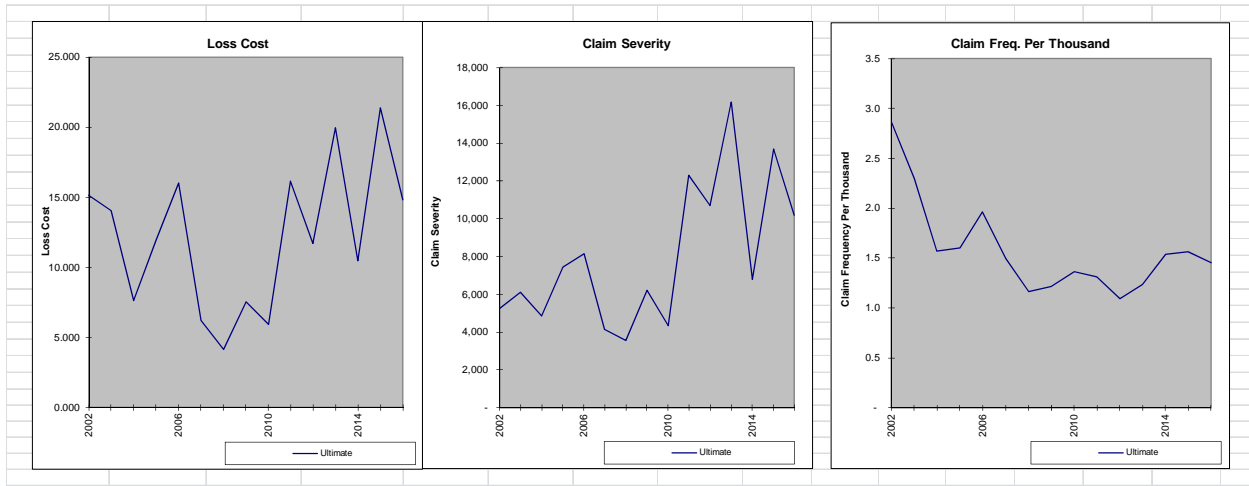
We select a loss cost trend of **-2.0%**; the same as our prior selection.

Accident Benefits (excluding Uninsured Auto)

Based on data as of December 31, 2015, we selected a past loss cost trend rate of +0.0%.

We estimate that the 2016 loss cost is 31% less than the 2015 loss cost. In this review, in an effort to reduce the variability we exclude the Uninsured Auto data² from our analysis and base our trend rates only on the Accident Benefits excluding Uninsured Auto data.

The following graphs display our estimate of the actual loss cost (average claim cost per vehicle), average severity (average claim cost per claim), and frequency rate (average claim incidence rate) over the period 2002 through 2016.



As can be seen in the above graphs, Accident Benefits claim costs have exhibited considerable variability – particularly loss cost and severity. Subject to this variability, severity has generally trended upward, including several sharp increases and decreases; frequency has been generally increasing since 2008; and loss cost has been generally increasing, although more modestly since 2011.

The high degree of variability can also be seen from the following January-December accident year-to-accident year loss cost changes:

² The Uninsured Auto averaged less than 5 claims a year.

2006 to 2007:	-61%
2007 to 2008:	-33%
2008 to 2009:	+82%
2009 to 2010:	-22%
2010 to 2011:	+172%
2011 to 2012:	-28%
2012 to 2013:	+71%
2013 to 2014:	-48%
2014 to 2015:	+104%
2015 to 2016:	-31%

The measured severity, frequency, and loss cost trends, associated Adjusted R-square values, p-values, and confidence intervals over these various trend measurement periods, with and without a reform parameter at April 2012, are presented in Exhibit 3.

Given the variability in experience, as well as the weak statistics for the April 2012 reform parameter, we continue to make no explicit reform adjustment.

Given the low claim volume (fewer than 100 claims a year) and noted high degree of variability in the claim experience, we base our selected trend rate on the Accident Benefits loss cost experience only.

We make the following observations about these measured trends.

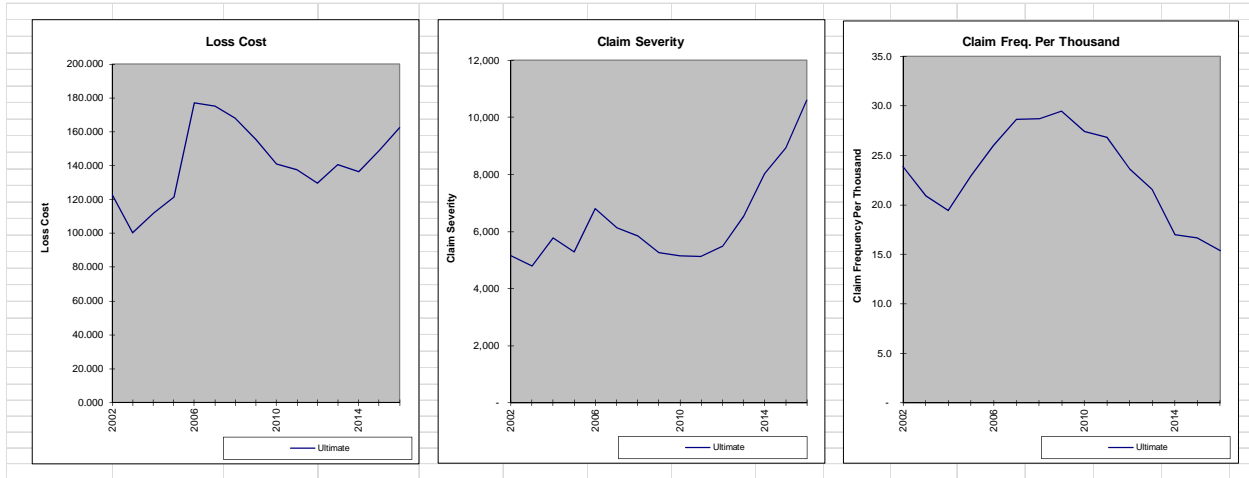
As noted, loss cost has generally trended upward (lower rate since 2011). However, the data points are quite variable (which is also evident from the regression statistics), and we particularly note the unexplained relatively low loss costs in 2007-2010 (compared to 2002-2006 and 2011-2016) which impact the measured trends. Given these results, we continue to select a past loss cost trend of **+0.0%**.

Collision

Based on data as of December 31, 2015, we selected a past loss cost trend rate of +0.0%.

We estimate that the 2016 loss cost is 9% higher than the 2015 loss cost.

The following graphs display our estimate of the actual loss cost (average claim cost per vehicle), average severity (average claim cost per claim), and frequency rate (average claim incidence rate) over the period 2002 through 2016.



Subject to variability (although seemingly less than other coverages): severity has been increasing since 2010/2011, including relatively large increases following the introduction of DCPD in 2013; frequency has been in decline since 2009 including relatively large decreases following the introduction of DCPD in 2013; and loss cost has generally exhibited an upward trend, particularly since 2012, including high loss costs over the period 2006 to 2009, and larger increases in 2015 and 2016.

The lower degree of loss cost variability than that of other coverages can also be seen from the following January- December accident year-to-accident year loss cost changes:

- 2006 to 2007: +4%
- 2007 to 2008: -5%
- 2008 to 2009: -7%
- 2009 to 2010: -8%
- 2010 to 2011: -4%
- 2011 to 2012: -7%
- 2012 to 2013: +9%
- 2013 to 2014: -2%
- 2014 to 2015: +10%
- 2015 to 2016: +9%

The measured severity, frequency, and loss cost trends, associated Adjusted R-square values, p-values, and confidence intervals over various trend measurement periods, with and without a reform parameter at April 2013, as well as excluding the 2006 to 2009 loss cost spike, are presented in Exhibit 3.

We make the following observations about these measured trends.

For reasons similar to those we stated for PD/DCPD, we assume the introduction of DCPD had an offsetting impact on severity (increase) and frequency (decrease), with no impact on loss cost and therefore consider the measured loss cost trends.

The measured loss cost trends are higher over the more recent periods, due to the impact of the loss cost increases in 2015 and 2016. We measure loss cost trend rates with significant p-values for time over 2011 to 2016 at +3.7% and 2012 to 2016 at +5.7%; and this difference is mainly due to 2012 as a low point (as seen the in the graphs above), with the decline from 2011 to 2012 at -7% (as noted above). However, these trends are heavily influenced by the more recent increases in the 2015 and 2016 data points that may be more of a reflection of the random nature of the claims. We find that over the longer time periods, and excluding the high level of loss costs from 2006 to 2009, the loss cost trends cluster around +2% with moderate Adjusted R-squares and significant p-values.

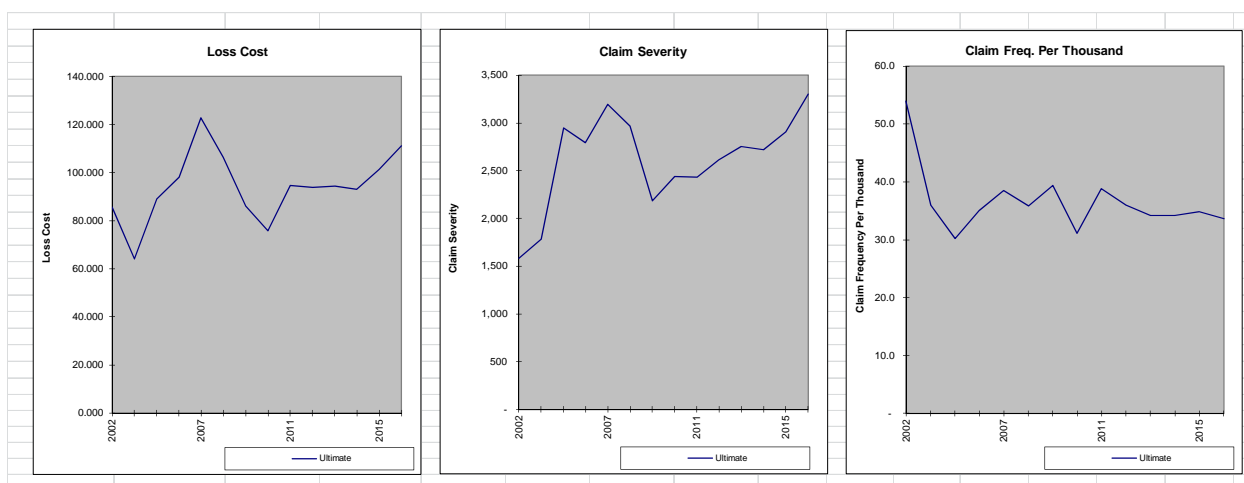
We select a loss cost trend rate of **+2%** based on the longer time periods; a two percentage point increase from our prior selection.

Comprehensive

Based on data as of December 31, 2015, we selected a past loss cost trend rate of +3.5%.

We estimate the 2016 loss cost is 10% higher than the 2015 loss cost.

The following graphs display our estimate of the actual loss cost (average claim cost per vehicle), average severity (average claim cost per claim), and frequency rate (average claim incidence rate) over the period 2002 through 2016.



Subject to considerable variability: severity has been increasing since 2009; frequency has been relatively flat (slight downward trend) since 2007, including a downward spike in 2010; and loss cost has been generally increasing, including an upward spike in 2007.

The degree of loss cost variability can also be seen from the following January- December accident year-to-accident year loss cost changes:

2006 to 2007:	+52%
2007 to 2008:	-14%
2008 to 2009:	-19%
2009 to 2010:	-11%
2010 to 2011:	+23%
2011 to 2012:	-2%
2012 to 2013:	+1%
2013 to 2014:	-1%
2014 to 2015:	+9%
2015 to 2016:	+10%

The measured severity, frequency, and loss cost trends, associated Adjusted R-square values, p-values, and confidence intervals over various trend measurement periods (including and excluding the high 2007 data point) are presented in Exhibit 3.

We make the following observations about these measured trends.

The measured severity trends beginning 2009 to 2012, ending 2016 have high Adjusted R-squares and significant p-values, and range from approximately +5% to +6%. We select a severity trend rate of +5.5%.

The measured frequency trends rates have low Adjusted R-square values, non-significant p-values, and wide confidence intervals over all time periods. However, with the exclusion of 2010 (the downward spike noted above), the measured frequency trend rates beginning 2007 through 2011 ending 2016 have moderate Adjusted R-square values, significant p-values, range from -1.5% to -2.4%. We select a frequency trend rate of -2.0%.

We select a past loss cost trend rate of **+3.5%** (rounded) based on our selected severity and frequency trend rates; the same as our prior selected loss cost trend rate.

Specified Perils

Due to insufficient data, we select the same past loss cost trend rate for Specified Perils as we do for Comprehensive, **+3.5%**.

All Perils

Due to insufficient data, we select a past loss cost trend rate of **+2.5%** for All Perils based on our selected values for Collision and Comprehensive.

Selected Of Future Trend Rates

The data is not credible enough to discern any changes in trend patterns that may have occurred over the past one to four years. Hence, for all coverages we select a future trend rate that is the same as our selected past trend rate.

Selected Trend Rates - Summary

The following table presents our selected past and future annual loss cost trend rates.

Coverage	Past Loss Cost	Future Loss Cost
Bodily Injury	+0.0%	+0.0%
Property Damage	-2.0%	-2.0%
Accident Benefits	+0.0%	+0.0%
Collision	+2.0%	+2.0%
Comprehensive	+3.5%	+3.5%
Specified Perils	+3.5%	+3.5%
All Perils	+2.5%	+2.5%

Reform Factors

Possibly due to the low data volume, there is no evidence of Bill 52 having an impact on claim costs as there is for private passenger vehicles. We, therefore, make no adjustment for Bill 52. This represents a change from our prior report.

Given the limited and volatile commercial automobile accident benefits claims experience, we make no direct adjustment to the Accident Benefit loss cost experience at this time for the FAIR Insurance reforms implemented in April 2012 or to the PD experience for the introduction of DCPD in April 2013.

Exhibits

In the Exhibit 1 we present our estimated loss cost, severity and frequency data points by accident half year and by accident year over the fifteen year period 2002-1 to 2016-2 for each coverage.

In Exhibit 2 we present our selected cumulative claim count and claim amount development factors.

In Exhibit 3 we present the summary of the measured loss trend rates over various time periods along with the associated regression statistics.



Paula Elliott, FCAS, FCIA



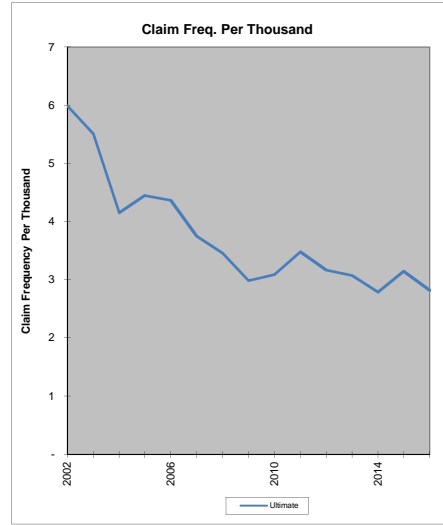
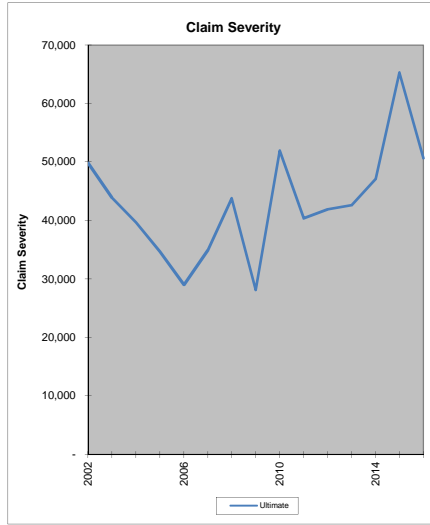
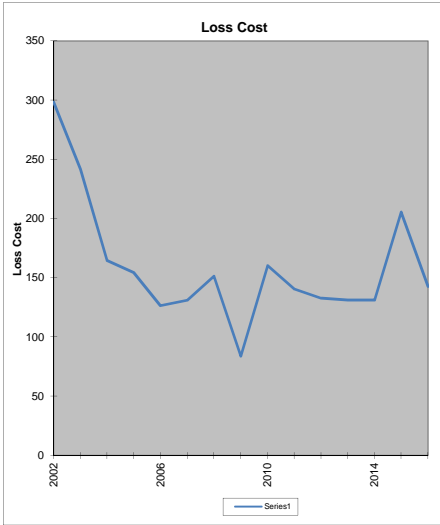
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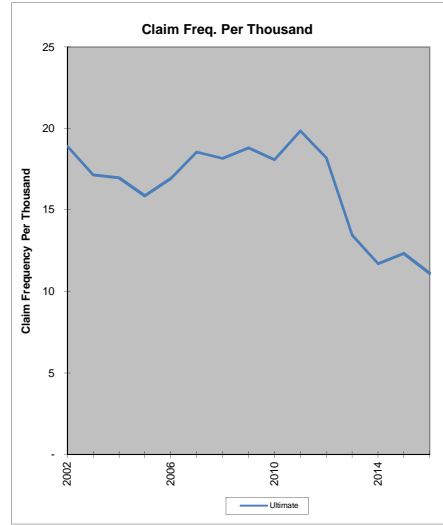
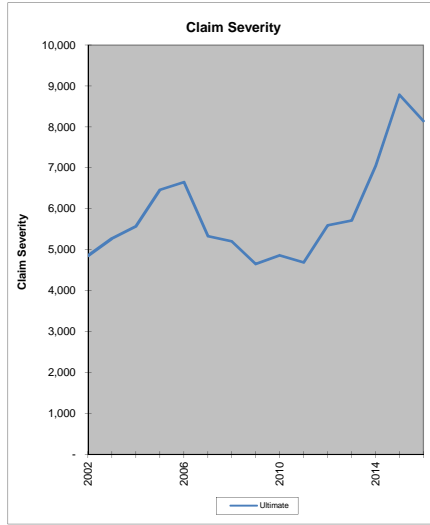
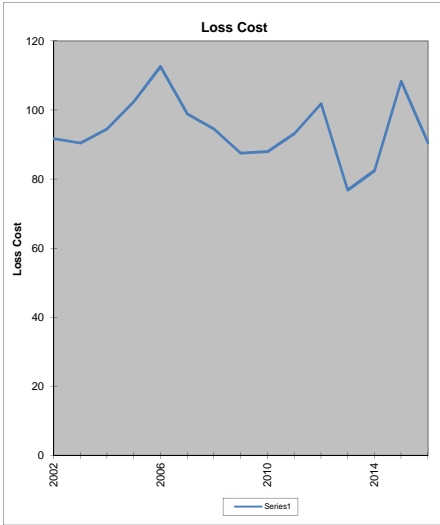
Third Party Liability - Bodily Injury

Accident Period	Time x	Earned Exposures	Ultimate Counts	Ultimate Losses	ULAE Adjustment	Ultimate Losses & LAE	Ultimate Loss Cost	Ultimate Severity	Ultimate Freq. per 1000
x 2002	1.5	45,745	274	12,622	1.082	13,657	298.54	49,841	5.99
x 2003	3.5	45,572	251	10,340	1.065	11,012	241.63	43,871	5.51
x 2004	5.5	47,458	197	7,254	1.077	7,813	164.62	39,659	4.15
x 2005	7.5	49,433	220	7,076	1.078	7,628	154.32	34,674	4.45
x 2006	9.5	49,718	217	5,522	1.140	6,296	126.62	29,012	4.36
x 2007	11.5	50,147	188	5,992	1.097	6,570	131.02	34,948	3.75
x 2008	13.5	50,923	176	7,014	1.099	7,705	151.30	43,776	3.46
x 2009	15.5	51,253	153	3,894	1.105	4,302	83.94	28,118	2.99
x 2010	17.5	50,791	157	7,446	1.095	8,150	160.46	51,910	3.09
x 2011	19.5	51,979	181	6,615	1.106	7,313	140.69	40,402	3.48
x 2012	21.5	54,009	171	6,469	1.108	7,165	132.67	41,902	3.17
x 2013	23.5	54,085	166	6,412	1.105	7,087	131.03	42,631	3.07
x 2014	25.5	54,472	152	6,559	1.090	7,151	131.28	47,119	2.79
x 2015	27.5	55,803	176	10,655	1.076	11,462	205.41	65,283	3.15
x 2016	29.5	56,468	159	7,367	1.095	8,064	142.81	50,644	2.82



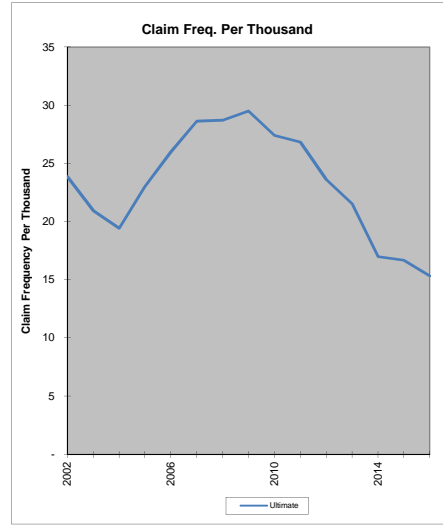
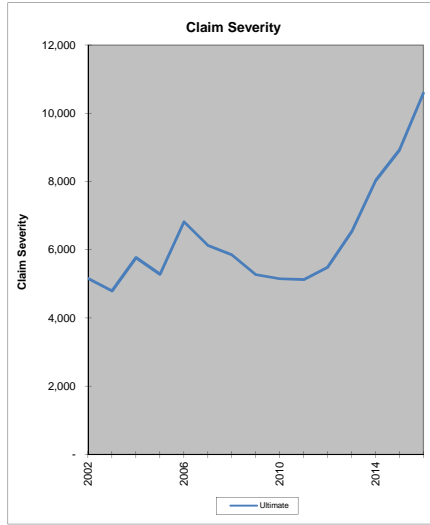
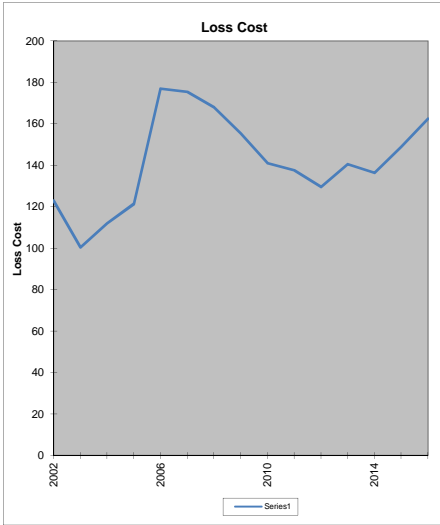
Third Party Liability - Property Damage

Accident Period	Time x	Earned Exposures	Ultimate Counts	Ultimate Losses	ULAE Adjustment	Ultimate Losses & LAE	Ultimate Loss Cost	Ultimate Severity	Ultimate Freq. per 1000	
x	2002	1.5	45,745	865	3,881	1,082	4,199	91.79	4,854	18.91
x	2003	3.5	45,572	781	3,872	1,065	4,123	90.48	5,280	17.14
x	2004	5.5	47,458	805	4,167	1,077	4,488	94.56	5,575	16.96
x	2005	7.5	49,433	784	4,699	1,078	5,065	102.47	6,461	15.86
x	2006	9.5	49,718	842	4,913	1,140	5,601	112.65	6,652	16.94
x	2007	11.5	50,147	931	4,523	1,097	4,960	98.91	5,328	18.57
x	2008	13.5	50,923	925	4,381	1,099	4,812	94.50	5,203	18.16
x	2009	15.5	51,253	964	4,058	1,105	4,484	87.49	4,652	18.81
x	2010	17.5	50,791	919	4,084	1,095	4,470	88.00	4,864	18.09
x	2011	19.5	51,979	1,032	4,381	1,106	4,843	93.18	4,692	19.86
x	2012	21.5	54,009	983	4,967	1,108	5,501	101.86	5,594	18.21
x	2013	23.5	54,085	728	3,762	1,105	4,158	76.88	5,712	13.46
x	2014	25.5	54,472	638	4,123	1,090	4,496	82.53	7,051	11.71
x	2015	27.5	55,803	688	5,619	1,076	6,045	108.33	8,787	12.33
x	2016	29.5	56,468	628	4,669	1,095	5,112	90.52	8,141	11.12



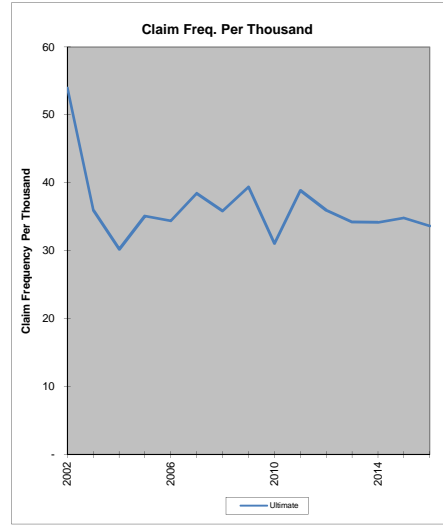
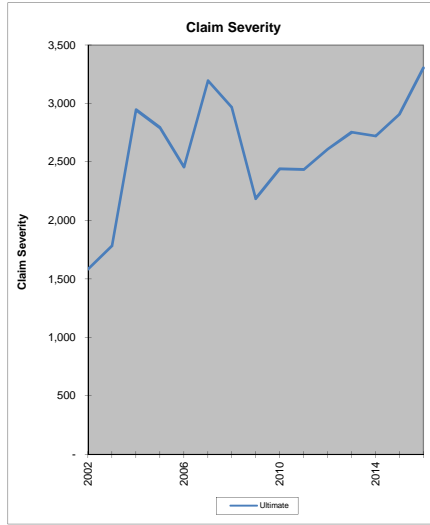
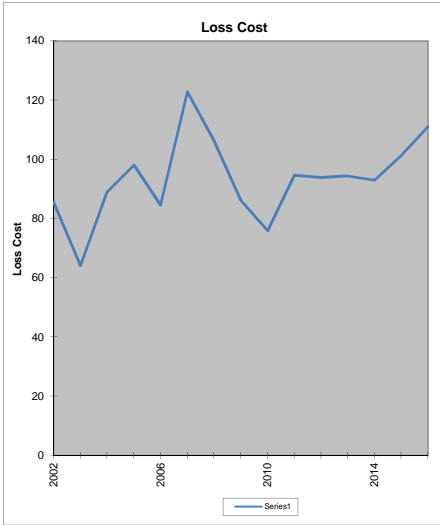
Collision

Accident Period	Time x	Earned Exposures	Ultimate Counts	Ultimate Losses	ULAE Adjustment	Ultimate Losses & LAE	Ultimate Loss Cost	Ultimate Severity	Ultimate Freq. per 1000
x 2002	1.5	12,453	297	1,416	1.082	1,532	123.02	5,158	23.85
x 2003	3.5	12,034	252	1,134	1.065	1,208	100.38	4,794	20.94
x 2004	5.5	12,149	236	1,264	1.077	1,361	112.05	5,768	19.43
x 2005	7.5	12,521	288	1,411	1.078	1,521	121.46	5,281	23.00
x 2006	9.5	12,975	337	2,015	1.140	2,297	177.02	6,816	25.97
x 2007	11.5	13,663	391	2,185	1.097	2,397	175.41	6,129	28.62
x 2008	13.5	13,970	401	2,138	1.099	2,348	168.08	5,856	28.70
x 2009	15.5	14,007	413	1,970	1.105	2,176	155.37	5,269	29.49
x 2010	17.5	14,198	389	1,829	1.095	2,002	141.01	5,147	27.40
x 2011	19.5	14,457	388	1,799	1.106	1,989	137.58	5,126	26.84
x 2012	21.5	14,767	349	1,729	1.108	1,915	129.68	5,491	23.62
x 2013	23.5	15,035	324	1,913	1.105	2,114	140.61	6,531	21.53
x 2014	25.5	15,393	262	1,926	1.090	2,100	136.44	8,030	16.99
x 2015	27.5	15,875	265	2,198	1.076	2,364	148.92	8,920	16.70
x 2016	29.5	16,377	251	2,432	1.095	2,662	162.55	10,593	15.35



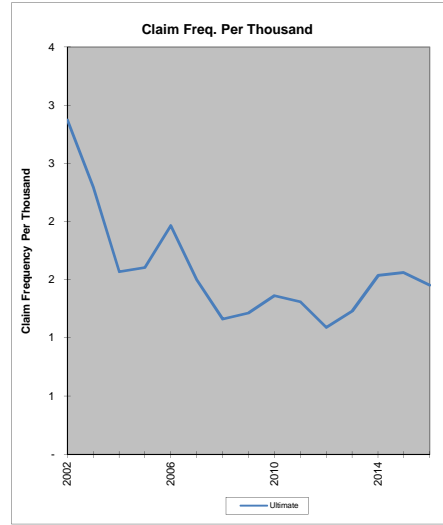
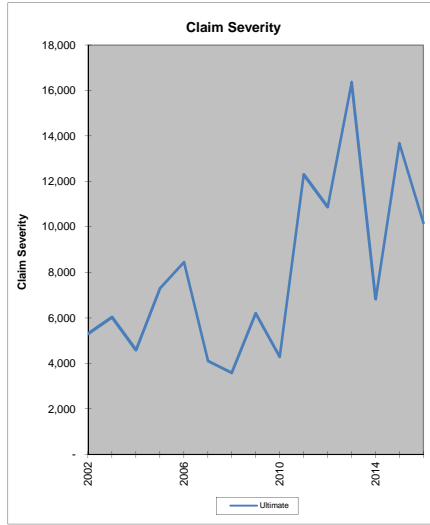
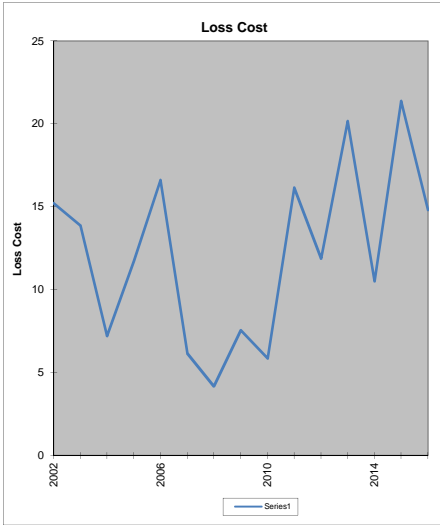
Comprehensive

Accident Period	Time x	Earned Exposures	Ultimate Counts	Ultimate Losses	ULAE Adjustment	Ultimate Losses & LAE	Ultimate Loss Cost	Ultimate Severity	Ultimate Freq. per 1000
x 2002	1.5	17,479	943	1,381	1.082	1,495	85.51	1,585	53.95
x 2003	3.5	16,845	606	1,015	1.065	1,081	64.17	1,784	35.97
x 2004	5.5	16,618	502	1,374	1.077	1,479	89.02	2,947	30.21
x 2005	7.5	16,664	585	1,516	1.078	1,634	98.08	2,794	35.11
x 2006	9.5	17,083	588	1,267	1.140	1,445	84.57	2,457	34.42
x 2007	11.5	17,627	678	1,975	1.097	2,166	122.87	3,194	38.46
x 2008	13.5	18,020	646	1,746	1.099	1,918	106.42	2,969	35.85
x 2009	15.5	18,192	717	1,419	1.105	1,567	86.16	2,186	39.41
x 2010	17.5	18,531	576	1,285	1.095	1,406	75.87	2,441	31.08
x 2011	19.5	18,857	733	1,614	1.106	1,785	94.64	2,435	38.87
x 2012	21.5	19,235	692	1,631	1.108	1,806	93.89	2,610	35.98
x 2013	23.5	19,451	666	1,661	1.105	1,835	94.36	2,756	34.24
x 2014	25.5	19,827	677	1,691	1.090	1,844	93.00	2,722	34.17
x 2015	27.5	20,359	709	1,917	1.076	2,063	101.32	2,909	34.83
x 2016	29.5	21,030	707	2,134	1.095	2,336	111.09	3,303	33.63



Accident Benefits - Excluding Uninsured

Accident Period	Time x	Earned Exposures	Ultimate Counts	Ultimate Losses	ULAE Adjustment	Ultimate Losses & LAE	Ultimate Loss Cost	Ultimate Severity	Ultimate Freq. per 1000
x 2002	1.5	44,926	129	632	1.082	684	15.22	5,302	2.87
x 2003	3.5	44,877	103	584	1.065	622	13.87	6,042	2.30
x 2004	5.5	46,522	73	311	1.077	335	7.21	4,593	1.57
x 2005	7.5	48,596	78	528	1.078	569	11.71	7,298	1.61
x 2006	9.5	48,838	96	712	1.140	811	16.61	8,451	1.97
x 2007	11.5	49,311	74	277	1.097	304	6.16	4,108	1.50
x 2008	13.5	50,730	59	192	1.099	211	4.17	3,584	1.16
x 2009	15.5	51,040	62	349	1.105	385	7.55	6,212	1.21
x 2010	17.5	50,541	69	270	1.095	296	5.86	4,290	1.37
x 2011	19.5	51,856	68	757	1.106	837	16.14	12,308	1.31
x 2012	21.5	53,949	59	579	1.108	641	11.88	10,879	1.09
x 2013	23.5	54,042	67	986	1.105	1,090	20.16	16,362	1.23
x 2014	25.5	54,150	83	522	1.090	569	10.51	6,831	1.54
x 2015	27.5	55,057	86	1,094	1.076	1,177	21.37	13,680	1.56
x 2016	29.5	55,670	81	753	1.095	825	14.81	10,192	1.45



**Oliver Wyman Selected Age-to-Ultimate Development Factors
As of December 31, 2016
Nova Scotia
Commercial Automobile (Excluding Farmers)**

**As of 2016-2
Age-to-Ultimate Factors
Incurred Claim Amount**

	Bodily Injury	Property Damage and DCPD	Accident Benefits Excluding Uninsured	Collision	Compre-hensive
180-Ult	1.000	1.000	1.000	1.000	1.000
174-Ult	1.000	1.000	1.000	1.000	1.000
168-Ult	1.000	1.000	1.000	1.000	1.000
162-Ult	1.000	1.000	1.000	1.000	1.000
156-Ult	1.000	1.000	1.000	1.000	1.000
150-Ult	1.000	1.000	1.000	1.000	1.000
144-Ult	1.000	1.000	1.000	1.000	1.000
138-Ult	1.000	1.000	1.000	1.000	1.000
132-Ult	1.000	1.000	1.000	1.000	1.000
126-Ult	1.000	1.000	1.000	1.000	1.000
120-Ult	1.000	1.000	1.000	1.000	1.000
114-Ult	1.000	1.000	1.000	1.000	1.000
108-Ult	0.999	1.000	1.001	1.000	1.000
102-Ult	0.995	0.992	0.999	1.000	1.000
96-Ult	0.991	0.995	0.999	1.000	1.000
90-Ult	1.005	0.990	0.999	1.000	1.000
84-Ult	1.022	0.992	0.999	1.000	1.000
78-Ult	1.023	0.993	0.999	1.000	1.000
72-Ult	1.005	0.987	1.005	1.000	1.000
66-Ult	1.007	0.975	1.012	1.000	1.000
60-Ult	1.012	0.980	1.015	1.000	1.000
54-Ult	1.015	0.980	1.024	1.000	1.000
48-Ult	1.035	0.986	1.030	1.000	1.000
42-Ult	1.088	0.977	1.078	0.999	1.000
36-Ult	1.134	0.974	1.099	0.996	1.000
30-Ult	1.242	0.963	1.095	0.994	1.000
24-Ult	1.353	0.948	1.237	0.991	0.999
18-Ult	1.461	0.934	1.206	0.981	0.993
12-Ult	1.571	0.950	1.103	0.978	0.991
6-Ult	2.018	1.091	1.080	0.940	1.062

Oliver Wyman Selected Age-to-Ultimate Development Factors
As of December 31, 2016
Nova Scotia
Commercial Automobile (Excluding Farmers)

As of 2016-2
Age-to-Ultimate Factors
Incurred Claim Count

	Bodily Injury	Property Damage and DCPD	Accident Benefits Excluding Uninsured	Collision	Compre-hensive
180-Ult	1.000	1.000	1.000	1.000	1.000
174-Ult	1.000	1.000	1.000	1.000	1.000
168-Ult	1.000	1.000	1.000	1.000	1.000
162-Ult	1.000	1.000	1.000	1.000	1.000
156-Ult	1.000	1.000	1.000	1.000	1.000
150-Ult	1.000	1.000	1.000	1.000	1.000
144-Ult	1.000	1.000	1.000	1.000	1.000
138-Ult	1.000	1.000	1.000	1.000	1.000
132-Ult	1.000	1.000	1.000	1.000	1.000
126-Ult	1.000	1.000	1.000	1.000	1.000
120-Ult	1.000	1.000	1.000	1.000	1.000
114-Ult	1.000	1.000	1.000	1.000	1.000
108-Ult	1.000	1.000	1.000	1.000	1.000
102-Ult	1.000	1.000	1.000	1.000	1.000
96-Ult	1.000	1.000	1.000	1.000	1.000
90-Ult	1.000	1.000	1.000	1.000	1.000
84-Ult	1.000	1.000	1.000	1.000	1.000
78-Ult	1.000	1.000	1.000	1.000	1.000
72-Ult	1.000	1.000	1.000	1.000	1.000
66-Ult	1.000	1.000	1.000	1.000	1.000
60-Ult	1.000	1.000	0.998	1.000	1.000
54-Ult	1.000	1.000	1.000	0.999	1.000
48-Ult	1.000	1.000	0.995	0.999	1.000
42-Ult	1.003	1.000	0.993	0.999	1.000
36-Ult	1.001	1.000	0.987	0.999	1.000
30-Ult	1.008	1.002	0.973	0.998	1.001
24-Ult	0.980	1.005	0.973	0.996	1.002
18-Ult	0.947	1.007	0.962	0.988	1.001
12-Ult	0.906	1.016	0.876	0.975	1.007
6-Ult	0.913	1.010	0.756	0.887	1.165

**Province of Nova Scotia
Commercial Vehicles
Industry Data as of December 31, 2016**

Bodily Injury

**Ending 2014
No Exclusions**

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2014	-1.6	+4.2	-0.02	40.5%	2.7	+4.1	0.11	17.2%	-4.2	+1.7	0.75	0.0%
2005-2014	-0.5	+4.9	-0.12	82.2%	4.1	+4.7	0.27	7.2%	-4.4	+2.1	0.71	0.1%
2006-2014	0.8	+6	-0.13	77.5%	4.9	+5.9	0.27	8.5%	-3.9	+2.5	0.6	0.8%
2007-2014	0.4	+8	-0.16	90.0%	3.3	+7.2	0.04	29.8%	-2.8	+2.7	0.43	4.5%
2008-2014	0.8	+11.3	-0.19	86.2%	2.9	+10.1	-0.08	49.3%	-2	+3.4	0.16	20.0%
2009-2014	4.3	+16	-0.09	49.1%	5.6	+14.5	0.05	32.7%	-1.3	+5.1	-0.11	51.8%
2010-2014	-5	+5.6	0.63	6.8%	-1.8	+12.1	-0.24	67.1%	-3.3	+6.7	0.25	22.5%
2011-2014	-2.2	+5.7	0.37	23.9%	4.8	+6.7	0.75	8.6%	-6.7	+3.8	0.95	1.8%
2012-2014	0.1	+5.9	-0.95	90.3%	6.7	+33.6	0.75	23.0%	-6.2	+23.8	0.83	19.1%

**Ending 2014
Excluding 2009 and 2015**

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2014	-1.6	+2.4	0.14	15.4%	2.7	+3.5	0.19	11.6%	-4.2	+1.4	0.84	0.0%
2005-2014	-0.8	+2.6	-0.06	49.6%	3.9	+4	0.36	5.1%	-4.5	+1.6	0.84	0.0%
2006-2014	-0.1	+3.2	-0.17	96.4%	4.3	+5.2	0.32	8.4%	-4.2	+2	0.77	0.3%
2007-2014	-1.5	+3.5	0.02	33.8%	1.9	+5.3	-0.03	39.9%	-3.3	+2.2	0.68	1.3%
2008-2014	-3.4	+3.4	0.55	5.5%	-0.5	+6.3	-0.23	83.2%	-2.9	+3.4	0.47	7.9%
2009-2014	-5	+5.6	0.63	6.8%	-1.8	+12.1	-0.24	67.1%	-3.3	+6.7	0.25	22.5%
2010-2014	-5	+5.6	0.63	6.8%	-1.8	+12.1	-0.24	67.1%	-3.3	+6.7	0.25	22.5%
2011-2014	-2.2	+5.7	0.37	23.9%	4.8	+6.7	0.75	8.6%	-6.7	+3.8	0.95	1.8%
2012-2014	0.1	+5.9	-0.95	90.3%	6.7	+33.6	0.75	23.0%	-6.2	+23.8	0.83	19.1%

**Ending 2015
No Exclusions**

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2015	0.3	+4.3	-0.1	86.2%	4.1	+3.9	0.3	3.8%	-3.6	+1.6	0.69	0.0%
2005-2015	1.6	+4.9	-0.04	46.5%	5.6	+4.2	0.45	1.4%	-3.7	+1.9	0.64	0.2%
2006-2015	3.1	+5.8	0.06	24.2%	6.5	+5.1	0.47	1.7%	-3.2	+2.2	0.51	1.2%
2007-2015	3.4	+7.4	0.02	30.9%	5.6	+6.3	0.31	7.0%	-2.1	+2.2	0.32	6.4%
2008-2015	4.4	+9.8	0.04	30.3%	5.8	+8.5	0.22	13.6%	-1.3	+2.6	0.06	27.1%
2009-2015	8.1	+12.3	0.26	14.0%	8.7	+10.8	0.38	8.2%	-0.6	+3.5	-0.15	66.6%
2010-2015	2.7	+13.4	-0.15	59.4%	4.6	+12.9	0	37.1%	-1.7	+4.6	0.01	36.2%
2011-2015	7.9	+19.8	0.16	27.8%	11.5	+13	0.66	5.9%	-3.3	+6.8	0.24	22.9%
2012-2015	14.7	+39.5	0.4	22.4%	16	+24.9	0.73	9.6%	-1.2	+13.4	-0.4	74.6%
2013-2015	25.9	+306.9	0.53	32.3%	24.4	+113.5	0.84	18.2%	1.2	+90.7	-0.93	88.4%

Ending 2015
Excluding 2009 and 2015

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2015	-1.6	+2.4	0.14	15.4%	2.7	+3.5	0.19	11.6%	-4.2	+1.4	0.84	0.0%
2005-2015	-0.8	+2.6	-0.06	49.6%	3.9	+4	0.36	5.1%	-4.5	+1.6	0.84	0.0%
2006-2015	-0.1	+3.2	-0.17	96.4%	4.3	+5.2	0.32	8.4%	-4.2	+2	0.77	0.3%
2007-2015	-1.5	+3.5	0.02	33.8%	1.9	+5.3	-0.03	39.9%	-3.3	+2.2	0.68	1.3%
2008-2015	-3.4	+3.4	0.55	5.5%	-0.5	+6.3	-0.23	83.2%	-2.9	+3.4	0.47	7.9%
2009-2015	-5	+5.6	0.63	6.8%	-1.8	+12.1	-0.24	67.1%	-3.3	+6.7	0.25	22.5%
2010-2015	-5	+5.6	0.63	6.8%	-1.8	+12.1	-0.24	67.1%	-3.3	+6.7	0.25	22.5%
2011-2015	-2.2	+5.7	0.37	23.9%	4.8	+6.7	0.75	8.6%	-6.7	+3.8	0.95	1.8%
2012-2015	0.1	+5.9	-0.95	90.3%	6.7	+33.6	0.75	23.0%	-6.2	+23.8	0.83	19.1%

Ending 2016
No Exclusions

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2016	0.3	+3.6	-0.09	84.3%	4	+3.3	0.35	2.0%	-3.5	+1.3	0.73	0.0%
2005-2016	1.4	+4	-0.04	45.1%	5.1	+3.5	0.48	0.7%	-3.5	+1.6	0.68	0.1%
2006-2016	2.6	+4.6	0.06	23.8%	5.8	+4.2	0.49	1.0%	-3.1	+1.8	0.58	0.4%
2007-2016	2.7	+5.8	0.02	31.4%	5	+5	0.34	4.6%	-2.2	+1.7	0.45	2.0%
2008-2016	3.3	+7.4	0.02	31.9%	5	+6.4	0.25	9.9%	-1.6	+2	0.25	9.9%
2009-2016	5.7	+9.1	0.18	16.6%	7	+7.9	0.36	6.7%	-1.2	+2.6	0.04	30.4%
2010-2016	1.3	+8.9	-0.16	71.2%	3.6	+8.5	0.03	32.1%	-2.1	+3.1	0.26	13.7%
2011-2016	4.2	+12.3	-0.01	38.7%	7.8	+9.3	0.49	7.4%	-3.3	+3.9	0.47	8.0%
2012-2016	6.6	+21.1	0.02	37.8%	8.8	+16.2	0.37	16.7%	-2.1	+5.9	0.05	35.1%
2013-2016	7.7	+51.2	-0.21	55.9%	9.2	+38.7	0.06	39.0%	-1.4	+13.6	-0.37	71.0%
2014-2016	4.5	+1035.8	-0.93	88.2%	3.9	+436	-0.9	85.9%	0.6	+95.9	-0.98	94.3%

Ending 2016
Excluding 2009 and 2015

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2004-2016	-1.1	+1.9	0.07	21.9%	2.9	+2.8	0.32	4.2%	-3.9	+1.1	0.85	0.0%
2005-2016	-0.4	+2.1	-0.09	65.0%	3.8	+3	0.47	1.7%	-4.1	+1.3	0.84	0.0%
2006-2016	0.2	+2.4	-0.14	84.0%	4.2	+3.8	0.43	3.3%	-3.8	+1.6	0.79	0.1%
2007-2016	-0.7	+2.6	-0.09	52.9%	2.4	+3.7	0.18	16.0%	-3	+1.5	0.75	0.3%
2008-2016	-1.7	+3	0.15	20.8%	1	+4.4	-0.12	58.4%	-2.7	+2.1	0.62	2.3%
2009-2016	-1.7	+4.9	-0.01	38.9%	1.1	+7.1	-0.19	69.0%	-2.8	+3.4	0.45	8.7%
2010-2016	-1.7	+4.9	-0.01	38.9%	1.1	+7.1	-0.19	69.0%	-2.8	+3.4	0.45	8.7%
2011-2016	0.6	+4.3	-0.25	68.3%	5	+2.4	0.92	0.6%	-4.2	+3.7	0.74	3.9%
2012-2016	2.4	+4	0.66	11.9%	5.6	+4.1	0.92	2.7%	-3	+6	0.55	16.4%
2013-2016	3.5	+11.5	0.88	16.0%	5.9	+23.1	0.84	18.3%	-2.3	+32.6	-0.08	52.6%

Property Damage & DCPD

Province of Nova Scotia
Commercial Vehicles
Industry Data as of December 31, 2016

No April 2013 Reform

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	-0.6	+1.3	0.01	31.3%	2.2	+2.3	0.19	5.7%	-2.8	+1.9	0.39	0.8%
2003-2016	-0.9	+1.4	0.05	22.0%	2.1	+2.7	0.13	11.1%	-2.9	+2.2	0.36	1.4%
2004-2016	-1.2	+1.6	0.11	14.0%	2.2	+3.2	0.11	14.3%	-3.3	+2.5	0.39	1.4%
2005-2016	-1.2	+1.9	0.08	18.9%	2.8	+3.7	0.15	11.6%	-3.9	+2.8	0.44	1.1%
2006-2016	-1	+2.3	0	34.5%	4.3	+4	0.34	3.6%	-5.1	+2.9	0.59	0.4%
2007-2016	-0.4	+2.7	-0.11	76.8%	6.3	+3.8	0.62	0.4%	-6.3	+2.9	0.71	0.1%
2008-2016	0.2	+3.4	-0.14	89.3%	8	+4	0.74	0.2%	-7.2	+3.4	0.74	0.2%
2009-2016	0.7	+4.5	-0.14	72.4%	10.1	+3.9	0.86	0.1%	-8.5	+3.7	0.8	0.2%
2010-2016	0.5	+6.3	-0.19	83.2%	11.3	+4.9	0.86	0.2%	-9.7	+4.7	0.81	0.4%
2011-2016	0.5	+9.6	-0.24	89.6%	13.3	+6.2	0.89	0.3%	-11.3	+5.9	0.83	0.8%
2012-2016	1.5	+16.8	-0.3	79.1%	13	+10.8	0.79	2.7%	-10.2	+10	0.68	5.5%

No April 2013 Reform
Excluding 2015

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	-1.1	+1.2	0.19	6.8%	1.5	+2.3	0.07	18.2%	-2.5	+2.1	0.31	2.3%
2003-2016	-1.4	+1.3	0.28	3.5%	1.2	+2.6	0.01	32.3%	-2.6	+2.4	0.27	4.0%
2004-2016	-1.8	+1.4	0.42	1.4%	1.2	+3.1	-0.02	39.1%	-3.1	+2.8	0.3	3.7%
2005-2016	-2	+1.6	0.4	2.2%	1.7	+3.7	0.01	31.7%	-3.7	+3.2	0.35	3.1%
2006-2016	-1.9	+2	0.3	5.9%	3.1	+4	0.2	10.9%	-4.9	+3.4	0.52	1.1%
2007-2016	-1.4	+2.4	0.1	21.7%	5.1	+3.7	0.56	1.2%	-6.2	+3.5	0.66	0.5%
2008-2016	-0.9	+3	-0.06	47.3%	6.8	+3.9	0.73	0.4%	-7.2	+4.1	0.7	0.6%
2009-2016	-0.7	+4.1	-0.16	69.4%	8.8	+3.4	0.89	0.1%	-8.7	+4.7	0.77	0.6%
2010-2016	-1.1	+6	-0.17	63.7%	9.9	+4.2	0.9	0.2%	-10	+6.1	0.78	1.2%
2011-2016	-1.5	+9.8	-0.23	65.6%	11.7	+4.6	0.95	0.3%	-11.8	+8.2	0.82	2.3%
2012-2016	-0.8	+21.1	-0.48	88.2%	11.1	+9.4	0.9	3.3%	-10.7	+17.1	0.65	12.4%

With April 2013 Reform Parameter

Date	Loss Cost						Severity						Frequency					
	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level
2002-2016	-0.2	+2.1	-0.05	84.6%	57.4%	0.9445	-1	+2.7	0.55	41.4%	0.5%	1.5383	0.9	+1.2	0.91	13.9%	0.0%	0.614
2003-2016	-0.6	+2.5	-0.03	63.1%	74.4%	0.9651	-2	+2.9	0.59	16.1%	0.3%	1.6301	1.5	+1.2	0.94	1.7%	0.0%	0.592
2004-2016	-1.1	+2.9	0.02	40.6%	98.2%	0.9973	-2.8	+3.4	0.62	10.3%	0.3%	1.7042	1.7	+1.4	0.94	2.3%	0.0%	0.5852
2005-2016	-1.3	+3.7	-0.02	46.4%	98.0%	1.0034	-3	+4.3	0.61	15.2%	0.6%	1.7258	1.8	+1.8	0.94	4.6%	0.0%	0.5814
2006-2016	-0.8	+4.8	-0.12	71.0%	90.2%	0.9816	-1.7	+5.4	0.64	48.2%	1.9%	1.6199	0.9	+2	0.95	29.3%	0.0%	0.606
2007-2016	1.1	+6	-0.2	68.5%	53.6%	0.904	1.1	+6.1	0.75	69.5%	5.8%	1.4317	0	+2.2	0.97	99.1%	0.0%	0.6314
2008-2016	3.3	+7.8	-0.1	32.6%	30.2%	0.827	3.4	+8	0.78	32.9%	17.2%	1.3064	-0.1	+3.1	0.96	96.6%	0.1%	0.6331
2009-2016	6.3	+10.4	0.09	16.7%	17.2%	0.7476	7.3	+9.7	0.85	10.2%	45.9%	1.1456	-0.9	+4.2	0.96	60.8%	0.3%	0.6526
2010-2016	8.3	+15.4	0.09	19.5%	18.6%	0.7077	9.7	+14	0.83	11.3%	74.1%	1.0713	-1.3	+6.3	0.96	60.0%	1.4%	0.6606
2011-2016	9.7	+23.7	0.03	26.2%	24.0%	0.6886	13.2	+18.4	0.85	9.2%	98.7%	1.0035	-3.1	+7.3	0.97	27.2%	2.4%	0.6863
2012-2016	10.2	+41.3	-0.15	37.1%	36.0%	0.693	13	+31.9	0.69	20.0%	99.8%	1.0007	-2.4	+10.5	0.95	42.4%	5.6%	0.6925

With April 2013 Reform Parameter
Excluding 2015

Date	Loss Cost						Severity						Frequency					
	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	LVI Ch Val: Level
2002-2016	-0.2	+1.6	0.29	80.5%	12.8%	0.8738	-1	+2.6	0.42	39.6%	1.5%	1.4487	0.9	+1.2	0.9	14.3%	0.0%	0.6032
2003-2016	-0.6	+1.9	0.33	53.2%	22.2%	0.8931	-2	+2.8	0.49	14.2%	0.7%	1.5351	1.5	+1.2	0.93	1.8%	0.0%	0.5818
2004-2016	-1.2	+2.2	0.4	27.0%	39.7%	0.9234	-2.8	+3.3	0.53	8.6%	0.6%	1.6052	1.7	+1.4	0.93	2.5%	0.0%	0.5753
2005-2016	-1.3	+2.9	0.37	32.3%	49.3%	0.9302	-3.1	+4.1	0.52	13.1%	1.1%	1.6271	1.8	+1.8	0.93	5.0%	0.0%	0.5717
2006-2016	-0.9	+3.7	0.27	58.8%	44.8%	0.9123	-1.8	+5.2	0.55	43.9%	3.2%	1.531	0.9	+2	0.95	29.7%	0.0%	0.5959
2007-2016	0.9	+4.3	0.25	62.7%	17.2%	0.8443	0.9	+5.6	0.71	70.2%	7.7%	1.3595	0	+2.1	0.97	97.2%	0.0%	0.621
2008-2016	3	+4.9	0.42	17.0%	5.8%	0.7784	3.1	+7.2	0.77	30.7%	20.2%	1.2482	-0.1	+3.1	0.97	91.3%	0.1%	0.6236
2009-2016	5.7	+4.9	0.74	2.9%	1.3%	0.7121	6.8	+8	0.88	7.1%	48.7%	1.1055	-1.1	+4.2	0.97	52.5%	0.4%	0.6442
2010-2016	7.1	+6.9	0.79	4.3%	2.2%	0.6845	8.9	+12.1	0.87	9.3%	78.2%	1.0458	-1.6	+6.8	0.96	51.3%	1.9%	0.6545
2011-2016	8	+12.7	0.78	10.7%	6.1%	0.674	12	+15.8	0.92	7.4%	93.5%	0.9889	-3.6	+6.1	0.99	13.1%	2.0%	0.6816
2012-2016	8.2	+57.2	0.65	29.9%	22.4%	0.6758	11.5	+69.2	0.81	25.5%	93.6%	0.9833	-3	+7.7	1	12.9%	3.8%	0.6872

Accident Benefits
Excluding UA

Province of Nova Scotia
Commercial Vehicles
Industry Data as of December 31, 2016

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	2.7	+6.5	-0.01	38.5%	6.4	+5.3	0.31	1.8%	-3.5	+2.7	0.33	1.4%
2003-2016	4.4	+7.2	0.06	20.5%	6.9	+6.1	0.29	2.7%	-2.3	+2.6	0.18	7.5%
2004-2016	6.5	+8.1	0.17	9.2%	7.8	+7.2	0.31	2.9%	-1.2	+2.6	0	32.8%
2005-2016	6.8	+9.7	0.13	13.7%	7.9	+8.6	0.25	5.8%	-1.1	+3.1	-0.04	46.4%
2006-2016	9.5	+11.4	0.23	8.0%	10.2	+10.1	0.32	4.0%	-0.6	+3.7	-0.09	70.8%
2007-2016	15.8	+10.5	0.59	0.6%	14.1	+11.3	0.48	1.5%	1.5	+3.2	0.02	30.5%
2008-2016	17.3	+13.5	0.55	1.3%	13.8	+14.5	0.37	4.8%	3.1	+3.2	0.36	5.1%
2009-2016	13.1	+15.7	0.35	7.2%	9.8	+17.3	0.14	19.6%	3.1	+4.2	0.24	12.2%
2010-2016	12.1	+21.9	0.18	19.1%	8.6	+24.1	-0.01	37.8%	3.2	+5.9	0.14	21.9%
2011-2016	2.1	+21.4	-0.23	79.3%	-3	+21.2	-0.2	71.5%	5.3	+7.9	0.35	12.8%
2012-2016	5.6	+38	-0.24	65.9%	-2.6	+37.9	-0.31	83.7%	8.4	+11.1	0.57	8.7%

With April 2012 Reform Parameter

Date	Loss Cost							Severity							Frequency						
	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val:	Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val:	Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val:	Level
2002-2016	-5.4	+9.5	0.2	25.7%	5.5%	2.553	1.6	+8.8	0.36	69.6%	18.2%	1.7091	-6.8	+4.1	0.47	0.5%	6.2%	1.4938			
2003-2016	-3.7	+11.7	0.19	50.7%	11.1%	2.304	1.3	+10.7	0.33	78.6%	21.6%	1.7352	-5	+4.5	0.25	3.8%	16.3%	1.3278			
2004-2016	-0.9	+14.5	0.21	89.0%	22.5%	1.9697	2.1	+13.4	0.32	72.5%	30.6%	1.661	-3	+5.1	-0.01	22.4%	38.7%	1.1859			
2005-2016	-2.5	+18	0.18	76.3%	23.2%	2.1381	0.7	+16.7	0.26	92.7%	30.4%	1.7872	-3.2	+6.4	-0.07	30.2%	42.5%	1.1964			
2006-2016	1.2	+23.7	0.2	90.6%	40.7%	1.7916	4.1	+21.8	0.28	67.2%	49.7%	1.5307	-2.7	+8.4	-0.17	48.2%	54.1%	1.1704			
2007-2016	15.3	+26.2	0.53	17.9%	95.6%	1.0332	12.5	+27.9	0.41	29.4%	88.2%	1.1	2.5	+7.9	-0.1	48.1%	75.8%	0.9393			
2008-2016	18.8	+35.5	0.48	20.2%	90.7%	0.9242	11.2	+36.9	0.27	45.7%	85.3%	1.1491	6.9	+7.2	0.45	5.2%	19.4%	0.8042			
2009-2016	10.6	+39.6	0.22	49.2%	86.1%	1.1312	2.9	+41.1	0.01	86.0%	65.0%	1.4311	7.5	+9.5	0.35	8.7%	22.0%	0.7905			
2010-2016	9.3	+51.3	-0.02	61.7%	86.3%	1.1471	1.2	+53.2	-0.2	94.9%	67.4%	1.4567	7.9	+12.3	0.24	13.6%	27.1%	0.7874			
2011-2016	4.8	+46	-0.6	74.8%	81.6%	0.8534	-3.5	+44.6	-0.6	81.5%	96.4%	1.0326	8.7	+14.7	0.34	14.6%	40.8%	0.8264			
2012-2016	-1.8	+82.8	-0.59	92.9%	62.5%	4.2193	-6.7	+91.9	-0.88	76.5%	79.5%	2.3288	5.2	+21.5	0.54	39.2%	46.7%	1.8118			

Collision

Province of Nova Scotia
Commercial Vehicles
Industry Data as of December 31, 2016

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	1.4	+1.9	0.1	13.7%	3.5	+2.3	0.43	0.5%	-2.1	+2.5	0.13	10.0%
2003-2016	1.3	+2.2	0.04	23.6%	3.7	+2.7	0.4	0.9%	-2.4	+2.9	0.15	9.8%
2004-2016	0.3	+2.2	-0.08	77.2%	3.7	+3.1	0.33	2.3%	-3.3	+3.1	0.26	4.2%
2005-2016	-0.6	+2.2	-0.07	59.2%	4.5	+3.6	0.4	1.6%	-4.8	+2.7	0.56	0.3%
2006-2016	-1.7	+2	0.2	9.3%	4.9	+4.3	0.37	2.8%	-6.3	+2.4	0.76	0.0%
2007-2016	-1.4	+2.5	0.08	22.4%	6.6	+4.7	0.54	1.0%	-7.6	+2.1	0.88	0.0%
2008-2016	-0.6	+2.9	-0.11	66.1%	8.8	+4.9	0.7	0.3%	-8.6	+2	0.92	0.0%
2009-2016	0.7	+3.1	-0.11	60.9%	11.4	+4.6	0.85	0.1%	-9.6	+1.9	0.95	0.0%
2010-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2011-2016	3.7	+3.8	0.57	5.0%	16.5	+3.2	0.98	0.0%	-11	+3.1	0.94	0.1%
2012-2016	5.7	+3.8	0.85	1.6%	18.2	+3.4	0.99	0.0%	-10.6	+5.4	0.9	0.9%

Excluding 2006 to 2009

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	2.1	+1	0.69	0.1%	3.8	+2.7	0.48	1.1%	-1.6	+2.5	0.1	18.2%
2003-2016	2.5	+1.1	0.74	0.1%	4.2	+3.4	0.45	1.9%	-1.6	+3.1	0.04	26.9%
2004-2016	1.9	+1.1	0.66	0.5%	4.3	+4.4	0.37	5.0%	-2.3	+3.9	0.09	21.9%
2005-2016	1.9	+1.7	0.5	3.1%	6.5	+5.4	0.54	2.2%	-4.4	+4.4	0.39	5.7%
2006-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2007-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2008-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2009-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2010-2016	2.2	+3.3	0.26	14.0%	13.8	+4.4	0.92	0.0%	-10.2	+2.4	0.95	0.0%
2011-2016	3.7	+3.8	0.57	5.0%	16.5	+3.2	0.98	0.0%	-11	+3.1	0.94	0.1%
2012-2016	5.7	+3.8	0.85	1.6%	18.2	+3.4	0.99	0.0%	-10.6	+5.4	0.9	0.9%

With Reform Factor for April 2013

Date	Loss Cost						Severity						Frequency					
	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val: Level	Trend	Conf. Int.	Adj. R2	T Pval Time	T Pval Level	Lvl Ch Val: Level
2002-2016	2.3	+3.1	0.08	12.6%	41.4%	0.8842	0.1	+2.5	0.72	92.3%	0.2%	1.5669	2.2	+2.4	0.7	6.8%	0.0%	0.5643
2003-2016	2.3	+3.8	0.01	20.5%	46.5%	0.8863	-0.3	+2.9	0.72	82.2%	0.3%	1.6057	2.6	+2.9	0.7	7.3%	0.0%	0.552
2004-2016	0.5	+4	-0.19	77.5%	87.8%	0.9764	-1.5	+3.2	0.74	33.1%	0.1%	1.7137	2	+3.5	0.71	22.6%	0.2%	0.5697
2005-2016	-1.3	+4.2	-0.16	50.3%	64.1%	1.0733	-1.2	+4.1	0.74	50.6%	0.4%	1.6934	-0.1	+3.3	0.83	96.7%	0.3%	0.6338
2006-2016	-4.3	+3.3	0.42	1.8%	6.8%	1.2419	-2.3	+5	0.74	33.1%	0.6%	1.7806	-2	+3.1	0.9	17.2%	0.5%	0.6975
2007-2016	-4.6	+4.4	0.31	4.5%	9.4%	1.2612	-0.7	+6.5	0.77	80.5%	2.1%	1.6595	-3.9	+3	0.95	1.8%	1.2%	0.76
2008-2016	-3.5	+6	0.01	20.5%	22.6%	1.2055	1.9	+8.3	0.81	59.8%	6.9%	1.4978	-5.3	+3.5	0.96	1.1%	4.0%	0.8048
2009-2016	-1.3	+7.9	-0.22	70.1%	52.0%	1.1098	6.2	+9.8	0.88	15.4%	19.9%	1.2918	-7	+4	0.97	0.7%	11.6%	0.8591
2010-2016	2.2	+9.6	0.07	55.7%	99.2%	1.0015	10.6	+11.6	0.92	5.5%	45.0%	1.1428	-7.6	+5.8	0.96	2.5%	24.1%	0.8764
2011-2016	5.1	+10.9	0.47	22.1%	67.3%	0.9443	15.1	+9	0.97	1.0%	62.0%	1.0526	-8.7	+8.1	0.94	4.7%	37.9%	0.8971
2012-2016	6.6	+10.5	0.8	10.8%	68.9%	0.962	16.4	+7.2	0.99	0.9%	33.5%	1.0684	-8.4	+13.8	0.88	12.8%	49.7%	0.9004

Comprehensive

**Province of Nova Scotia
Commercial Vehicles
Industry Data as of December 31, 2016**

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	1.3	+2	0.08	16.3%	2.4	+2.4	0.21	5.0%	-1.1	+1.6	0.06	19.1%
2003-2016	1.4	+2.3	0.05	21.5%	1.3	+2.4	0.04	23.5%	0	+1.1	-0.08	97.3%
2004-2016	0.3	+2.2	-0.08	76.3%	0.2	+2.1	-0.09	85.5%	0.1	+1.3	-0.09	84.6%
2005-2016	0.3	+2.6	-0.09	79.2%	0.8	+2.4	-0.04	45.3%	-0.5	+1.3	-0.02	38.9%
2006-2016	0.6	+3.1	-0.09	65.9%	1.4	+2.8	0.02	30.0%	-0.7	+1.5	0.01	31.2%
2007-2016	-0.2	+3.6	-0.12	89.0%	0.9	+3.4	-0.07	54.3%	-1.2	+1.7	0.13	16.8%
2008-2016	1.7	+3.3	0.07	25.0%	2.7	+3.3	0.26	9.0%	-0.9	+2.2	0	35.2%
2009-2016	3.8	+2.5	0.65	0.9%	5	+1.5	0.9	0.0%	-1.2	+2.9	-0.01	37.2%
2010-2016	4.6	+3.2	0.69	1.3%	4.7	+2.1	0.85	0.2%	-0.1	+3.6	-0.2	93.3%
2011-2016	3.1	+3.5	0.52	6.6%	5.6	+2.5	0.88	0.3%	-2.3	+2.2	0.61	4.2%
2012-2016	4.6	+4.5	0.71	4.5%	5.8	+4.4	0.82	2.2%	-1.2	+2	0.37	16.5%

Excluding 2007

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	1.6	+1.6	0.21	5.6%	2.6	+2.3	0.28	2.9%	-1	+1.7	0.05	22.5%
2003-2016	1.8	+1.9	0.21	6.7%	1.6	+2.3	0.11	14.4%	0.1	+1.1	-0.08	80.5%
2004-2016	0.8	+1.8	0	33.7%	0.5	+2.1	-0.07	61.3%	0.3	+1.3	-0.07	62.4%
2005-2016	1.1	+2.2	0.03	27.7%	1.4	+2.2	0.1	17.9%	-0.3	+1.4	-0.08	59.9%
2006-2016	2	+2.5	0.23	9.4%	2.5	+2.4	0.34	4.4%	-0.5	+1.7	-0.07	54.7%
2007-2016	1.7	+3.3	0.07	25.0%	2.7	+3.3	0.26	9.0%	-0.9	+2.2	0	35.2%
2008-2016	1.7	+3.3	0.07	25.0%	2.7	+3.3	0.26	9.0%	-0.9	+2.2	0	35.2%
2009-2016	3.8	+2.5	0.65	0.9%	5	+1.5	0.9	0.0%	-1.2	+2.9	-0.01	37.2%
2010-2016	4.6	+3.2	0.69	1.3%	4.7	+2.1	0.85	0.2%	-0.1	+3.6	-0.2	93.3%
2011-2016	3.1	+3.5	0.52	6.6%	5.6	+2.5	0.88	0.3%	-2.3	+2.2	0.61	4.2%
2012-2016	4.6	+4.5	0.71	4.5%	5.8	+4.4	0.82	2.2%	-1.2	+2	0.37	16.5%

Excluding 2010

Date	Loss Cost				Severity				Frequency			
	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time	Trend	Conf. Int.	Adj. R2	T Pval Time
2002-2016	1.4	+1.9	0.11	13.0%	2.4	+2.6	0.21	5.8%	-1	+1.6	0.05	21.1%
2003-2016	1.4	+2.2	0.07	18.8%	1.4	+2.5	0.04	24.5%	0	+1.1	-0.09	92.5%
2004-2016	0.3	+1.9	-0.09	73.6%	0.2	+2.2	-0.1	85.8%	0.1	+1.3	-0.1	83.6%
2005-2016	0.2	+2.3	-0.11	83.0%	0.8	+2.5	-0.05	48.5%	-0.6	+1	0.05	25.1%
2006-2016	0.4	+2.9	-0.11	75.1%	1.3	+3	0	34.9%	-0.9	+1.2	0.16	13.5%
2007-2016	-0.7	+3.1	-0.1	60.4%	0.8	+3.7	-0.11	64.0%	-1.5	+1.1	0.53	1.5%
2008-2016	1	+2.8	-0.03	40.2%	2.6	+3.8	0.21	14.3%	-1.5	+1.4	0.44	4.3%
2009-2016	2.9	+2.1	0.68	1.4%	5.4	+1.5	0.94	0.0%	-2.4	+1.3	0.78	0.5%
2010-2016	3.1	+3.5	0.52	6.6%	5.6	+2.5	0.88	0.3%	-2.3	+2.2	0.61	4.2%
2011-2016	3.1	+3.5	0.52	6.6%	5.6	+2.5	0.88	0.3%	-2.3	+2.2	0.61	4.2%
2012-2016	4.6	+4.5	0.71	4.5%	5.8	+4.4	0.82	2.2%	-1.2	+2	0.37	16.5%