

Manitoba Public Insurance Corporation

***Automobile Insurance Division
Universal Compulsory Automobile Insurance***

***Appointed Actuary's Report
as at 31 March 2023***

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July 13, 2023



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22 June 2023

**2022 Appointed Actuary's Report
Manitoba Public Insurance Corporation
Universal Compulsory Automobile Insurance**

Dear Marnie/Cara:

I am pleased to provide you with my 2022 Appointed Actuary's report for the Universal Compulsory Automobile Insurance operations of Manitoba Public Insurance Corporation (MPI) as of March 31, 2023.

This is for inclusion with your annual P&C-1 return, for your external auditor, and your own internal use. You are also required to forward a PDF copy to The Public Utilities Board of Manitoba (PUB).

Yours sincerely,

Cosimo Pantaleo, FCIA

Enclosures



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1. Scope of Report

1.1 Introduction

The Board of Directors of Manitoba Public Insurance Corporation ("MPI", or "the Company") has appointed Cosimo Pantaleo as Actuary.

This valuation was performed by Ernst & Young LLP ("EY") under the direction of Mr. Pantaleo. Mr. Pantaleo is a Fellow of the Canadian Institute of Actuaries and of the Casualty Actuarial Society. Mr. Pantaleo is available to answer any questions regarding this report and can be reached at the following address:

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For purposes of this report, policy liabilities¹ were reviewed in detail on both a direct and net of reinsurance basis. Ceded liabilities are generally established as the difference between direct and net liabilities. The valuation covers only the policy liabilities referenced in the opinion in Section 2. To our knowledge there are no other policy liabilities.

The valuation has been prepared according to Accepted Actuarial Practice ("AAP"). It complies with the appropriate Standards of Practice of the Canadian Institute of Actuaries as well as applicable regulatory requirements. Accepted Actuarial Practice requires all policy liabilities recognize both the time value of money and a provision for adverse deviations.

¹Policy liabilities are composed of claim liabilities (provision for unpaid claims and adjustment expenses related to the expired portion of policies), and premium liabilities (future obligations related to the unexpired portion of policies).



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1.2 Use and Distribution

This report and the opinions and conclusions contained herein were prepared for the internal use of the Company and were based on confidential information supplied by the Company. This valuation has been performed for the preparation of financial statements at year-end. It is not intended nor necessarily suitable for any other purpose.

This report may be submitted to the Public Utilities Board of Manitoba (PUB) and insurance regulators in any other jurisdiction where the Company is licensed. We understand this report will be provided, in its entirety, to the Company's external auditors.

No further distribution of this report may be made without the prior permission of MPI and Ernst & Young LLP. The Company and its Appointed Actuary should be notified immediately following any requests for disclosure of any part of this report. Should the report be disclosed, it must be provided in its entirety and recipients advised that the author is available at their cost to discuss the report.



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2022 Appointed Actuary's Report

2. Expression of Opinion

To the Board of Directors of the Manitoba Public Insurance Corporation:

I have valued the policy liabilities and reinsurance recoverables of Manitoba Public Insurance Corporation for its non-consolidated statement of financial position at 31 March 2023 and their changes in the non-consolidated statement of operations for the year then ended in accordance with accepted actuarial practice in Canada including selection of appropriate assumptions and methods.

In my opinion, the amount of policy liabilities net of reinsurance recoverables makes appropriate provision for all policy obligations and the financial statements fairly present the results of the valuation.

The results of my valuation together with amounts carried in the Annual Return are the following:

Claims Liabilities (\$000's)	Carried in Annual Return	Appointed Actuary's Estimate
(1) Direct unpaid claims and adjustment expenses	2,121,688	2,121,688
(2) Assumed unpaid claims and adjustment expenses	-	-
(3) Gross unpaid claims and adjustment expenses	2,121,688	2,121,688
(4) Ceded unpaid claims and adjustment expenses	4,655	4,655
(5) Other amounts to recover	-	-
(6) Other net liabilities	-	-
(7) Net unpaid claims and adjustment expenses (3)-(4)-(5)+(6)	2,117,033	2,117,033
Premium Liabilities (\$000's)	Carried in Annual Return	Appointed Actuary's Estimate
(1) Gross policy liabilities in connection with unearned premiums		515,358
(2) Net policy liabilities in connection with unearned premiums		520,056
(3) Gross unearned premiums	585,267	585,267
(4) Net unearned premiums	585,267	585,267
(5) Premium deficiency	-	-
(6) Other net liabilities	-	-
(7) Deferred policy acquisition expenses	39,383	
(8) Maximum policy acquisition expenses deferrable [(4)+(5)+(9)] _{Col. 1} - (2) _{Col. 2}		65,211
(9) Unearned Commissions + Ceded Deferred Premium Taxes + Ceded Deferred Insurance Operations Expenses		

Cosimo Pantaleo, FCIA

Toronto, Canada
22 June 2023

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3. Data

3.1 Data Sources

In developing this report, we have relied upon information supplied by the Company. In particular, MPI supplied detailed data on direct paid and unpaid claims, direct written, earned and unearned premiums, and unallocated loss adjustment expenses and operating expenses as of 31 March 2023.

We have reviewed this information for reasonableness and internal consistency but without independent audit or verification except as noted herein. The accuracy of our results is dependent on the accuracy and completeness of this data. Therefore, any material discrepancies discovered in this data should be reported and, if warranted, this report amended accordingly.

3.2 Use of Auditor's Work

We have asked of the Company's external auditor, PricewaterhouseCoopers LLP:

1. to employ appropriate tests and sampling of the Company's individual records to ensure accurate and proper recording of information,
2. to employ appropriate tests and sampling to ascertain that proper management controls are in place to ensure completeness of data,
3. to employ appropriate tests to ensure that our data sets correspond in aggregate to internal company reports,
4. to ensure that reinsurance treaties are properly signed, and
5. to identify any reinsurers who are delinquent in paying accounts.

We expect to receive the auditor's report from PricewaterhouseCoopers LLP before MPI's balance sheet as of March 31, 2023 is finalized. Should we be advised of any material discrepancies, we will revise our report accordingly.

3.3 Reliance on or Use of the Work of Another Actuary

We worked with the Company's Actuarial team including Ms. Cara Low, Vice President & Chief Actuary and Ms. Cherity Ostapowich, Director, Valuation & Capital Management throughout the valuation process especially during valuation steps of gathering data and information regarding the Company's operations (Claims, Underwriting, etc.), reconciling of data and setting up the valuation models, initial assumption selections and understanding effects of internal changes on observed trends and the valuation analysis.

3.4 Reconciliation

We have reviewed the data in our appendices and have reconciled gross and net paid claims, unpaid claims and earned premiums to the general ledger as of 31 March 2023. This reconciliation is shown in Appendix H. Minor differences between our data and the general ledger are not material and do not warrant restatement.



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3.5 Claim Data Structure

The Company provided direct and net claim data (including external claim adjustment expenses) for each line of business on both a paid and an incurred basis as of 31 March 2023. This data is available starting with the 2004 accident year.

Reported claim counts have not been included in this report due to limitations with the claims dataset, making it difficult to determine the number of cumulative reported claim counts.

3.6 Rounding

Many figures shown in this report have been rounded to the nearest thousand dollars. Totals and calculations may not agree because of rounding.

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4. Assumptions

4.1 Emergence Patterns

To estimate the ultimate costs of unpaid losses we have relied on incurred and paid loss data triangles, as well as the level of earned premiums recorded each year. Projected future claim reporting and payments were based upon the Company's historical experience, supplemented where deemed appropriate, by patterns drawn from other available sources.

We have assumed business will proceed as it has in the past, with no material changes in settlement procedures or cash flows.

We have not anticipated any extraordinary changes to the legal, social or economic environment (or to the interpretation of policy and treaty language) which might affect the cost, frequency, or future reporting of claims. In addition, our estimates make no provision for potential future claims arising from loss causes not contained in the historical data except in so far as claims of these types are included in the reported losses and are routinely developed.

4.2 Materiality

We have set a precision gauge of \$50,000 for data used in our analysis. We expect any unexplained differences to be less than our gauge.

We have adopted a materiality standard of \$10,000,000 for MPI in total. This amount is less than 1% of MPI's estimated total aggregate liability for gross unpaid claims and claim adjustment expenses. If the total value for all policy liabilities is within \$10,000,000 of our estimate, we do not consider it to be materially different from ours.

This materiality standard is not intended to provide for errors in the estimation process, such as:

Parameter specification error, including statistical error in the estimation of the parameters, which arises from distortion in the underlying assumptions due to the possible inability of the historical patterns and trends to adequately describe future events; or

Process risk, which is uncertainty associated with the dispersion of the actual outcomes throughout a distribution of possible outcomes.

4.3 Variability of Estimates

The standard of materiality is not a measure of the uncertainty in our estimates. It does not mean that actual results, when all losses are settled, will be within \$10,000,000 of our estimate. Policy liabilities are estimates and as such complete assurance cannot be given as to the ultimate accuracy of any recommended level. The value of policy liabilities represents our best estimate based on the information available to us at the time of our valuation. However, being estimates, they can vary since the actual value is subject to events yet to occur, e.g. the likelihood of claimants bringing suit, the size of awards, or changes in the standards of liability. It should

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be recognized that future claims emergence may deviate, perhaps materially, from our estimates. In our judgement, we have employed techniques and assumptions that are appropriate and the conclusions presented herein are reasonable.

The materiality standard is intended to be used as a guideline in determining the significance of any potential errors in this analysis.

4.4 Underlying Assets

The policy liabilities are matched by recorded assets, which have sufficient magnitude and a schedule of maturities and/or adequate liquidity to meet the cash flow requirement of these liabilities. The market yield on these recorded assets is used in establishing an appropriate discount rate to apply to the policy liabilities. However, we have not examined the validity of recorded assets supporting the policy liabilities.

4.5 Salvage and Subrogation

The claim liabilities in this report are net of anticipated future salvage and subrogation. If an asset for anticipated salvage and subrogation is included in the balance sheet, the liability for unpaid claims and adjustment expenses should be increased by a corresponding amount.

4.6 COVID - 19 and Inflation

The COVID-19 pandemic has significantly impacted the insurance environment. Early lockdown measures requiring non-essential businesses to close for extended periods resulted in significantly fewer vehicles on the roads compared to the past and commuting patterns have been altered significantly. Short tail automobile claim frequency decreased subsequent to the onset of the pandemic; however, news reports of more speeding and dangerous driving have the potential to lead to increased claim severity. Claimants may also have had treatments for their injuries delayed, potentially impacting their recovery, and the courts and legal systems were also affected by the restrictions leading to delays and backlogs. Issues with supply chain, inflationary pressure on labour costs, and a shortage of replacement vehicles has increased claim severity. During 2022, mobility and automobile claim frequency generally returned closer to pre-pandemic levels though it is still unclear whether general insurance trends will return fully to pre-pandemic levels or whether new normals are being established. Inflation has also been particularly relevant this year as the consumer price index ("CPI") has risen to levels not seen in decades. There was no explicit adjustment made to MPIs valuation data to account for COVID-19 related behavioural changes. However, it was considered when selecting assumptions/methods.

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5. Background

5.1 Company Operations

MPI was incorporated as a Crown Corporation in 1970 under the Automobile Insurance Act. In 1974 the Automobile Insurance Act was revised and became the Manitoba Public Insurance Corporation Act. Under the provisions of this Act, MPI operates an automobile insurance division and a discontinued general insurance division.

On March 1, 1994, the province of Manitoba introduced the Personal Injury Protection Plan (“PIPP”). This plan eliminated bodily injury tort actions involving Manitoba drivers within Manitoba and increased payments under no-fault accident benefits coverage. For the coverages affected, we have segregated our analysis into pre-PIPP and PIPP eras.

The Automobile Insurance division provides Basic Insurance, Extension Insurance, and Special Risk Extension (SRE) Insurance coverages. The Basic Insurance package includes third party liability with a \$500,000 limit, no-fault accident benefits and all perils coverage with a \$750 deductible. In addition, MPI writes optional coverage, for example increased liability limits and deductible buy-down coverage in competition with private insurers. This optional coverage is known as “Extension Insurance”. Other vehicle insurance coverages not offered by Basic Insurance or Extension Insurance are provided by SRE.

SRE was transferred from the General Insurance division to the Automobile Insurance division on November 1, 1991. The remaining portions of the General Insurance division have been in orderly runoff since 1990. In 2004, all remaining portions of General Insurance division were transferred to the Automobile Insurance division under SRE. Beginning in 2020, the Corporation changed its year-end to March 31 to coincide with the Government of Manitoba’s fiscal year-end. In 2021, Ms. Cara Low was named VP, Chief Actuary and Chief Risk Officer.

Only Basic Insurance is the subject of this report.

5.2 Reinsurance

MPI’s reinsurance structure consists of the following:

1. Automobile excess of loss treaty with retention of \$5 million excess of \$5 million (SRE only).
Automobile Third Party Liability excess of loss program with retention of \$10 million and a limit of \$50 million.
2. Catastrophe program of \$360 million excess of \$40 million. The \$40 million reflects MPI’s retention for all catastrophes related events in a fiscal year. The threshold to be considered as an event is a minimum total loss of \$1 million; for the annual aggregate deductible, the contribution layer is \$399 million excess of \$1 million.
3. Automobile Property Damage Treaty (SRE only) of \$14 million excess of \$1 million.



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The following table shows the general structure of the Automobile/General Liability reinsurance coverage applicable from 1994 to present.

Calendar Year	Reinsurance Coverage (\$ million)
1994 - 1997	34.0 excess of 1.0
1998	49.0 excess of 1.0
1999 - 2001	74.0 excess of 1.0
2002	73.0 excess of 2.0
2003	38.0 excess of 2.0
2004	47.5 excess of 2.5
2005	47.0 excess of 3.0
2006-2012	45.0 excess of 5.0
2012/13 – 2018/19	45.0 excess 5.0
2019/20 – 2021/22	40.0 excess 10.0
2021/22*	40.0 excess 10.0
2022/23*	40.0 excess 10.0

* For SRE only, the casualty treaty has a \$5M excess of \$5M with 22.5% coinsurance clause.

The reinsurance treaties from 1994 onward contain clauses that mandate all open claims for a given calendar year to be collectively settled with the reinsurers for lump sums based on mutually agreed commuted values. The first reinsurance layer for calendar year 1995 has been 100% commuted. For calendar years 1996 and 1997, claims in the first reinsurance layer are currently being commuted on a claim-by-claim basis. As a consequence, MPI has received cash equal to the present value of expected future reinsurance recoveries, but in exchange, MPI now bears the risk if these claims in aggregate subsequently experience adverse runoff.

Starting 2012/13, the reinsurance contract coverage period was changed from a calendar year basis to a fiscal year basis.

Our valuation of policy liabilities was made on a direct basis and on a net basis after consideration of all reinsurance. The Company advises that currently there is no material amount of uncollectible reinsurance receivable. However, no absolute certainty can be given on the collectability of reinsurance. Contingent liability exists to the extent reinsurance becomes uncollectible.

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6. Claim Liabilities

6.1 Incurred But Not Reported

Our methodology employed the incurred and paid development techniques (also known as the Chain Ladder methods), the Expected Loss Method, the related Bornhuetter-Ferguson ("BF") and Cape Cod modifications to estimate the claim liability for IBNR by line on an ultimate undiscounted basis. A more detailed discussion of these techniques (and their underlying assumptions) is given in the Description of Methodologies section.

The ultimate undiscounted unpaid case reserves and IBNR amounts were then discounted to recognize the time value of money and provisions for adverse deviation. This process is described more fully in a later subsection entitled Accepted Actuarial Practice.

The general approach used to calculate the IBNR for each line of business is outlined below.

6.1.1 Bodily Injury

We selected the IBNR based on the Incurred Bornhuetter-Ferguson (B/F) method for all insurance years. This is consistent with the previous March valuation.

Incurred loss development factors were not changed from the last valuation while the Paid loss development factors were updated to reflect recent experience. There is no impact to the undiscounted IBNR. The data, loss development factors, and selections are shown direct (equal to net) in Appendix A.

6.1.2 Property Damage

We selected the IBNR based on the Incurred B/F method for all insurance years, except the most recent year where the Incurred Loss Development method was selected. Previously, the Incurred B/F method was used for all insurance years. The Incurred BF method and Incurred Loss Development methods produce similar results for historical years, however, the Incurred Loss Development method places more weight on actual claims emergence at early maturities compared to the Incurred B/F method that places more weight on the expected loss ratio at early maturities. Since property damage losses tend to emerge relatively quickly, the Incurred Loss Development method was selected to reflect recent experience. The impact of this adjustment on an undiscounted direct basis is an increase of \$0.4M (net same as direct).

The loss ratio assumption in the Bornhuetter-Ferguson method was adjusted to exclude insurance year 2020 as this year was the pandemic year and is not reflective of loss experience of current and past trends. The impact of this adjustment on an undiscounted direct basis is an increase of \$0.05M (net same as direct).

Incurred and Paid loss development factors were updated from the last valuation to reflect recent experience. The impact is an increase of \$0.4M (net same as direct). The data, loss development factors, and selections are shown direct (equal to net) in Appendix B.



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6.1.3 Collision

We selected the IBNR based on the Incurred Loss Development method for all insurance years. In 2021 and 2022 insurance years there is evidence of late reporting of claims due to backlogs in repair shops (e.g. parts and material shortages). As case reserves are not setup in the claims system until vehicles are assessed, this resulted in a reporting lag as collision claims were opened but with no associated case reserves. Also, there was an increase in labour rates due to minimum wage increases in Manitoba which affects the light vehicle accreditation agreement. Both events will result in an increase to the ultimate claim costs as these items are not reflected in historical data, so a bulk amount of IBNR was added to insurance year 2022. The impact of this adjustment on an undiscounted direct basis was an increase of \$10.5M (net same as direct).

The loss ratio assumption in the Bornhuetter-Ferguson method was adjusted to exclude insurance year 2020 as this year was the pandemic year and is not reflective of loss experience of current and past trends. There was no impact of this adjustment to IBNR on an undiscounted because the Incurred Loss Development method was used for all insurance years.

Incurred and Paid loss development factors were updated from the last valuation to reflect recent experience. The impact of this adjustment on an undiscounted direct basis is an increase of \$3.5M (net same as direct). The data, loss development factors, and selections are shown direct (equal to net) in Appendix C.

6.1.4 Comprehensive

We selected the IBNR based on the Incurred Loss Development method for all accident periods. Previously, the Paid Development method was used for all insurance years except the most recent year, where the Incurred Development method was selected. The impact of this change on an undiscounted direct basis is an increase of \$0.8M (a decrease of \$0.1M on a net basis).

Incurred and Paid loss development factors were updated from the last valuation to reflect recent experience. The impact of this adjustment on an undiscounted direct basis is an increase of \$0.5M (net same as direct). The data, loss development factors, and selections are shown direct in Appendix D.

The data is net of major hailstorm claims. Hailstorm paid and incurred losses and IBNR calculations are shown separately in Appendix D. Note that for this coverage reinsurance only applies to hail losses.

In 2018, there was one major hailstorm event. Historical hailstorms' incurred development patterns were used to estimate the ultimate losses for this event. The selected undiscounted IBNR was -\$0.3 million for this event. There is no IBNR on a net basis. The direct IBNR was calculated using the Incurred Development method which is shown in Appendix D. The IBNR method selection is consistent with the non-hail approach for that insurance year.

6.1.5 Accident Benefits – Weekly Indemnity

At each analysis the historical payments and case reserves are restated to reflect current benefit levels prior to performing the analysis. Earned premiums were restated to match the indexing of loss costs. The original



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incurred and paid data triangles before restatement are shown at the beginning of Appendix E.

This IBNR analysis is done on a gross basis only. We have assumed that any gross IBNR will be entirely borne by the Company and that no additional reinsurance recoverable will be generated. Thus, direct IBNR and net IBNR are identical.

With respect to the reserving approach, MPI revised its reserving process for long-term PIPP claims by centralizing the process to a dedicated team in 2017. As a result, most weekly indemnity claims older than 24 months are now tabular reserved for life. There are no further changes thereafter.

For the selection of the tail (120-month to Ultimate) factors:

- The incurred / paid tail factor was selected based on the observed ratios of the tabular reserve ultimate to the incurred / paid at 120 months. The derivation of the tabular reserve ultimate is outlined below.
- Incremental incurred loss development factors after 120 months were selected based on the most recent observed factors to reflect the changes from centralized reserving.
- Incremental paid loss development factors after 120 months were revised to reflect the recent experience if there were at least five observed factors.

As in prior reports, for insurance years that are over 10 years old (2012 and prior), we determined tabular reserve ultimate loss estimates for each insurance year as follows:

- Open weekly indemnity claims were identified.
- For open claims with tabular reserves, the tabular reserves were recalculated as of March 31, 2023. The initial calculation was done using a 0% interest rate so that only mortality and morbidity experience is reflected. These make up the majority of open claims. These are subsequently discounted, and this is accounted for in Appendix E of the valuation.
- For open claims without tabular reserves:
 - i. 50% of the number of claims was assumed to ultimately be tabular reserved. These claims were multiplied by the average tabular reserves for open claims with tabular reserves.
 - ii. 50% of the number of claims was assumed to remain non-tabular. These claims were multiplied by the average reserves for open claims without tabular reserves.
- The aggregate tabular reserve for all open claims was then used to determine the IBNR based on the tabular reserving method as presented on pages 20 and 21 of Appendix E.

For insurance years more than 10 years old, we selected the IBNR based on the tabular reserving ultimate losses less case reserves. Some IBNR is intended for relapsed cases. For the seven insurance years thereafter, we selected the IBNR based on the Incurred BF method. Finally, for the three most recent insurance years, we selected the IBNR based on the higher of the Incurred and Paid B/F. This "higher of" selection is to recognize the uncertainty among the actuarial methods in the more recent insurance years (especially as it pertains to the case reserve levels for serious injuries).

The increase in minimum wage above Manitoba CPI was not captured in the current loss triangles, and a bulk IBNR was added to all insurance years to account for this event. The estimated impact is \$2.21 million where

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20% was allocated to the current year and the remaining 80% was allocated evenly to the prior insurance years.

Incurred and Paid loss development factors were updated from the last valuation to reflect recent experience. The impact of this adjustment on an undiscounted direct basis is an increase of \$2.34M (net is same as direct).

6.1.6 Accident Benefits – Other Indexed

Historical payments and case reserves were restated to reflect current benefit levels prior to performing the analysis. Earned premiums were restated to match the indexing of loss costs.

The IBNR for the three most recent insurance years was selected based on the higher of the Incurred and Paid BF methods. For all other preceding insurance years, we selected the IBNR based on the Incurred BF method.

In September 2010, a new claims management system (FINEOS/BI3) was implemented. The new system required that case reserves be set up to pay for expenses. However, the development on these expenses is already included in both the incurred and paid historical triangles. As such, the additional expense reserves were removed from the incurred triangle prior to analysis. The selected IBNR was then reduced by the current expense reserve of \$10.6 million.

The new claims management system was improperly handling the auto-reserving and auto-closing of new claims, resulting in excess reserves for certain benefits. We have applied the same adjustment to these excess reserves as to the expense reserves; excess reserves were removed prior to analysis and the selected IBNR was reduced by \$0.8 million.

Bulk IBNR was added to all insurance years for the same reason as described in section 6.1.5. The estimated impact is \$1.09 million with 20% allocated to the current year and 80% allocated evenly for all prior insurance years.

Incurred and Paid loss development factors were not changed from the last valuation. The data, loss development factors, and selections are shown direct (equal to net) in Appendix F.

6.1.7 Accident Benefits – Other Non-Indexed

In 2018, MPI discovered a backlog in processing payments and reserves for Permanent Impairment for insurance years 2015-2017. MPI undertook a review of claims in those insurance years, and case reserves were increased significantly. A further review of insurance years 2015-2017 was performed by MPI in 2020, which led to the removal of excess reserves. In 2021, the backlog has been cleared and case reserves have returned to normal.

For all insurance years, we selected the IBNR based on the Incurred BF method; similar to previous valuations.

Incurred loss development factors were not changed from the last valuation while the Paid loss development factors were updated to reflect recent experience. There is no impact to the undiscounted IBNR. The data, loss development factors, and selections are shown direct (equal to net) in Appendix G.



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6.1.8 PIPP Enhancements

In October 2009 the Manitoba legislature passed Bill 36, which enhances PIPP benefits for catastrophically injured claimants. The enhancements impact past and future claimants. The enhancements are listed below (with April 1, 2023 figures):

- i. Increase income replacement indemnity to the industrial average wage ("IAW") if claimant is not already receiving an amount equal to or greater than the IAW.
- ii. Increase the maximum permanent impairment benefit to \$285,287.
- iii. Increase the maximum personal care assistance monthly payments to \$6,480.
- iv. Provide the Corporation with the authority to reimburse expenses up to a lifetime limit of \$1,326,922 per claimant.
- v. When permanent impairment benefits have been paid, and the claimant is later entitled to death benefits, the death benefits will not be offset by the permanent impairment benefits already paid (as was the previous practice). Note that this enhancement applies to all injured claimants.

The fourth enhancement was estimated to have a marginal impact on MPI's unpaid claims; therefore, no provision was added for this enhancement.

In August 2011, the Manitoba legislature passed additional PIPP benefit enhancements for catastrophically injured claimants, introduced as part of a reinterpretation of Section 138 of the Manitoba Public Insurance Corporation Act. These enhancements are outlined as follows:

- i. *Vehicle Purchase*: Outright purchase and adaptation of a vehicle for the claimant once every five years. Previously, only the adaptation of a vehicle was covered if a new vehicle was purchased by the claimant.
- ii. Modification of a secondary residence, e.g. a cottage owned by the claimant.
- iii. Reimbursement for extraordinary expenses to better support the claimant's continuation of pre-accident activities and new life event (e.g. marriage) requirements.
- iv. Provide attendant care coverage for employment if it reduces the total amount of PIPP benefits payable.
- v. *Annual Spending Allowance*: Reimbursement for extraordinary expenses for leisure and recreational activities. Biannual limits ranging from \$500 to \$4,000 depending on the claimants' degree of permanent impairment. This enhancement applies to all injured claimants.



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The estimate of the claim liabilities pertaining to enhancements (i) and (v) are presented in Appendix PE - Exhibit 1; the estimate for the other three enhancements is presented in Appendix PE - Exhibit 4.

We used the following process in performing our estimates:

- Catastrophic claimants who are eligible for the enhancement are determined. This group is made up of catastrophic claimants already receiving the enhancement. Claims liabilities are based on tabular reserves calculated as of March 31, 2023. The calculation was done using a 0% interest rate so that only mortality and morbidity experience is reflected. These are subsequently discounted, and this is accounted for in the PIPP Enhancement exhibits of the valuation.
- Potential catastrophic claimants who may be eligible for the enhancement are determined. This group is made up of claimants who are close to making the cut-off for being deemed as catastrophic claimants. We assumed that a proportion of the claimants will ultimately be eligible for the enhancement, based on the premise that the severity of their injuries will deteriorate over time. Claims liabilities for this group are determined based on tabular reserves (as of March 31, 2023) and/or averages from the eligible group.

For Death Benefits, which are applicable to all injured claimants, we have assumed that the claims liabilities calculated for catastrophic claimants are a sufficient proxy.

For Annual Spending Allowance, which is also applicable to all injured claimants, we determined the tabular reserves for open claims not deemed to be catastrophic but with a permanent impairment of 20% or greater. The additional claims liabilities from this group are minimal.

On May 1, 2015, the Manitoba legislature introduced another PIPP benefit enhancement:

- vi. *Caregiver Death Benefit*: This enhancement provides caregiver weekly indemnity to the person responsible for the care of a deceased claimant's dependents, and only affects claimants with accident dates on May 1, 2015 and after. The estimation of the claim liabilities for this enhancement is based on the average claim cost for known claims combined with the ultimate claim count estimate by year (see Appendix PE).

On April 1, 2023, the Manitoba legislature introduced indexation to the following benefits:

- Index the maximum reimbursement for catastrophically injured and Permanent Impaired Victim who engages in Leisure or Recreational Activities to \$4,240 , and
- Index the maximum indemnity for acquisition of a motor vehicle by catastrophically injured victim to \$53,000



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6.1.9 Pools and Associations

MPI does not participate in any pools or associations.

6.1.10 Mass Tort and Environmental Liabilities

To our knowledge no exposure exists for mass tort or environmental exposures. As a result, no explicit additional allowance has been made for mass tort and/or pollution claims.

6.1.11 Class Action Suits

We are not aware of any class actions currently pending that involve the Company.



6.2 Accepted Actuarial Practice

This analysis initially estimated the ultimate undiscounted incurred claim liability by accident year, line, and by type of business. Accepted Actuarial Practice requires all liabilities to recognize both the time value of money and a provision for adverse deviations.

6.2.1 Provision for Adverse Deviations

The Standards of Practice of the Canadian Institute of Actuaries identify three major valuation variables: claim development, reinsurance recovery and interest rate. The Standards define ranges for the selection of margins for each of these three valuation variables, namely

- between 2.5% and 20% for the claim development variable,
- between 0% and 15% for the reinsurance variable, and
- between 25 and 200 basis points for the interest rate variable.

The selected margin for reinsurance was 5.00% for AB-PIPP WI, 5.00% for AB-PIPP Indexed, and 2.50% for Comprehensive. The selected margin for interest rates was 40 basis points, whereas last year this was 50 basis points. The impact of this change was a decrease of \$16.7M to the discounted claim liabilities. The margin was decreased to recognize MPI's strong Asset Liabilities Matching strategy and that the assets supporting the liabilities is heavily comprised of government and provincial bonds, which tend to have lower risk than corporate bonds.

The claims development margin was reduced from 7.50% to 5.00% for Collision and Comprehensive to be consistent with company practices and due to the short tail nature of these coverages. The impact of this change resulted in a reduction of \$4.4M.

The selected margins for claims development are as follows:

BI-Pre-PIPP.....	12.50%
BI-Post March 1, 1994	15.00%
AB-Pre-PIPP WI.....	5.00%
AB-Pre-PIPP Other	5.00%
AB-PIPP WI (2021 & After)	15.00%
AB-PIPP WI (Prior to 2021)	10.00%
AB-PIPP Indexed (2013 & After)	15.00%
AB-PIPP Indexed (Prior to 2013).....	10.00%
AB-PIPP Non-Indexed	10.00%
Collision	5.00%
Comprehensive.....	5.00%
Property Damage	5.00%
ULAE	10.46%

Indicated margins were calculated using interpolation between the minimum and maximum range based on

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qualitative factors. The selection of the margins can be found in Appendix H.

6.2.2 Payment Patterns

The selected payment patterns for discounting were based on the Company's own experience. The selections are shown in Exhibit 7.

For Accident Benefits Weekly Indemnity claims older than ten years, the tabular reserves are discounted at 0.0%, 1.65% and 2.05% and are shown in Appendix E, p. 20-21.

6.2.3 Interest Rates

All liabilities were discounted to reflect the time value of money using an interest rate of 4.09% (March 2022 – 3.54%) based on the market yield of the Company's bond portfolio at 31 March 2023 net of investment expenses. Claim liabilities were discounted at 4.09% and then again at 3.69% to allow a margin for adverse deviations in the interest rate to provide for default risk, mismatch risk and reinvestment risk. The calculation of the discount rate is shown in Exhibit 9.

For lines of business that are inflation-indexed (Accident Benefits – Weekly Indemnity and Accident Benefits – Other Indexed), we assumed a variable interest rate. The Company's assumption is that inflation varies over the next few periods (6.00%, 4.05%, 2.35%, and 2.10%) before stabilizing at 2.0% which results in a inflation adjusted interest rate (-1.80%, 0.04%, 1.70%, 1.95%, and 2.05% thereafter).

The future inflation assumption for 2023 is based on the Manitoba CPI as of December 31, 2022 which is capped at 6.00% since the Manitoba CPI is 7.90%. The capping of inflation for indexed benefits is outlined in the MPIC Act, section 167(1) and 167(2). The other years are based on the average of several bank forecasts which was provided by MPI's Investment and ALM department. The future inflation has a floor of 2.00% as inflation has been around 2.00% historically. The table below shows the expected inflation.

	2023	2024	2025	2026	2027	After 2028
Bank Forecast	n/a	4.05%	2.35%	2.10%	1.90%	2.00%
Selected	6.00% ¹	4.05%	2.35%	2.10%	2.00%	2.00%

¹ The 6.00% is capped inflation and based on 7.90% MB CPI is from Statistics Canada as of December 31, 2022.

The impact of updated inflation assumptions resulted in an increase to discounted claim liabilities of \$55M. The future inflation is included in the discounting and can be found in Exhibit 7 and Exhibit 8.

6.2.4 Unallocated Loss Adjustment Expenses

Derivation of the unallocated loss adjustment expense ("ULAE") provision is detailed in Exhibit 5.

We have based our estimate on the traditional paid to paid method that implicitly assumes that ULAE is 50% paid when the claim is opened and 50% paid when the claim is closed. ULAE was estimated as 18.5% of case



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outstanding and IBNR liabilities, plus the same percentage applied to “pure” IBNR to cover claim-opening costs. When selecting the ULAE ratio in this valuation, the years affected by the pandemic were excluded (2020 and 2021).

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7. Premium Liabilities

Premium liabilities are not a specific item in the Annual Return. They are calculated as the unearned premium (net of reinsurance recoverable), less the deferred policy acquisition costs, (net of unearned premium due to reinsurers). Deferred policy acquisition costs are limited to a maximum amount based on the claim liabilities expected to occur as the unearned premium matures.

7.1 Unearned Premium

MPI provided unearned premiums on gross and net bases which are shown in Exhibit 6. The Company computes its liability for unearned premium pro rata based on the unexpired portion of each policy. We have examined the aggregate amount of unearned premium carried for reasonableness and requested the external auditors confirm the calculation.

7.2 Unearned Commission

The Company has no unearned commissions.

7.3 Maximum Deferred Policy Acquisition Expense

Certain expenses associated with the cost of acquiring policies may be deferred and taken into income over the life of the policy. However, the unearned premium ("UPR") must also provide for the costs of claims that are expected to occur as the UPR is earned. Consequently, we estimate the claim and policy service costs are expected to occur as the UPR is earned. If these costs exceed the amount of the UPR, then an additional liability referred to as a Premium Deficiency Reserve must be set up. Normally this is not the case and an asset, Deferred Policy Acquisition Expense ("DPAE"), may be established.

The DPAE is limited by the extent expected costs are less than the UPR. Exhibit 6 details the estimation on the maximum allowable DPAE.

The procedure is as follows, for each line of business on gross and net of reinsurance bases:

1. We selected expected loss and allocated loss adjustment expense ratios on an undiscounted basis. These estimates were based on the results of our claim liability analysis.
2. Unallocated Loss Adjustment Expenses were added based on the selected ULAE ratio as outlined in Exhibit 5.
3. Expected Loss and Loss Adjustment Expenses were then discounted based on the selected claims liability payment patterns adjusted to the average payment date associated with the unearned premiums.



4. PfADs for Claims Development, Investment, and Reinsurance (net basis only) were then added.
5. Maintenance expenses, any contingent commissions and the cost of excess of loss reinsurance (net basis only) were also added to derive the policy liabilities in connection with unearned premiums.
6. The policy liabilities in connection with unearned premium were subtracted from the unearned premiums plus unearned reinsurance commissions (if applicable) to derive the maximum allowable DPAE.
7. The maximum allowable DPAE was compared to the company's estimate of DPAE to determine if an adjustment to the company's DPAE provision was required or if a premium deficiency reserve was required to be set up.

Since the equity in the unearned premium is larger than the Company's booked deferred acquisition expenses no further adjustment was necessary.



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8. Subsequent Event

We are not aware of any events subsequent to 31 March 2023 that are material to our valuation.

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9. Summary

9.1 Claim Liabilities on Accepted Actuarial Practice Basis

The claim liabilities calculated according to Accepted Actuarial Practice are shown in Exhibit 1. The discounted amounts and provisions for adverse deviations are extracted from Exhibit 7 and Exhibit 8. The amount of ULAE from Exhibit 5 was adjusted appropriately to reflect these discounted IBNR figures.

9.2 Claim Liabilities for Income Tax Purposes

According to the CIA Educational Note "Consideration of Future Income Taxes in the Valuation of Policy Liabilities" issued July 2006, if the effect of discounting the asset for Future Income Taxes is material, the actuary should adjust the estimate of policy liabilities accordingly.

The Company does not pay income taxes and therefore my estimate of the net claim liabilities does not include an adjustment for the effect of discounting of the asset for Future Income Taxes.

9.3 Carried Unpaid Claims versus Actuarial Estimates

The Company is carrying the claim liabilities indicated by the analysis in this report.



10. Comparison to prior year estimates

Exhibit 3 provides a comparison of prior years' ultimate undiscounted estimates to the current undiscounted estimates with the exception of the indexed coverages where the prior ultimate estimates are brought to current benefit level.

From March 2022 to March 2023 (1-Year Runoff)

For Basic, the 1-year runoff is an unfavorable \$3.9M on a direct basis and \$1.7M on a net basis. Most of this prior year impact can be attributed to Accident Benefits and Collision. In particular we observed the following:

- Direct favourable development of \$5.3 million for Accident Benefits – Weekly Indemnity (net \$6.1 million) due to changes in selected factors and development that was more favourable than anticipated.
- Direct favourable development of \$12.7 million for Accident Benefits – Other (Indexed) (net \$13.1 million) due to changes in selected factors and development that was more favourable than anticipated.
- Direct unfavorable development on Collision of \$20.6 million (net same as direct). This is mainly attributed by higher severity and backlogs in repair shops causing delays in getting financial reserves set in the claim system.

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11. Regulatory Disclosures

11.1 Appointment

The MPI Board of Directors ratified the Audit, Finance and Risk committee recommendation to appoint me as External Actuary on 23 June 2022.

11.2 Board or Audit Committee Reporting

The following Appointed Actuary's reports have been prepared in the last three years:

Covering Policy Liabilities Ending	Appointed Actuary	Date Report Presented	Presentation to	Type of Presentation
31 March 2022	Joe S. Cheng	23 June 2022	Board of Directors	Web Based
31 March 2021	Joe S. Cheng	24 June 2021	Board of Directors	Web Based
31 March 2020	Joe S. Cheng	29 June 2020	Board of Directors	Teleconference

This report will be presented to MPI's Audit and Finance Committee on 22 June 2023.

11.3 Continuing Professional Development Requirements

I am in compliance with the Continuing Professional Development requirements of the Canadian Institute of Actuaries.

11.4 Disclosure of Compensation

I attest that all my direct and indirect compensation is derived using the following methodology:

- My services are charged to the Company solely on the basis of time expended and expenses incurred.
- I am a limited partner of Ernst & Young L.P., which provides services to Ernst & Young LLP. My compensation is my proportion of the annual income of Ernst & Young LLP.
- I am independent of the Company.
- I receive no incentive compensation based on the financial results or performance of the Company.

I confirm that I have performed my duties without regard to any personal considerations or to any influence, interest or relationship in respect of the affairs of my client or employer that might impair my professional judgement or objectivity.

I confirm that my ability to act fairly is unimpaired, that there has been full disclosure of the methodology used to derive my compensation to all known direct users of my services.

11.5 Reporting Relationships of the Appointed Actuary

I was engaged by Ms. Cara Low, to act as Appointed Actuary and produce this report for this valuation year. I have discussed findings and this report with Ms. Cara Low.



12. Description of Methodologies

The choice of a method to estimate losses should consider, among other things, the line of business, number of years of experience, and age of the underwriting or accident year being developed.

12.1 Incurred Loss Development Method

The incurred loss development method is based upon the assumption that the relative change in a given accident year's incurred loss estimates from one evaluation point to the next is similar to the relative change in prior accident years' incurred loss estimates at similar evaluation points. In utilizing this method, actual-historical accident year incurred loss data is evaluated at the end of each calendar year in a triangular fashion and is shown as follows:

Accident Year	Evaluation Point - Measured in Months				
	12	24	36	48	60
2018	XXX	XXX	XXX	XXX	XXX
2019	XXX	XXX	XXX	XXX	
2020	XXX	XXX	XXX		
2021	XXX	XXX			
2022	XXX				

"Report-to-report" development factors are calculated to measure the relative development of an accident year from one evaluation point to the next. These historical report-to-report-development factors and comparable industry factors are then used to select appropriate report-to-report development factors to use in projecting the incomplete accident years to an ultimate basis.

The incurred loss development method as described here uses incurred (or reported) losses as the starting point. In addition to incurred losses, the method can be applied to reported claim counts, average incurred claims and average open claims.

12.2 Paid Loss Development Method

The paid loss development method is based upon the assumption that the relative change in a given accident year's paid losses from one evaluation point to the next is similar to the relative change in prior accident years' paid losses at similar evaluation points. In utilizing this method, historical evaluations of actual accident year paid losses are made in a manner similar to that shown above for the incurred loss development method.

Report-to-report development factors are then calculated in a manner similar to that described above and selected factors are then used to project the actual paid losses for any given accident year to an ultimate basis.

This method differs from the incurred loss development method in that the company's case loss reserves are excluded from the analysis. This method has the disadvantage of ignoring whatever information is provided by current case loss reserves, but it has the advantage of avoiding the distortions which might be reflected in the incurred loss development method from abnormal reserve increases or decreases.



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The results produced by this method are directly dependent upon the amount of paid losses reported to date. The method's implicit assumption is that payment patterns have not changed substantially over time.

The paid loss development method may also be applied to closed claim counts, average paid claims and average closed claims.

12.3 Expected Loss Method

Under the expected loss method, ultimate losses are based upon some prior measure of the anticipated losses, usually relative to some measure of exposure, such as premiums, sales receipts, or payroll. Alternatively, a "frequency/severity" approach entails first estimating the number of claims expected, then multiplying this number by the expected average size of each claim for the coverage year.

Since actual losses do not enter into the calculations, this method has the advantage of stability over time. The ultimate loss estimate does not change unless the premiums or loss ratio are changed. However, this advantage of stability is offset by a lack of responsiveness. In effect, the method ignores actual loss experience as it is reported. This method is based on the assumption that the initial expected losses will essentially materialize as anticipated.

12.4 Bornhuetter-Ferguson

The Bornhuetter-Ferguson method is essentially a blend of the incurred loss development and expected loss methods. It combines these two methods by splitting expected losses into two pieces - expected reported and expected unreported. As an accident year matures, the expected reported losses are replaced by actual reported losses and the initial expected loss assumption becomes gradually less important.

Two parameters need to be determined to apply the Bornhuetter-Ferguson method: the initial expected loss amount and the expected reporting pattern.

The loss development factors need to be converted to a basis appropriate for use with expected losses. The factor to be applied to the expected losses is determined as follows:

$$\text{IBNR factor} = 1 - 1 / \text{loss development factor to ultimate.}$$

Therefore, the ultimate losses for an accident year are:

$$(\text{Expected losses} \times \text{IBNR factor}) + \text{Incurred losses to date}$$

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12.5 Cape Cod Method

The Cape Cod method relies on the loss emergence patterns estimated in the incurred loss development method as well as an appropriate exposure base. In this case the exposure base used is earned premium. The fundamental assumption is that the loss ratio emerged to date applies to the “unreported” exposures. The total reported losses for all years are divided by the total reported exposures for all years to derive an expected ultimate loss-to-exposure ratio. The expected ultimate loss ratio is then applied to the unreported exposure for each year to estimate IBNR reserves.

12.6 Calculation of Policy Liabilities According to Accepted Actuarial Practice

The calculation of claims liabilities according to Accepted Actuarial Practice is based on the concepts of present value as well as providing margins for adverse claim development, reinsurance recoveries and investment recoveries. Claims are paid out over time, and in the interim assets backing these claims can be invested to earn interest until payments are required. As claims are paid, actual experience could be worse than expected and prudence suggests an allowance for adverse experience should be added.

For each accident period the current amount of claims that have been paid are compared to the total amount of claims paid or expected to be paid (“ultimate undiscounted unpaid claims liabilities”). These ratios of historical payment patterns are examined to determine the rate at which claim dollars have been paid in the past. A selected pattern is then applied to current unpaid claims to estimate when these claims will be paid. Claims payments are assumed to be paid in the middle of each year. Using the selected payment pattern the claims are discounted using an expected yield rate from a notionally associated portfolio of assets to produce a present value of future payments.

The claim payments are then discounted using an interest rate lower than the expected yield rate (the expected rate less a margin). The difference between these two estimates is the interest rate provision for adverse deviation, which is intended to provide for possible adverse experience in yield rates, reinvestments, and/or asset defaults. A margin factor is applied to the present value of future payments to provide a provision for possible adverse experience in claim development or payment patterns. Finally, a margin factor is applied to expected reinsurance recoveries to provide a provision for possible future problems in the collection of these reinsurance amounts. The dollar impact of applying these three margins is referred to as the provision for adverse deviations.

The total of the present value of future payments and the provision for adverse deviations (interest, loss development, reinsurance) produce the “unpaid claims liabilities according to Accepted Actuarial Practice”. This amount less the current outstanding claims generates the Incurred But Not Reported Claims (“IBNR”) according to Accepted Actuarial Practice.

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13. Glossary

Accident Year: Each claim is assigned an accident year based on the calendar year (or fiscal year) in which the claim occurred. Paid and reported claims for any accident year can be evaluated as of any report date. Ultimate incurred claims for each accident year can be estimated by a number of actuarial techniques (see Methods section).

Case: Refers to the data (premium, claim, ...) carried by the company on individual policy and claim files.

Claim Liabilities: Claim liabilities include all unpaid claims and adjustment expenses (both unallocated and external).

Claim (Loss): The use of the term claim (loss) without modification includes losses and loss adjustment expenses (LAE) which provide for both external (allocated) and internal (unallocated) adjustment expenses.

Claim (Loss) Ratio: Ratio of incurred claims to earned premium.

Deferred Policy Acquisition Expense (DPAE): DPAE is the capitalization of acquisition expenses in proportion to the related unearned premium but limited to the related equity in unearned premium.

Equity in Unearned Premium: The equity in unearned premium is unearned premium less expected losses and loss adjustment expenses associated with those unearned premiums.

Expected Claim (Loss) Ratio: 100% less the acquisition expenses, general expenses and profit margin, all expressed as percentage of premium. It represents the claim ratio expected from a given portfolio assuming no premium redundancy or inadequacy.

IBNR: IBNR is the provision for claims incurred but not yet reported. In this report we have used the term in its broader, more general sense, to represent development on outstanding case reserves (also referred to as "supplemental" IBNR reserves) and unreported claims (also referred to as "pure" IBNR).

Unallocated Loss Adjustment Expense (ULAE): The costs of closing claim files that are borne by the company internally and so not recorded against individual claims.

Materiality: Materiality is intended as a guideline in determining the significance of any potential errors in this analysis to the intended reader. The amount of the standard of materiality is not a measure of the uncertainty in our estimates. It is not intended to provide for, or even approximate, errors in the estimation process.

Policy Liabilities: Policy liabilities is the sum of the premium and claim liabilities.



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Premium Liabilities: The premium liabilities are the net obligations of the insurance company with respect to its insurance and reinsurance contracts other than the claim liabilities. Generally, these liabilities are included in the unearned premium, premium deficiency and deferred policy acquisition expense provisions.

Premium Deficiency: The premium deficiency is the expected underwriting loss on the unearned premium calculated as the excess of expected losses, adjustment expenses and servicing expenses relating to the policies in force over the unearned premiums.

Reported Claims: Reported claims amounts include actual claim payment plus individual unpaid case estimates. They do not include IBNR.

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Exhibit 1
Unpaid Claims Summary

Manitoba Public Insurance
Automobile Insurance Division
Summary of Policy Claim Liabilities
As of March 31, 2023
(\$000)

Exhibit 1
Sheet 1

	Direct & Agency	Ceded	Net	Carried Before Review	Carried After Review
1. Selected IBNR (Including External Adjustment Expenses) [a]					
Bodily Injury - Basic	6,456	-	6,456		
Property Damage - Basic	9,414	-	9,414		
Collision - Basic	39,050	-	39,050		
Comprehensive - Basic	11,228	(290)	11,518		
Accident Benefits - Weekly Indemnity	222,653	-	222,653		
Accident Benefits - Other (Indexed)	97,960	-	97,960		
Accident Benefits - Other (Non-Indexed)	13,525	-	13,525		
Total	400,287	(290)	400,576		
Unallocated Loss Adjustment Expense (ULAE) Provision [b]	206,003	-	206,003		
Total Including ULAE Provision	606,289	(290)	606,579		
2. CIA Rules Adjustments [c]					
i. Discount Amount - Excluding ULAE Provision	(236,799)	(32)	(236,767)		
ii. Discount Amount - ULAE Provision	(26,881)	-	(26,881)		
iii. Provision for Adverse Deviation - Excluding ULAE Provision	218,175	210	217,965		
iv. Provision for Adverse Deviation - ULAE Provision	24,767	-	24,767		
	(20,739)	178	(20,917)		
3. Adjusted IBNR (Including External Adjustment Expense) (1+2i+2iii)	381,662	(112)	381,774	396,816	381,774
4. Adjusted ULAE Provision (1+2ii+2iv)	203,888	-	203,888	209,620	203,888
5. Adjusted IBNR - PIPP Enhancement [d]	41,764	-	41,764	39,586	41,764
6. Total Actuarial Liabilities (3+4+5)	627,315	(112)	627,427	646,022	627,427
7. Case Reserve Outstanding					
Hail Catastrophe	1,270	1,270	-		
PIPP Enhancement [e]	67,892	-	67,892		
Other than Hail & Enh	1,425,211	3,497	1,421,714		
Total [f]	1,494,373	4,767	1,489,606	1,489,607	1,489,607
8. Total - Claim Liabilities (6+7)	2,121,688	4,655	2,117,033	2,135,629	2,117,034

Notes:

[a] From Exhibit 2, Column 6 for the respective coverage

[b] From Exhibit 5, Row 12; Net equal to Direct & Agency

[c] From Exhibit 7, Sheet 1 for Direct & Agency and Exhibit 7, Sheet 2 for Net

[d] PE Exhibit 2, Sheet 8, Column 12 + PE Exhibit 4, Required IBNR

[e] PE Exhibit 1, Sheet 8, Column 4 + PE Exhibit 4, Case Reserves

[f] From MPI - Difference from Actuarial Database (Exh 2, Sheet 9 + PE Exh 1, Sheet 8 + PE Exhibit 4):

12,087

Manitoba Public Insurance
Automobile Insurance Division
Summary of Policy Premium Liabilities
As of March 31, 2023
(\$000)

Exhibit 1
Sheet 2

	Direct & Agency	Ceded	Net
1. Unearned Premium [a]	585,267	-	585,267
2. Equity in Unearned Premium [b]	69,908	4,698	65,211
3. Carried Deferred Policy Acquisition Expense [a]	39,383	-	39,383
4. Write Down Deferred Policy Acquisition Expense [c]	-	-	-
5. Maximum Permissible Deferred Policy Acquisition Expense [d]	69,908	4,698	65,211
6. Deferred Policy Acquisition Expense After Review [e]	39,383	-	39,383
7. Premium Deficiency [f]	-	-	-

Notes:

[a] From MPI

[b] From Exhibit 6, Sheet 1 for Direct & Agency and Exhibit 6, Sheet 5 for Net

[c] $\text{Min}((3) - (2), (3))$ if greater than 0, otherwise 0

[d] $\text{Max}((2), (3) - (4))$

[e] $\text{Min}((3), (5))$

[f] Negative of (2) if greater than 0, otherwise 0

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Exhibit 2
Claim Liabilities

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 1

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Bodily Injury - Basic								
2004 & Prior			-					-
2005	632,408	4,229	-	4,229	-	4,229	0.67%	-
2006	656,746	3,448	-	3,448	-	3,448	0.52%	-
2007	679,930	3,714	-	3,714	-	3,714	0.55%	-
2008	709,787	3,134	-	3,134	-	3,134	0.44%	-
2009	741,553	2,925	100	3,025	-	3,025	0.41%	100
2010	761,034	4,351	-	4,351	-	4,351	0.57%	-
2011	772,649	2,396	-	2,396	-	2,396	0.31%	-
2012	769,715	4,134	-	4,134	-	4,134	0.54%	-
2013	781,394	3,634	20	3,654	-	3,654	0.47%	20
2014	822,358	4,953	459	5,412	2	5,414	0.66%	461
2015	877,262	4,355	333	4,688	6	4,694	0.54%	339
2016	923,168	4,237	875	5,112	34	5,145	0.56%	909
2017	977,104	4,007	1,433	5,440	111	5,551	0.57%	1,544
2018	1,044,467	4,434	1,584	6,018	246	6,264	0.60%	1,830
2019	1,099,731	2,407	1,526	3,933	491	4,424	0.40%	2,017
2020	1,134,690	947	2,034	2,981	1,081	4,062	0.36%	3,115
2021	1,159,166	461	2,202	2,663	1,901	4,564	0.39%	4,103
2022	1,126,492	75	3,107	3,181	2,583	5,764	0.51%	5,690
Total	15,669,653	57,840	13,673	71,512	6,456	77,968	0.50%	20,129

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division

Exhibit 2
Sheet 2

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Property Damage - Basic								
2004 & Prior			(2)					(2)
2005	632,408	30,388	-	30,388	-	30,388	4.81%	-
2006	656,746	33,603	-	33,603	-	33,603	5.12%	-
2007	679,930	34,382	3	34,384	-	34,384	5.06%	3
2008	709,787	36,154	-	36,154	-	36,154	5.09%	-
2009	741,553	34,390	-	34,390	-	34,390	4.64%	-
2010	761,034	38,388	-	38,388	-	38,388	5.04%	-
2011	772,649	37,177	-	37,177	-	37,177	4.81%	-
2012	769,715	42,273	-	42,273	-	42,273	5.49%	-
2013	781,394	45,212	-	45,212	-	45,212	5.79%	-
2014	822,358	40,710	20	40,729	(20)	40,709	4.95%	(0)
2015	877,262	41,151	-	41,151	(41)	41,110	4.69%	(41)
2016	923,168	43,697	1	43,698	(66)	43,632	4.73%	(65)
2017	977,104	46,522	6	46,527	(70)	46,458	4.75%	(64)
2018	1,044,467	42,665	332	42,998	(22)	42,976	4.11%	310
2019	1,099,731	38,596	444	39,040	63	39,103	3.56%	507
2020	1,134,690	27,649	276	27,924	208	28,133	2.48%	484
2021	1,159,166	40,785	2,260	43,045	1,329	44,374	3.83%	3,589
2022	1,126,492	23,477	13,897	37,374	8,032	45,406	4.03%	21,929
Total	15,669,653	677,218	17,237	694,455	9,414	703,869	4.49%	26,651

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division

Exhibit 2
Sheet 3

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Collision - Basic								
2004 & Prior			(1)					(1)
2005	632,408	204,571	-	204,571	-	204,571	32.35%	-
2006	656,746	225,713	-	225,713	-	225,713	34.37%	-
2007	679,930	232,656	-	232,656	-	232,656	34.22%	-
2008	709,787	243,030	-	243,030	-	243,030	34.24%	-
2009	741,553	238,260	-	238,260	-	238,260	32.13%	-
2010	761,034	279,557	-	279,557	-	279,557	36.73%	-
2011	772,649	271,419	-	271,420	-	271,420	35.13%	-
2012	769,715	315,828	2	315,830	-	315,830	41.03%	2
2013	781,394	350,413	-	350,413	-	350,413	44.84%	-
2014	822,358	313,862	-	313,862	-	313,862	38.17%	-
2015	877,262	355,373	3	355,376	-	355,376	40.51%	3
2016	923,168	387,536	6	387,542	-	387,542	41.98%	6
2017	977,104	408,923	22	408,945	-	408,945	41.85%	22
2018	1,044,467	409,127	59	409,187	205	409,391	39.20%	264
2019	1,099,731	406,822	91	406,913	611	407,524	37.06%	702
2020	1,134,690	315,157	258	315,414	1,263	316,677	27.91%	1,521
2021	1,159,166	433,885	2,151	436,036	5,551	441,587	38.10%	7,702
2022	1,126,492	319,860	100,652	420,512	31,421	451,933	40.12%	132,073
Total	15,669,653	5,711,992	103,243	5,815,237	39,050	5,854,286	37.36%	142,293

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 4

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Comprehensive - Basic								
2004 & Prior			(2)					(2)
2005	632,408	72,812	-	72,812	-	72,812	11.51%	-
2006	656,746	73,541	-	73,541	-	73,541	11.20%	-
2007	679,930	111,676	-	111,676	-	111,676	16.42%	-
2008	709,787	49,838	-	49,838	-	49,838	7.02%	-
2009	741,553	78,862	-	78,862	-	78,862	10.63%	-
2010	761,034	74,834	-	74,834	-	74,834	9.83%	-
2011	772,649	75,372	-	75,372	-	75,372	9.75%	-
2012	769,715	72,140	4	72,144	-	72,144	9.37%	4
2013	781,394	75,173	-	75,173	-	75,173	9.62%	-
2014	822,358	71,692	-	71,692	-	71,692	8.72%	-
2015	877,262	121,437	3	121,440	-	121,440	13.84%	3
2016	923,168	118,653	13	118,666	-	118,666	12.85%	13
2017	977,104	72,859	2	72,861	-	72,861	7.46%	2
2018	1,044,467	113,944	1,347	115,290	(290)	115,001	11.01%	1,057
2019	1,099,731	86,516	718	87,234	-	87,234	7.93%	718
2020	1,134,690	84,398	523	84,920	-	84,920	7.48%	523
2021	1,159,166	84,998	1,134	86,132	933	87,065	7.51%	2,067
2022	1,126,492	83,072	19,005	102,076	10,585	112,661	10.00%	29,590
Total	15,669,653	1,521,818	22,747	1,544,565	11,228	1,555,793	9.93%	33,975

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division

Exhibit 2
Sheet 5

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Weekly Indemnity								
2004 & Prior			165,040		24,380			189,420
2005	632,408	40,758	15,365	56,123	2,312	58,436	9.24%	17,677
2006	656,746	48,713	23,714	72,427	2,137	74,564	11.35%	25,851
2007	679,930	49,416	24,214	73,630	2,151	75,781	11.15%	26,365
2008	709,787	48,162	25,421	73,583	2,666	76,249	10.74%	28,087
2009	741,553	45,851	24,504	70,355	2,461	72,816	9.82%	26,965
2010	761,034	56,168	34,267	90,436	4,390	94,826	12.46%	38,657
2011	772,649	50,635	35,764	86,399	4,084	90,483	11.71%	39,848
2012	769,715	48,975	30,144	79,119	3,218	82,337	10.70%	33,362
2013	781,394	41,398	29,151	70,549	4,210	74,759	9.57%	33,361
2014	822,358	37,664	35,460	73,125	4,289	77,414	9.41%	39,749
2015	877,262	41,926	42,976	84,902	4,931	89,832	10.24%	47,907
2016	923,168	42,276	47,813	90,089	5,190	95,279	10.32%	53,003
2017	977,104	40,728	50,041	90,768	5,196	95,965	9.82%	55,237
2018	1,044,467	33,098	43,812	76,911	5,574	82,485	7.90%	49,386
2019	1,099,731	27,064	49,236	76,300	8,079	84,379	7.67%	57,315
2020	1,134,690	20,438	46,112	66,550	11,880	78,429	6.91%	57,992
2021	1,159,166	20,390	10,231	30,621	57,353	87,974	7.59%	67,584
2022	1,126,492	9,633	5,500	15,133	68,153	83,287	7.39%	73,653
Total	15,669,653	703,293	738,765	1,277,019	222,653	1,475,293	9.41%	961,418

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 6

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Other (Indexed)								
2004 & Prior			123,428		13,718			137,146
2005	632,408	39,989	16,312	56,302	2,499	58,800	9.30%	18,811
2006	656,746	44,853	21,551	66,404	2,880	69,284	10.55%	24,431
2007	679,930	44,624	22,394	67,019	3,319	70,338	10.34%	25,713
2008	709,787	39,601	10,208	49,809	2,820	52,629	7.41%	13,028
2009	741,553	42,756	15,644	58,401	3,412	61,813	8.34%	19,056
2010	761,034	42,317	13,767	56,084	3,491	59,575	7.83%	17,258
2011	772,649	43,005	19,367	62,371	4,096	66,467	8.60%	23,463
2012	769,715	42,552	12,977	55,528	3,888	59,417	7.72%	16,865
2013	781,394	40,249	10,562	50,810	3,598	54,408	6.96%	14,160
2014	822,358	35,588	10,935	46,523	3,195	49,718	6.05%	14,130
2015	877,262	44,872	14,158	59,030	3,980	63,010	7.18%	18,138
2016	923,168	45,621	26,949	72,570	4,624	77,194	8.36%	31,573
2017	977,104	43,013	23,322	66,334	4,206	70,540	7.22%	27,528
2018	1,044,467	35,914	16,209	52,122	3,387	55,509	5.31%	19,596
2019	1,099,731	31,096	25,663	56,759	3,099	59,858	5.44%	28,762
2020	1,134,690	22,848	32,502	55,350	2,416	57,766	5.09%	34,918
2021	1,159,166	20,861	21,785	42,646	8,241	50,887	4.39%	30,026
2022	1,126,492	9,892	22,437	32,329	21,091	53,421	4.74%	43,528
Total	15,669,653	669,650	460,170	1,006,391	97,960	1,090,633	6.96%	558,130

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 7

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Other (Non-Indexed)								
2004 & Prior			2,935		-			2,935
2005	632,408	28,564	3	28,567	29	28,595	4.52%	32
2006	656,746	34,360	80	34,440	52	34,492	5.25%	132
2007	679,930	29,369	30	29,399	74	29,473	4.33%	104
2008	709,787	29,215	26	29,242	117	29,359	4.14%	143
2009	741,553	29,894	(4)	29,890	165	30,055	4.05%	161
2010	761,034	28,965	8	28,973	203	29,177	3.83%	211
2011	772,649	31,891	228	32,120	274	32,394	4.19%	502
2012	769,715	29,756	44	29,801	299	30,100	3.91%	343
2013	781,394	27,633	48	27,682	320	28,001	3.58%	368
2014	822,358	27,777	212	27,989	408	28,397	3.45%	620
2015	877,262	28,824	384	29,208	545	29,753	3.39%	929
2016	923,168	31,408	556	31,964	726	32,691	3.54%	1,282
2017	977,104	29,214	516	29,731	797	30,528	3.12%	1,313
2018	1,044,467	23,457	2,285	25,743	765	26,508	2.54%	3,050
2019	1,099,731	19,437	4,257	23,694	729	24,423	2.22%	4,986
2020	1,134,690	15,386	10,083	25,469	706	26,175	2.31%	10,789
2021	1,159,166	11,159	17,411	28,570	1,613	30,183	2.60%	19,024
2022	1,126,492	7,386	19,457	26,843	5,702	32,545	2.89%	25,159
Total	15,669,653	463,698	58,559	519,324	13,525	532,849	3.40%	72,084

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 8

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Total								
2004 & Prior			291,403		38,097			329,500
2005	632,408	109,312	31,680	140,992	4,840	145,831	23.06%	36,520
2006	656,746	127,926	45,345	173,271	5,069	178,340	27.16%	50,414
2007	679,930	123,409	46,638	170,048	5,543	175,591	25.82%	52,181
2008	709,787	116,978	35,655	152,634	5,603	158,237	22.29%	41,258
2009	741,553	118,501	40,144	158,646	6,038	164,684	22.21%	46,182
2010	761,034	127,450	48,042	175,493	8,085	183,578	24.12%	56,127
2011	772,649	125,531	55,359	180,890	8,453	189,343	24.51%	63,812
2012	769,715	121,283	43,165	164,448	7,406	171,853	22.33%	50,571
2013	781,394	109,280	39,761	149,041	8,128	157,168	20.11%	47,889
2014	822,358	101,029	46,607	147,636	7,892	155,529	18.91%	54,499
2015	877,262	115,621	57,518	173,140	9,455	182,595	20.81%	66,973
2016	923,168	119,305	75,318	194,623	10,540	205,163	22.22%	85,858
2017	977,104	112,955	73,879	186,833	10,200	197,033	20.17%	84,079
2018	1,044,467	92,469	62,306	154,776	9,726	164,502	15.75%	72,032
2019	1,099,731	77,597	79,156	156,753	11,907	168,661	15.34%	91,063
2020	1,134,690	58,672	88,697	147,369	15,003	162,371	14.31%	103,700
2021	1,159,166	52,410	49,427	101,836	67,207	169,043	14.58%	116,634
2022	1,126,492	26,911	47,394	74,306	94,946	169,252	15.02%	142,340
Total	15,669,653	1,836,640	1,257,494	2,802,734	334,139	3,098,775	19.78%	1,591,633

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division

Exhibit 2
Sheet 9

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Basic - Total All Coverage*								
2004 & Prior			291,398		38,097			329,495
2005	632,408	421,312	31,680	452,992	4,840	457,832	72.39%	36,520
2006	656,746	464,231	45,345	509,576	5,069	514,645	78.36%	50,414
2007	679,930	505,837	46,641	552,477	5,543	558,021	82.07%	52,184
2008	709,787	449,135	35,655	484,790	5,603	490,393	69.09%	41,258
2009	741,553	472,938	40,244	513,184	6,038	519,221	70.02%	46,282
2010	761,034	524,581	48,042	572,624	8,085	580,708	76.31%	56,127
2011	772,649	511,894	55,359	567,254	8,453	575,707	74.51%	63,812
2012	769,715	555,657	43,171	598,827	7,406	606,233	78.76%	50,577
2013	781,394	583,712	39,781	623,493	8,128	631,621	80.83%	47,909
2014	822,358	532,245	47,086	579,331	7,874	587,206	71.41%	54,960
2015	877,262	637,938	57,857	695,795	9,421	705,215	80.39%	67,278
2016	923,168	673,428	76,213	749,640	10,508	760,149	82.34%	86,721
2017	977,104	645,266	75,342	720,607	10,241	730,848	74.80%	85,583
2018	1,044,467	662,640	65,628	728,268	9,865	738,134	70.67%	75,493
2019	1,099,731	611,938	81,935	693,874	13,071	706,945	64.28%	95,006
2020	1,134,690	486,822	91,788	578,609	17,555	596,164	52.54%	109,343
2021	1,159,166	612,539	57,174	669,713	76,922	746,634	64.41%	134,096
2022	1,126,492	453,394	184,055	637,449	147,567	785,016	69.69%	331,622
Total	15,669,653	9,805,508	1,414,394	10,928,502	400,287	11,290,691	72.05%	1,814,681

Notes:
 (2) - From MPI
 (3) to (5) - From MPI Fiscal Year Summaries
 (6) - From Exhibit 4
 *Not including PIPP Enhancements (see PE Exhibit 1, Sheet 8 & PE Exhibit 4)

Manitoba Public Insurance
Automobile Insurance Division
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 10

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Comprehensive - Basic								
2004 & Prior			(2)					(2)
2005	621,331	72,812	-	72,812	-	72,812	11.72%	-
2006	647,698	73,541	-	73,541	-	73,541	11.35%	-
2007	667,689	75,549	-	75,549	-	75,549	11.31%	-
2008	699,646	49,838	-	49,838	-	49,838	7.12%	-
2009	728,959	60,636	-	60,636	-	60,636	8.32%	-
2010	750,546	74,834	-	74,834	-	74,834	9.97%	-
2011	761,267	75,182	-	75,182	-	75,182	9.88%	-
2012	757,411	72,140	4	72,144	-	72,144	9.53%	4
2013	767,939	75,173	-	75,173	-	75,173	9.79%	-
2014	808,646	71,692	-	71,692	-	71,692	8.87%	-
2015	864,905	121,437	3	121,440	-	121,440	14.04%	3
2016	911,562	118,653	13	118,666	-	118,666	13.02%	13
2017	965,709	72,859	2	72,861	-	72,861	7.54%	2
2018	1,031,748	100,154	77	100,230	-	100,230	9.71%	77
2019	1,085,549	86,516	718	87,234	-	87,234	8.04%	718
2020	1,120,929	84,398	523	84,920	-	84,920	7.58%	523
2021	1,143,507	84,998	1,134	86,132	933	87,065	7.61%	2,067
2022	1,110,100	83,072	19,005	102,076	10,585	112,661	10.15%	29,590
Total	15,445,139	1,453,485	21,477	1,474,962	11,518	1,486,480	9.62%	32,995

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4

Manitoba Public Insurance
Automobile Insurance Division
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 11

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Weekly Indemnity								
2004 & Prior			165,040		24,380			189,420
2005	621,331	40,431	15,361	55,792	2,312	58,105	9.35%	17,673
2006	647,698	48,608	23,714	72,322	2,137	74,459	11.50%	25,851
2007	667,689	49,416	23,821	73,237	2,151	75,388	11.29%	25,972
2008	699,646	48,162	25,421	73,583	2,666	76,249	10.90%	28,087
2009	728,959	45,851	24,461	70,312	2,461	72,773	9.98%	26,922
2010	750,546	56,168	33,322	89,490	4,390	93,880	12.51%	37,712
2011	761,267	50,635	35,185	85,820	4,084	89,903	11.81%	39,269
2012	757,411	48,975	30,144	79,119	3,218	82,337	10.87%	33,362
2013	767,939	41,250	29,108	70,358	4,210	74,568	9.71%	33,318
2014	808,646	37,664	35,460	73,124	4,289	77,414	9.57%	39,749
2015	864,905	41,926	42,976	84,902	4,931	89,832	10.39%	47,907
2016	911,562	42,276	47,573	89,849	5,190	95,039	10.43%	52,763
2017	965,709	40,728	50,041	90,769	5,196	95,965	9.94%	55,237
2018	1,031,748	33,098	43,812	76,910	5,574	82,484	7.99%	49,386
2019	1,085,549	27,064	49,236	76,300	8,079	84,378	7.77%	57,315
2020	1,120,929	20,438	46,112	66,550	11,880	78,430	7.00%	57,992
2021	1,143,507	20,390	10,231	30,621	57,353	87,973	7.69%	67,584
2022	1,110,100	9,633	5,498	15,131	68,153	83,284	7.50%	73,651
Total	15,445,139	702,713	736,516	1,274,189	222,653	1,472,462	9.53%	959,169

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4, Net = Direct & Agency

Manitoba Public Insurance
Automobile Insurance Division
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 12

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Other (Indexed)								
2004 & Prior			123,428		13,718			137,146
2005	621,331	39,641	16,308	55,949	2,499	58,448	9.41%	18,807
2006	647,698	44,758	21,551	66,309	2,880	69,189	10.68%	24,431
2007	667,689	44,624	22,031	66,655	3,319	69,974	10.48%	25,350
2008	699,646	39,601	10,208	49,809	2,820	52,629	7.52%	13,028
2009	728,959	42,756	15,616	58,372	3,412	61,784	8.48%	19,028
2010	750,546	42,317	13,387	55,704	3,491	59,195	7.89%	16,878
2011	761,267	43,005	19,053	62,058	4,096	66,153	8.69%	23,149
2012	757,411	42,552	12,977	55,529	3,888	59,417	7.84%	16,865
2013	767,939	40,195	10,546	50,741	3,598	54,338	7.08%	14,144
2014	808,646	35,588	10,935	46,523	3,195	49,718	6.15%	14,130
2015	864,905	44,872	14,158	59,030	3,980	63,010	7.29%	18,138
2016	911,562	45,621	26,813	72,434	4,624	77,058	8.45%	31,437
2017	965,709	43,013	23,322	66,335	4,206	70,541	7.30%	27,528
2018	1,031,748	35,914	16,209	52,123	3,387	55,509	5.38%	19,596
2019	1,085,549	31,096	25,663	56,759	3,099	59,859	5.51%	28,762
2020	1,120,929	22,848	32,502	55,350	2,416	57,767	5.15%	34,918
2021	1,143,507	20,861	21,785	42,646	8,241	50,887	4.45%	30,026
2022	1,110,100	9,892	22,430	32,322	21,091	53,414	4.81%	43,521
Total	15,445,139	669,153	458,922	1,004,647	97,960	1,088,890	7.05%	556,882

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4, Net = Direct & Agency

Manitoba Public Insurance
Automobile Insurance Division
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 13

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Accident Benefits - Total								
2004 & Prior			291,403		38,097			329,500
2005	621,331	108,637	31,672	140,308	4,840	145,148	23.36%	36,512
2006	647,698	127,726	45,345	173,071	5,069	178,140	27.50%	50,414
2007	667,689	123,409	45,882	169,291	5,543	174,835	26.19%	51,425
2008	699,646	116,978	35,655	152,634	5,603	158,237	22.62%	41,258
2009	728,959	118,501	40,073	158,575	6,038	164,612	22.58%	46,111
2010	750,546	127,450	46,717	174,168	8,085	182,252	24.28%	54,802
2011	761,267	125,531	54,466	179,997	8,453	188,450	24.75%	62,919
2012	757,411	121,283	43,165	164,448	7,406	171,854	22.69%	50,571
2013	767,939	109,078	39,702	148,780	8,128	156,907	20.43%	47,830
2014	808,646	101,029	46,607	147,636	7,892	155,528	19.23%	54,499
2015	864,905	115,621	57,518	173,140	9,455	182,595	21.11%	66,973
2016	911,562	119,305	74,942	194,248	10,540	204,787	22.47%	85,482
2017	965,709	112,955	73,879	186,834	10,200	197,034	20.40%	84,079
2018	1,031,748	92,469	62,306	154,775	9,726	164,502	15.94%	72,032
2019	1,085,549	77,597	79,156	156,753	11,907	168,660	15.54%	91,063
2020	1,120,929	58,672	88,697	147,369	15,003	162,372	14.49%	103,700
2021	1,143,507	52,410	49,427	101,837	67,207	169,044	14.78%	116,634
2022	1,110,100	26,911	47,385	74,297	94,946	169,243	15.25%	142,331
Total	15,445,139	1,835,563	1,253,997	2,798,160	334,139	3,094,201	20.03%	1,588,136

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4, Net = Direct & Agency

Manitoba Public Insurance
Automobile Insurance Division
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 2
Sheet 14

Insurance Year	Earned Premium	Actual Claims @ 31/03/2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
Basic - Total All Coverage*								
2004 & Prior			291,398		38,097			329,495
2005	621,331	420,637	31,672	452,309	4,840	457,148	73.58%	36,512
2006	647,698	464,031	45,345	509,376	5,069	514,445	79.43%	50,414
2007	667,689	469,710	45,885	515,594	5,543	521,138	78.05%	51,428
2008	699,646	449,135	35,655	484,790	5,603	490,393	70.09%	41,258
2009	728,959	454,712	40,173	494,886	6,038	500,924	68.72%	46,211
2010	750,546	524,581	46,717	571,298	8,085	579,383	77.19%	54,802
2011	761,267	511,704	54,466	566,171	8,453	574,624	75.48%	62,919
2012	757,411	555,657	43,171	598,828	7,406	606,234	80.04%	50,577
2013	767,939	583,510	39,722	623,232	8,128	631,360	82.21%	47,850
2014	808,646	532,245	47,086	579,331	7,874	587,205	72.62%	54,960
2015	864,905	637,938	57,857	695,795	9,421	705,215	81.54%	67,278
2016	911,562	673,428	75,837	749,265	10,508	759,773	83.35%	86,345
2017	965,709	645,266	75,342	720,607	10,241	730,848	75.68%	85,583
2018	1,031,748	648,850	64,358	713,208	10,155	723,363	70.11%	74,513
2019	1,085,549	611,938	81,935	693,873	13,071	706,945	65.12%	95,006
2020	1,120,929	486,822	91,788	578,609	17,555	596,164	53.18%	109,343
2021	1,143,507	612,539	57,174	669,713	76,922	746,635	65.29%	134,096
2022	1,110,100	453,394	184,046	637,440	147,567	785,007	70.72%	331,613
Total	15,445,139	9,736,098	1,409,627	10,854,325	400,576	11,216,804	72.62%	1,810,203

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - From Exhibit 4
*Not including PIPP Enhancements (see PE Exhibit 1, Sheet 8 & PE Exhibit 4)



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 3
Runoff Comparison

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 1

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Bodily Injury - Basic											
2005	632,408	4,229	4,254	4,254	4,228	4,228	4,228	4,223	4,242	4,238	4,240
2006	656,746	3,448	3,448	3,448	3,549	3,549	3,565	3,565	3,547	3,628	3,471
2007	679,930	3,714	3,711	3,683	3,772	3,772	3,751	3,738	3,736	3,785	3,786
2008	709,787	3,134	3,159	3,157	2,462	2,432	2,431	2,442	2,444	2,471	2,467
2009	741,553	3,025	2,970	2,965	3,477	3,477	3,479	3,488	3,695	3,757	3,604
2010	761,034	4,351	4,469	4,429	4,555	4,516	4,444	4,283	4,462	4,492	4,100
2011	772,649	2,396	2,460	2,460	2,620	2,578	2,593	2,603	2,783	2,693	2,823
2012	769,715	4,134	4,176	4,177	3,640	3,668	3,804	3,959	4,067	4,150	3,130
2013	781,394	3,654	3,651	3,651	3,761	3,850	4,100	4,400	4,383	4,194	5,189
2014	822,358	5,414	5,410	5,423	5,637	5,763	5,952	5,883	6,321	5,121	
2015	877,262	4,694	4,694	4,723	4,354	4,948	5,054	5,523	4,810		
2016	923,168	5,145	4,836	5,053	5,668	5,659	5,555	5,853			
2017	977,104	5,551	5,256	5,454	5,211	5,693	5,624				
2018	1,044,467	6,264	5,997	5,787	5,429	5,113					
2019	1,099,731	4,424	4,352	4,741	5,279						
2020	1,134,690	4,062	3,691	4,669							
2021	1,159,166	4,564	3,909								
2022	1,126,492	5,764									
Total	15,669,653	77,968									
Total Excl. 2022	14,543,161	72,204	70,441								
Total Excl. 2021 to 2022	13,383,995	67,640	66,533	68,075							
Total Excl. 2020 to 2022	12,249,305	63,578	62,842	63,406	63,645						
Total Excl. 2019 to 2022	11,149,575	59,154	58,490	58,665	58,366	59,245					
Total Excl. 2018 to 2022	10,105,108	52,890	52,493	52,878	52,936	54,132	54,580				
Total Excl. 2017 to 2022	9,128,005	47,338	47,237	47,424	47,725	48,439	48,956	49,961			
Total Excl. 2016 to 2022	8,204,836	42,193	42,402	42,371	42,057	42,781	43,401	44,107	44,491		
Total Excl. 2015 to 2022	7,327,574	37,498	37,708	37,648	37,703	37,833	38,347	38,584	39,681	38,529	
Total Excl. 2014 to 2022	6,505,216	32,085	32,298	32,225	32,066	32,070	32,395	32,701	33,360	33,408	32,809

Notes:
(2) - From MPI
(3) - From Exhibit 2, Column 7; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 2

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Property Damage - Basic											
2005	632,408	30,388	30,392	30,392	30,286	30,289	30,292	30,296	30,298	30,302	30,327
2006	656,746	33,603	33,603	33,606	33,563	33,570	33,574	33,580	33,582	33,586	33,570
2007	679,930	34,384	34,389	34,391	34,355	34,280	34,290	34,292	34,284	34,288	34,274
2008	709,787	36,154	36,155	36,158	36,014	35,972	36,015	35,965	35,949	36,098	35,999
2009	741,553	34,390	34,404	34,407	34,935	34,945	34,937	34,921	34,905	35,082	35,089
2010	761,034	38,388	38,392	38,404	37,352	37,344	37,337	37,314	37,260	37,315	37,237
2011	772,649	37,177	37,181	37,189	37,432	37,484	37,475	37,488	37,401	37,361	37,226
2012	769,715	42,273	42,278	42,344	41,816	41,885	41,770	41,689	41,545	41,275	41,250
2013	781,394	45,212	45,197	45,176	45,619	45,620	45,594	45,371	45,092	44,366	45,057
2014	822,358	40,709	40,696	40,683	41,040	41,047	41,004	40,929	41,064	39,985	
2015	877,262	41,110	41,090	41,086	41,022	41,180	41,203	41,150	40,799		
2016	923,168	43,632	43,632	43,656	43,734	43,551	43,652	41,997			
2017	977,104	46,458	46,548	46,701	46,350	46,082	46,445				
2018	1,044,467	42,976	43,043	43,253	43,198	43,143					
2019	1,099,731	39,103	38,760	39,276	40,958						
2020	1,134,690	28,133	28,216	31,022							
2021	1,159,166	44,374	40,952								
2022	1,126,492	45,406									
Total	15,669,653	703,869									
Total Excl. 2022	14,543,161	658,463	654,928								
Total Excl. 2021 to 2022	13,383,995	614,089	613,976	617,744							
Total Excl. 2020 to 2022	12,249,305	585,956	585,759	586,722	587,673						
Total Excl. 2019 to 2022	11,149,575	546,854	547,000	547,446	546,716	546,392					
Total Excl. 2018 to 2022	10,105,108	503,878	503,957	504,193	503,517	503,249	503,589				
Total Excl. 2017 to 2022	9,128,005	457,420	457,409	457,493	457,168	457,167	457,144	454,993			
Total Excl. 2016 to 2022	8,204,836	413,788	413,777	413,837	413,433	413,616	413,492	412,995	412,179		
Total Excl. 2015 to 2022	7,327,574	372,678	372,687	372,751	372,412	372,436	372,289	371,845	371,380	369,659	
Total Excl. 2014 to 2022	6,505,216	331,969	331,991	332,068	331,371	331,389	331,285	330,917	330,316	329,674	330,029

Notes:
 (2) - From MPI
 (3) - From Exhibit 2, Column 7; All insurance years are from April to March.
 (4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 3

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Collision - Basic											
2005	632,408	204,571	204,586	204,598	203,041	203,046	203,057	203,050	203,062	203,087	203,099
2006	656,746	225,713	225,719	225,727	224,416	224,437	224,451	224,432	224,455	224,461	224,474
2007	679,930	232,656	232,679	232,688	233,047	233,065	233,083	233,097	233,118	233,125	233,055
2008	709,787	243,030	243,042	243,051	241,727	241,732	241,750	241,758	241,640	241,650	241,487
2009	741,553	238,260	238,266	238,289	242,479	242,491	242,510	242,523	242,417	242,278	242,137
2010	761,034	279,557	279,564	279,577	271,204	271,224	271,184	271,174	271,034	270,677	270,336
2011	772,649	271,420	271,441	271,448	273,142	273,155	273,139	273,093	272,845	272,363	271,756
2012	769,715	315,830	315,845	315,840	310,694	310,691	310,634	310,751	310,225	309,292	308,566
2013	781,394	350,413	350,417	350,405	349,411	349,350	349,215	349,214	348,258	346,295	347,122
2014	822,358	313,862	313,842	313,814	317,802	317,689	317,797	317,313	316,130	315,862	
2015	877,262	355,376	355,332	355,302	352,280	352,243	352,355	352,428	349,069		
2016	923,168	387,542	387,483	387,341	386,054	385,820	386,123	385,169			
2017	977,104	408,945	408,978	408,891	408,331	408,218	414,398				
2018	1,044,467	409,391	409,487	409,529	409,515	405,314					
2019	1,099,731	407,524	407,611	407,821	414,142						
2020	1,134,690	316,677	317,472	319,704							
2021	1,159,166	441,587	420,009								
2022	1,126,492	451,933									
Total	15,669,653	5,854,286									
Total Excl. 2022	14,543,161	5,402,354	5,381,774								
Total Excl. 2021 to 2022	13,383,995	4,960,766	4,961,766	4,964,026							
Total Excl. 2020 to 2022	12,249,305	4,644,089	4,644,293	4,644,322	4,637,287						
Total Excl. 2019 to 2022	11,149,575	4,236,565	4,236,682	4,236,501	4,223,146	4,218,475					
Total Excl. 2018 to 2022	10,105,108	3,827,174	3,827,195	3,826,971	3,813,631	3,813,160	3,819,696				
Total Excl. 2017 to 2022	9,128,005	3,418,230	3,418,217	3,418,080	3,405,300	3,404,943	3,405,298	3,404,003			
Total Excl. 2016 to 2022	7,327,574	3,030,688	3,030,734	3,030,739	3,019,245	3,019,122	3,019,175	3,018,834	3,012,254		
Total Excl. 2015 to 2022	6,505,216	2,675,312	2,675,402	2,675,436	2,666,965	2,666,879	2,666,819	2,666,406	2,663,184	2,659,090	
Total Excl. 2014 to 2022	6,505,216	2,361,450	2,361,560	2,361,622	2,349,164	2,349,190	2,349,022	2,349,092	2,347,055	2,343,228	2,342,033

Notes:
(2) - From MPI
(3) - From Exhibit 2, Column 7; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 4

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Comprehensive - Basic											
2005	632,408	72,812	72,817	72,821	70,851	70,853	70,856	70,857	70,861	70,858	70,831
2006	656,746	73,541	73,545	73,556	74,845	74,846	74,850	74,881	74,852	74,858	74,850
2007	679,930	111,676	111,676	111,679	113,321	113,326	113,323	113,288	113,283	113,262	113,240
2008	709,787	49,838	49,843	49,851	49,858	49,809	49,809	49,778	49,890	49,929	49,937
2009	741,553	78,862	78,861	78,866	78,638	78,638	78,618	78,588	78,538	78,510	78,487
2010	761,034	74,834	74,841	74,847	74,850	74,839	74,821	74,748	74,678	74,511	74,468
2011	772,649	75,372	75,371	75,365	74,636	74,631	74,634	74,545	74,488	74,356	74,116
2012	769,715	72,144	72,130	72,124	72,624	72,612	72,606	72,469	72,412	72,192	71,472
2013	781,394	75,173	75,172	75,159	74,738	74,788	74,802	74,636	74,477	74,116	75,439
2014	822,358	71,692	71,685	71,652	70,972	70,995	70,979	70,931	71,616	72,352	
2015	877,262	121,440	121,367	121,397	120,234	120,140	120,099	119,834	125,330		
2016	923,168	118,666	118,660	118,749	119,244	119,063	119,093	123,042			
2017	977,104	72,861	72,967	73,075	73,854	74,831	73,678				
2018	1,044,467	115,001	114,389	114,960	116,908	114,610					
2019	1,099,731	87,234	87,024	87,610	85,563						
2020	1,134,690	84,920	86,396	84,653							
2021	1,159,166	87,065	84,241								
2022	1,126,492	112,661									
Total	15,669,653	1,555,793									
Total Excl. 2022	14,543,161	1,443,132	1,440,986								
Total Excl. 2021 to 2022	13,383,995	1,356,067	1,356,745	1,356,363							
Total Excl. 2020 to 2022	12,249,305	1,271,146	1,270,349	1,271,710	1,271,136						
Total Excl. 2019 to 2022	11,149,575	1,183,912	1,183,324	1,184,101	1,185,573	1,183,981					
Total Excl. 2018 to 2022	10,105,108	1,068,911	1,068,936	1,069,141	1,068,665	1,069,372	1,068,167				
Total Excl. 2017 to 2022	9,128,005	996,050	995,968	996,066	994,812	994,541	994,489	997,596			
Total Excl. 2016 to 2022	7,327,574	877,384	877,308	877,317	875,567	875,477	875,396	874,554	880,425		
Total Excl. 2015 to 2022	6,505,216	755,944	755,941	755,920	755,333	755,337	755,298	754,720	755,095	754,945	
Total Excl. 2014 to 2022	6,505,216	684,252	684,256	684,268	684,362	684,342	684,319	683,789	683,479	682,593	682,838

Notes:
(2) - From MPI
(3) - From Exhibit 2, Column 7; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 5

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Weekly Indemnity											
2005	632,408	67,841	67,120	67,779	68,180	69,622	70,306	68,713	66,569	66,660	66,554
2006	656,746	84,732	84,784	83,943	85,057	88,500	87,871	84,584	84,288	83,757	82,161
2007	679,930	85,483	85,236	86,271	86,346	87,222	85,502	84,903	82,318	79,410	77,689
2008	709,787	85,107	85,481	84,000	85,474	83,760	82,694	81,358	80,303	80,963	77,891
2009	741,553	80,656	80,928	80,713	77,901	79,944	77,562	74,589	72,712	70,379	67,043
2010	761,034	103,746	102,921	103,854	101,829	102,348	98,188	92,434	86,294	81,444	72,398
2011	772,649	97,826	96,807	98,287	95,910	97,737	94,254	87,985	78,015	70,264	77,864
2012	769,715	88,927	91,350	93,008	96,414	101,997	105,583	83,995	77,233	80,534	75,593
2013	781,394	79,776	79,458	77,714	80,046	87,035	88,221	90,486	82,726	75,066	71,601
2014	822,358	81,294	80,402	80,542	79,804	78,549	74,152	81,969	73,335	64,494	
2015	877,262	93,625	92,115	94,844	98,013	94,279	94,372	78,976	68,099		
2016	923,168	98,608	100,095	99,879	100,374	92,676	90,642	72,716			
2017	977,104	98,734	97,757	99,586	100,751	94,113	84,165				
2018	1,044,467	84,348	86,852	95,866	100,097	97,022					
2019	1,099,731	85,444	90,274	96,198	96,074						
2020	1,134,690	78,988	78,295	73,230							
2021	1,159,166	88,308	88,878								
2022	1,126,492	83,286									
Total	15,669,653	1,566,729									
Total Excl. 2022	14,543,161	1,483,443	1,488,754								
Total Excl. 2021 to 2022	13,383,995	1,395,135	1,399,876	1,415,716							
Total Excl. 2020 to 2022	12,249,305	1,316,147	1,321,581	1,342,486	1,352,269						
Total Excl. 2019 to 2022	11,149,575	1,230,703	1,231,307	1,246,288	1,256,195	1,254,803					
Total Excl. 2018 to 2022	10,105,108	1,146,355	1,144,455	1,150,422	1,156,098	1,157,781	1,133,512				
Total Excl. 2017 to 2022	9,128,005	1,047,621	1,046,698	1,050,836	1,055,347	1,063,668	1,049,347	982,707			
Total Excl. 2016 to 2022	7,327,574	949,012	946,603	950,957	954,973	970,992	958,705	909,991	851,892		
Total Excl. 2015 to 2022	6,505,216	855,387	854,488	856,113	856,960	876,713	864,333	831,015	783,794	752,972	
Total Excl. 2014 to 2022	6,505,216	774,093	774,086	775,571	777,156	798,164	790,181	749,047	710,459	688,478	668,794

Notes:
(2) - From MPI
(3) = Appendix E, Page 12, Accumulated-to-Date + Exhibit 2, Column 9; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 6

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Other (Indexed)											
2005	632,408	68,717	68,145	67,455	61,469	62,043	62,426	62,922	63,172	63,809	63,727
2006	656,746	79,526	78,763	77,662	76,608	79,663	80,493	82,679	80,809	80,445	80,675
2007	679,930	79,593	79,878	79,019	79,833	79,588	79,338	77,235	75,495	77,105	79,138
2008	709,787	60,752	61,274	61,998	62,366	64,142	65,165	65,737	68,176	68,375	70,425
2009	741,553	69,754	69,287	68,296	68,214	69,151	70,308	69,984	69,427	69,096	70,104
2010	761,034	67,391	67,483	69,212	62,874	63,192	63,295	69,411	68,059	68,617	68,551
2011	772,649	73,553	73,268	72,225	69,844	71,514	70,869	71,733	75,417	75,103	76,856
2012	769,715	66,031	66,057	64,996	67,397	72,361	72,614	71,749	72,322	78,496	80,741
2013	781,394	60,084	59,961	59,168	57,749	61,433	63,342	78,790	78,954	80,164	78,369
2014	822,358	54,124	52,816	53,089	54,833	58,401	61,248	73,482	73,907	77,025	
2015	877,262	67,791	67,056	69,855	68,794	72,960	77,410	76,835	72,906		
2016	923,168	81,394	83,694	82,895	77,055	85,320	76,828	73,028			
2017	977,104	74,038	75,744	74,034	74,690	79,688	76,924				
2018	1,044,467	57,792	56,704	68,409	71,940	80,221					
2019	1,099,731	61,240	62,639	64,553	68,748						
2020	1,134,690	58,482	59,597	48,543							
2021	1,159,166	51,231	61,784								
2022	1,126,492	53,421									
Total	15,669,653	1,184,914									
Total Excl. 2022	14,543,161	1,131,493	1,144,151								
Total Excl. 2021 to 2022	13,383,995	1,080,262	1,082,367	1,081,412							
Total Excl. 2020 to 2022	12,249,305	1,021,779	1,022,770	1,032,869	1,022,414						
Total Excl. 2019 to 2022	11,149,575	960,540	960,131	968,315	953,666	999,676					
Total Excl. 2018 to 2022	10,105,108	902,747	903,427	899,906	881,726	919,455	920,260				
Total Excl. 2017 to 2022	9,128,005	828,710	827,683	825,872	807,036	839,767	843,336	873,585			
Total Excl. 2016 to 2022	7,327,574	747,316	743,989	742,976	729,981	754,448	766,507	800,557	798,644		
Total Excl. 2015 to 2022	6,505,216	679,525	676,933	673,122	661,187	681,488	689,097	723,722	725,738	738,235	
Total Excl. 2014 to 2022	6,505,216	625,401	624,117	620,032	606,354	623,087	627,850	650,240	651,831	661,210	668,586

Notes:
(2) - From MPI
(3) = Appendix F, Page 17, Accumulated-to-Date + Exhibit 2, Column 9; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 7

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Other (Non-Indexed)											
2005	632,408	28,595	28,614	28,561	28,828	28,847	28,928	28,984	28,836	28,832	28,980
2006	656,746	34,492	34,504	34,422	33,974	34,048	34,070	34,067	34,023	33,997	34,024
2007	679,930	29,473	29,459	29,402	30,330	30,193	30,183	30,208	30,137	30,112	30,287
2008	709,787	29,359	29,334	29,281	28,898	28,654	29,155	28,989	28,490	28,390	28,518
2009	741,553	30,055	30,073	30,032	30,011	30,010	29,987	30,058	29,781	30,075	29,843
2010	761,034	29,177	29,180	29,084	28,721	28,655	28,605	28,504	28,453	28,358	28,228
2011	772,649	32,394	32,426	32,408	32,250	32,185	32,032	31,822	31,732	31,685	31,404
2012	769,715	30,100	30,146	30,173	30,622	30,572	30,277	30,373	30,199	30,413	29,857
2013	781,394	28,001	28,046	28,080	28,098	28,061	27,596	27,550	27,723	29,351	26,911
2014	822,358	28,397	28,468	28,447	27,830	27,995	28,224	27,901	27,379	25,723	
2015	877,262	29,753	29,794	29,625	30,520	32,589	30,723	27,146	27,066		
2016	923,168	32,691	32,719	32,586	37,351	37,107	32,139	29,745			
2017	977,104	30,528	30,019	29,032	34,356	33,152	30,213				
2018	1,044,467	26,508	29,161	30,653	32,559	35,290					
2019	1,099,731	24,423	26,729	27,952	30,165						
2020	1,134,690	26,175	27,420	30,719							
2021	1,159,166	30,183	30,392								
2022	1,126,492	32,545									
Total	15,669,653	532,849									
Total Excl. 2022	14,543,161	500,304	506,484								
Total Excl. 2021 to 2022	13,383,995	470,121	476,092	480,458							
Total Excl. 2020 to 2022	12,249,305	443,946	448,671	449,738	464,513						
Total Excl. 2019 to 2022	11,149,575	419,522	421,943	421,787	434,348	437,359					
Total Excl. 2018 to 2022	10,105,108	393,014	392,781	391,134	401,789	402,069	392,133				
Total Excl. 2017 to 2022	9,128,005	362,486	362,762	362,102	367,433	368,917	361,919	355,347			
Total Excl. 2016 to 2022	7,327,574	329,795	330,043	329,515	330,082	331,810	329,780	325,602	323,820		
Total Excl. 2015 to 2022	6,505,216	300,042	300,249	299,890	299,562	299,221	299,057	298,455	296,754	296,936	
Total Excl. 2014 to 2022	6,505,216	271,645	271,781	271,443	271,732	271,226	270,833	270,555	269,375	271,213	268,052

Notes:
(2) - From MPI
(3) - From Exhibit 2, Column 7; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 8

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Total											
2005	632,408	165,154	163,879	163,795	158,476	160,512	161,659	160,619	161,659	160,619	158,577
2006	656,746	198,750	198,051	196,027	195,639	202,210	202,434	201,330	202,434	201,330	199,120
2007	679,930	194,548	194,573	194,692	196,510	197,004	195,023	192,347	195,023	192,347	187,950
2008	709,787	175,217	176,089	175,279	176,739	176,557	177,014	176,084	177,014	176,084	176,969
2009	741,553	180,465	180,288	179,042	176,126	179,105	177,857	174,631	177,857	174,631	171,920
2010	761,034	200,313	199,585	202,150	193,424	194,196	190,088	190,349	190,088	190,349	182,806
2011	772,649	203,773	202,501	202,920	198,003	201,435	197,154	191,540	197,154	191,540	185,164
2012	769,715	185,057	187,554	188,178	194,433	204,930	208,474	186,117	208,474	186,117	179,754
2013	781,394	167,862	167,464	164,962	165,893	176,528	179,159	196,826	179,159	196,826	189,404
2014	822,358	163,815	161,686	162,079	162,468	164,944	163,624	183,351	163,624	183,351	
2015	877,262	191,169	188,966	194,323	197,327	199,828	202,505	182,957	202,505		
2016	923,168	212,693	216,507	215,361	214,780	215,103	199,610	175,489			
2017	977,104	203,300	203,519	202,653	209,796	206,953	191,303				
2018	1,044,467	168,648	172,717	194,928	204,597	212,533					
2019	1,099,731	171,108	179,642	188,703	194,987						
2020	1,134,690	163,646	165,313	152,493							
2021	1,159,166	169,722	181,054								
2022	1,126,492	169,252									
Total	15,669,653	3,284,492									
Total Excl. 2022	14,543,161	3,115,240	3,139,389								
Total Excl. 2021 to 2022	13,383,995	2,945,518	2,958,335	2,977,585							
Total Excl. 2020 to 2022	12,249,305	2,781,872	2,793,022	2,825,093	2,839,196						
Total Excl. 2019 to 2022	11,149,575	2,610,764	2,613,380	2,636,390	2,644,209	2,691,839					
Total Excl. 2018 to 2022	10,105,108	2,442,116	2,440,663	2,441,462	2,439,612	2,479,305	2,445,905				
Total Excl. 2017 to 2022	9,128,005	2,238,816	2,237,143	2,238,809	2,229,816	2,272,352	2,254,602	2,211,640			
Total Excl. 2016 to 2022	7,327,574	2,026,123	2,020,636	2,023,448	2,015,036	2,057,250	2,054,992	2,036,150	2,054,992		
Total Excl. 2015 to 2022	6,505,216	1,834,954	1,831,670	1,829,125	1,817,709	1,857,422	1,852,487	1,853,193	1,852,487	1,853,193	
Total Excl. 2014 to 2022	6,505,216	1,671,139	1,669,984	1,667,046	1,655,242	1,692,478	1,688,864	1,669,842	1,688,864	1,669,842	1,631,665

Notes:
(2) - From MPI
(3) to (12) - Total of Sheets 5 to 7

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 9

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Basic - Total All Coverage*											
2005	632,408	477,155	475,929	475,861	466,882	468,929	470,093	469,044	470,123	469,104	467,074
2006	656,746	535,055	534,367	532,364	532,012	538,612	538,874	537,787	538,869	537,863	535,485
2007	679,930	576,978	577,029	577,134	581,005	581,447	579,470	576,762	579,445	576,806	572,304
2008	709,787	507,374	508,288	507,495	506,801	506,502	507,019	506,026	506,936	506,233	506,859
2009	741,553	535,002	534,788	533,569	535,656	538,655	537,401	534,151	537,413	534,258	531,237
2010	761,034	597,444	596,851	599,408	581,385	582,119	577,875	577,867	577,523	577,345	568,946
2011	772,649	590,137	588,954	589,382	585,833	589,282	584,995	579,269	584,672	578,314	571,086
2012	769,715	619,437	621,984	622,663	623,207	633,786	637,288	614,985	636,723	613,026	604,173
2013	781,394	642,314	641,902	639,354	639,422	650,136	652,870	670,448	651,369	665,797	662,210
2014	822,358	595,492	593,318	593,651	597,918	600,439	599,356	618,408	598,755	616,671	
2015	877,262	713,790	711,449	716,832	715,216	718,339	721,216	701,892	722,513		
2016	923,168	767,679	771,118	770,160	769,481	769,195	754,033	731,551			
2017	977,104	737,114	737,268	736,773	743,542	741,777	731,447				
2018	1,044,467	742,280	745,633	768,458	779,647	780,713					
2019	1,099,731	709,392	717,389	728,151	740,929						
2020	1,134,690	597,438	601,088	592,540							
2021	1,159,166	747,313	730,165								
2022	1,126,492	785,016									
Total	15,669,653	11,476,408									
Total Excl. 2022	14,543,161	10,691,392	10,687,518								
Total Excl. 2021 to 2022	13,383,995	9,944,079	9,957,353	9,983,793							
Total Excl. 2020 to 2022	12,249,305	9,346,641	9,356,265	9,391,253	9,398,938						
Total Excl. 2019 to 2022	11,149,575	8,637,249	8,638,877	8,663,102	8,658,009	8,699,931					
Total Excl. 2018 to 2022	10,105,108	7,894,969	7,893,243	7,894,645	7,878,362	7,919,219	7,891,936				
Total Excl. 2017 to 2022	9,128,005	7,157,854	7,155,976	7,157,871	7,134,820	7,177,442	7,160,490	7,118,192			
Total Excl. 2016 to 2022	7,327,574	6,390,176	6,384,858	6,387,712	6,365,339	6,408,246	6,406,457	6,386,640	6,404,340		
Total Excl. 2015 to 2022	6,505,216	5,676,386	5,673,409	5,670,880	5,650,122	5,689,907	5,685,241	5,684,748	5,681,827	5,675,416	
Total Excl. 2014 to 2022	6,505,216	5,080,895	5,080,090	5,077,229	5,052,204	5,089,469	5,085,885	5,066,341	5,083,073	5,058,746	5,019,373

Notes:
(2) - From MPI
(3) to (12) - Total of Sheets 1 to 4, & Sheet 8
*Not including PIPP Enhancements

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 10

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Comprehensive - Basic											
2005	621,331	72,812	72,817	72,821	70,851	70,853	70,856	70,857	70,861	70,858	70,831
2006	647,698	73,541	73,545	73,556	74,845	74,846	74,850	74,881	74,852	74,858	74,850
2007	667,689	75,549	75,549	75,552	77,194	77,199	77,196	77,161	77,156	77,135	77,153
2008	699,646	49,838	49,843	49,851	49,858	49,809	49,809	49,778	49,890	49,929	49,937
2009	728,959	60,636	60,635	60,640	60,412	60,412	60,392	60,362	60,312	60,284	60,400
2010	750,546	74,834	74,841	74,847	74,850	74,839	74,821	74,748	74,678	74,511	74,468
2011	761,267	75,182	75,181	75,175	74,446	74,441	74,115	74,017	73,976	74,356	74,116
2012	757,411	72,144	72,130	72,124	72,624	72,612	72,606	72,469	72,412	72,192	71,472
2013	767,939	75,173	75,172	75,159	74,738	74,788	74,802	74,636	74,477	74,116	75,439
2014	808,646	71,692	71,685	71,652	70,972	70,995	70,979	70,931	71,616	72,352	
2015	864,905	121,440	121,367	121,397	120,234	120,140	120,099	119,834	125,330		
2016	911,562	118,666	118,660	118,749	119,244	119,063	119,093	123,042			
2017	965,709	72,861	72,967	73,075	73,854	74,831	73,678				
2018	1,031,748	100,230	100,476	100,773	101,392	99,620					
2019	1,085,549	87,234	87,024	87,610	85,563						
2020	1,120,929	84,920	86,396	84,653							
2021	1,143,507	87,065	84,241								
2022	1,110,100	112,661									
Total	15,445,139	1,486,480									
Total Excl. 2022	14,335,039	1,373,818	1,372,531								
Total Excl. 2021 to 2022	13,191,532	1,286,753	1,288,289	1,287,633							
Total Excl. 2020 to 2022	12,070,603	1,201,833	1,201,893	1,202,981	1,201,077						
Total Excl. 2019 to 2022	10,985,054	1,114,599	1,114,869	1,115,371	1,115,514	1,114,448					
Total Excl. 2018 to 2022	9,953,306	1,014,368	1,014,393	1,014,598	1,014,122	1,014,829	1,013,295				
Total Excl. 2017 to 2022	8,987,597	941,507	941,425	941,523	940,269	939,998	939,617	942,715			
Total Excl. 2016 to 2022	7,211,131	822,841	822,765	822,774	821,024	820,934	820,524	819,673	825,560		
Total Excl. 2015 to 2022	6,402,484	701,401	701,398	701,377	700,790	700,794	700,426	699,839	700,230	700,592	
Total Excl. 2014 to 2022	6,402,484	629,709	629,713	629,725	629,819	629,799	629,447	628,908	628,614	628,240	628,664

Notes:
(2) - From MPI
(3) - From Exhibit 2, Column 7; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 11

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Weekly Indemnity											
2005	621,331	67,510	66,776	67,424	67,489	69,039	69,945	68,484	69,830	69,948	70,311
2006	647,698	84,627	84,677	83,835	85,057	88,500	87,871	84,584	89,042	88,848	87,254
2007	667,689	85,090	84,935	86,108	86,226	87,160	85,352	84,903	86,645	84,117	83,170
2008	699,646	85,107	85,481	84,000	85,474	83,760	82,694	81,358	84,876	85,755	83,209
2009	728,959	80,613	80,928	80,713	77,901	79,944	77,562	74,589	77,233	75,087	72,585
2010	750,546	102,801	102,394	103,455	101,399	102,160	98,000	92,434	93,525	88,857	80,414
2011	761,267	97,247	96,420	98,060	95,910	97,737	94,254	87,985	84,600	77,593	87,211
2012	757,411	88,927	91,350	93,008	96,414	101,997	105,583	83,995	86,283	90,331	87,110
2013	767,939	79,585	79,088	77,366	79,689	86,693	87,913	90,216	91,175	85,457	88,028
2014	808,646	81,294	80,402	80,542	79,804	78,549	74,152	81,969	81,841	78,036	
2015	864,905	93,625	92,115	94,844	98,013	94,279	94,372	78,976	85,971		
2016	911,562	98,368	100,095	99,879	100,374	92,676	90,642	72,716			
2017	965,709	98,734	97,757	99,586	100,751	94,113	84,165				
2018	1,031,748	84,348	86,852	95,866	100,097	97,022					
2019	1,085,549	85,444	90,274	96,198	96,074						
2020	1,120,929	78,988	78,295	73,230							
2021	1,143,507	88,308	88,878								
2022	1,110,100	83,284									
Total	15,445,139	1,563,900									
Total Excl. 2022	14,335,039	1,480,616	1,486,717								
Total Excl. 2021 to 2022	13,191,532	1,392,308	1,397,839	1,414,115							
Total Excl. 2020 to 2022	12,070,603	1,313,320	1,319,544	1,340,885	1,350,671						
Total Excl. 2019 to 2022	10,985,054	1,227,876	1,229,270	1,244,687	1,254,597	1,253,628					
Total Excl. 2018 to 2022	9,953,306	1,143,528	1,142,418	1,148,821	1,154,499	1,156,607	1,132,506				
Total Excl. 2017 to 2022	8,987,597	1,044,794	1,044,661	1,049,235	1,053,749	1,062,494	1,048,341	982,208			
Total Excl. 2016 to 2022	7,211,131	946,425	944,566	949,356	953,375	969,817	957,698	909,492	931,020		
Total Excl. 2015 to 2022	6,402,484	852,800	852,451	854,512	855,362	875,539	863,326	830,516	845,049	824,029	
Total Excl. 2014 to 2022	6,402,484	771,506	772,049	773,970	775,558	796,990	789,174	748,547	763,208	745,993	739,292

Notes:
(2) - From MPI
(3) = Appendix E, Page 12, Accumulated-to-Date + Exhibit 2, Column 9 - Ceded Paid; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 12

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Other (Indexed)											
2005	621,331	68,365	67,805	67,127	61,016	61,674	62,199	62,776	64,408	64,825	64,688
2006	647,698	79,431	78,670	77,570	76,608	79,663	80,493	82,679	83,206	82,439	82,516
2007	667,689	79,230	79,600	78,880	79,732	79,538	79,220	77,235	77,400	78,673	81,061
2008	699,646	60,752	61,274	61,998	62,366	64,142	65,165	65,737	69,424	70,237	72,639
2009	728,959	69,726	69,287	68,296	68,214	69,151	70,308	69,984	71,845	71,746	72,560
2010	750,546	67,011	67,273	69,035	62,703	63,122	63,226	69,411	69,689	70,793	71,192
2011	761,267	73,239	73,067	72,108	69,844	71,514	70,869	71,733	77,454	77,395	80,766
2012	757,411	66,031	66,057	64,996	67,397	72,361	72,614	71,749	75,303	82,119	87,330
2013	767,939	60,014	59,826	59,039	57,636	61,331	63,250	78,608	81,892	86,213	99,819
2014	808,646	54,124	52,816	53,089	54,833	58,401	61,248	73,482	79,515	95,117	
2015	864,905	67,791	67,056	69,855	68,794	72,960	77,410	76,835	94,720		
2016	911,562	81,258	83,694	82,895	77,055	85,320	76,828	73,028			
2017	965,709	74,038	75,744	74,034	74,690	79,688	76,924				
2018	1,031,748	57,792	56,704	68,409	71,940	80,221					
2019	1,085,549	61,240	62,639	64,553	68,748						
2020	1,120,929	58,482	59,597	48,543							
2021	1,143,507	51,231	61,784								
2022	1,110,100	53,414									
Total	15,445,139	1,183,169									
Total Excl. 2022	14,335,039	1,129,755	1,142,894								
Total Excl. 2021 to 2022	13,191,532	1,078,524	1,081,109	1,080,429							
Total Excl. 2020 to 2022	12,070,603	1,020,041	1,021,512	1,031,886	1,021,577						
Total Excl. 2019 to 2022	10,985,054	958,802	958,873	967,332	952,829	999,085					
Total Excl. 2018 to 2022	9,953,306	901,009	902,169	898,923	880,889	918,864	919,753				
Total Excl. 2017 to 2022	8,987,597	826,972	826,425	824,889	806,199	839,176	842,829	873,257			
Total Excl. 2016 to 2022	7,211,131	745,714	742,731	741,994	729,144	753,856	766,001	800,229	844,855		
Total Excl. 2015 to 2022	6,402,484	677,923	675,675	672,139	660,350	680,897	688,591	723,394	750,135	779,557	
Total Excl. 2014 to 2022	6,402,484	623,799	622,859	619,049	605,517	622,496	627,343	649,912	670,620	684,440	712,572

Notes:
(2) - From MPI
(3) = Appendix F, Page 17, Accumulated-to-Date + Exhibit 2, Column 9 - Ceded Paid; All insurance years are from April to March.
(4) to (12) - From respective Year-end valuations; All insurance years are from March to Feb; except the columns (4) and (5) which are from April to March.

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 13

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Accident Benefits - Total											
2005	621,331	164,471	163,195	163,112	157,333	159,560	161,072	160,243	163,166	163,756	163,836
2006	647,698	198,550	197,851	195,827	195,639	202,210	202,434	201,330	206,317	205,355	203,793
2007	667,689	193,792	193,994	194,390	196,288	196,892	194,755	192,347	194,228	192,998	194,369
2008	699,646	175,217	176,089	175,279	176,739	176,557	177,014	176,084	183,455	184,981	184,337
2009	728,959	180,394	180,288	179,042	176,126	179,105	177,857	174,631	179,065	176,892	174,925
2010	750,546	198,988	198,847	201,574	192,823	193,937	189,831	190,349	191,819	188,154	180,059
2011	761,267	202,880	201,912	202,575	198,003	201,435	197,154	191,540	194,086	186,810	199,709
2012	757,411	185,057	187,554	188,178	194,433	204,930	208,474	186,117	191,863	202,823	204,639
2013	767,939	167,601	166,960	164,485	165,424	176,085	178,759	196,373	200,663	199,220	215,570
2014	808,646	163,815	161,686	162,079	162,468	164,944	163,624	183,351	189,580	201,053	
2015	864,905	191,169	188,966	194,323	197,327	199,828	202,505	182,957	211,414		
2016	911,562	212,317	216,507	215,361	214,780	215,103	199,610	175,489			
2017	965,709	203,300	203,519	202,653	209,796	206,953	191,303				
2018	1,031,748	168,648	172,717	194,928	204,597	212,533					
2019	1,085,549	171,108	179,642	188,703	194,987						
2020	1,120,929	163,646	165,313	152,493							
2021	1,143,507	169,722	181,054								
2022	1,110,100	169,243									
Total	15,445,139	3,279,918									
Total Excl. 2022	14,335,039	3,110,675	3,136,094								
Total Excl. 2021 to 2022	13,191,532	2,940,953	2,955,040	2,975,002							
Total Excl. 2020 to 2022	12,070,603	2,777,307	2,789,727	2,822,509	2,836,761						
Total Excl. 2019 to 2022	10,985,054	2,606,199	2,610,085	2,633,806	2,641,774	2,690,073					
Total Excl. 2018 to 2022	9,953,306	2,437,551	2,437,368	2,438,878	2,437,177	2,477,539	2,444,392				
Total Excl. 2017 to 2022	8,987,597	2,234,251	2,233,848	2,236,225	2,227,381	2,270,586	2,253,089	2,210,812			
Total Excl. 2016 to 2022	7,211,131	2,021,934	2,017,341	2,020,864	2,012,601	2,055,484	2,053,479	2,035,322	2,105,655		
Total Excl. 2015 to 2022	6,402,484	1,830,765	1,828,375	1,826,541	1,815,274	1,855,656	1,850,974	1,852,365	1,894,241	1,902,041	
Total Excl. 2014 to 2022	6,402,484	1,666,950	1,666,689	1,664,462	1,652,806	1,690,712	1,687,351	1,669,014	1,704,661	1,700,988	1,721,239

Notes:
(2) - From MPI
(3) to (12) - Total of Sheets 7, 11 & 12

Manitoba Public Insurance
Automobile Insurance Division
Comparison of Actual With Expected Experience in Previous Year-End Valuations
Net Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Exhibit 3
Sheet 14

Insurance Year	Earned Premium	Estimated Ultimate Losses									
		March 2023 Valuation	March 2022 Valuation	March 2021 Valuation	Feb 2020 Valuation	Feb 2019 Valuation	Feb 2018 Valuation	Feb 2017 Valuation	Feb 2016 Valuation	Feb 2015 Valuation	Feb 2014 Valuation
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Basic - Total All Coverage*											
2005	621,331	476,472	475,245	475,177	465,738	467,976	469,506	468,669	471,629	472,242	472,332
2006	647,698	534,855	534,167	532,164	532,012	538,612	538,874	537,787	542,753	541,888	540,158
2007	667,689	540,095	540,322	540,705	544,656	545,208	543,074	540,635	542,522	541,331	542,636
2008	699,646	507,374	508,288	507,495	506,801	506,502	507,019	506,026	513,378	515,129	514,227
2009	728,959	516,705	516,562	515,343	517,430	520,429	519,175	515,925	520,394	518,293	516,155
2010	750,546	596,119	596,113	598,831	580,785	581,860	577,617	577,867	579,253	575,150	566,199
2011	761,267	589,054	588,175	588,847	585,643	589,092	584,476	578,741	581,092	573,584	585,630
2012	757,411	619,437	621,984	622,663	623,207	633,786	637,288	614,985	620,111	629,732	629,058
2013	767,939	642,053	641,397	638,876	638,953	649,694	652,470	669,995	672,873	668,190	688,376
2014	808,646	595,492	593,318	593,651	597,918	600,439	599,356	618,408	624,711	634,373	
2015	864,905	713,790	711,449	716,832	715,216	718,339	721,216	701,892	731,422		
2016	911,562	767,303	771,118	770,160	769,481	769,195	754,033	731,551			
2017	965,709	737,114	737,268	736,773	743,542	741,777	731,447				
2018	1,031,748	727,510	731,721	754,271	764,131	765,723					
2019	1,085,549	709,392	717,389	728,151	740,929						
2020	1,120,929	597,438	601,088	592,540							
2021	1,143,507	747,313	730,165								
2022	1,110,100	785,007									
Total	15,445,139	11,402,521									
Total Excl. 2022	14,335,039	10,617,514	10,615,768								
Total Excl. 2021 to 2022	13,191,532	9,870,201	9,885,603	9,912,480							
Total Excl. 2020 to 2022	12,070,603	9,272,763	9,284,515	9,319,940	9,326,444						
Total Excl. 2019 to 2022	10,985,054	8,563,371	8,567,126	8,591,789	8,585,515	8,628,632					
Total Excl. 2018 to 2022	9,953,306	7,835,861	7,835,405	7,837,518	7,821,384	7,862,910	7,835,551				
Total Excl. 2017 to 2022	8,987,597	7,098,746	7,098,138	7,100,745	7,077,841	7,121,133	7,104,105	7,062,483			
Total Excl. 2016 to 2022	7,211,131	6,331,444	6,327,020	6,330,585	6,308,360	6,351,937	6,350,072	6,330,931	6,400,139		
Total Excl. 2015 to 2022	6,402,484	5,617,654	5,615,571	5,613,753	5,593,144	5,633,599	5,628,856	5,629,039	5,668,716	5,669,911	
Total Excl. 2014 to 2022	6,402,484	5,022,163	5,022,253	5,020,103	4,995,226	5,033,160	5,029,500	5,010,632	5,044,005	5,035,539	5,054,773

Notes:
(2) - From MPI
(3) to (12) - Total of Sheets 1 to 3, Sheet 10, & Sheet 13
*Not including PIPP Enhancements

July 13, 2023



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 4
Incurred But Not Reported Estimates

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 1

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR
(1)	(2)	(3)	(4)	(5)	(6)
Bodily Injury - Basic					
2004 & Prior					
2005	-	-	-	-	-
2006	-	-	-	-	-
2007	-	-	-	-	-
2008	-	-	-	-	-
2009	-	-	(100)	(100)	-
2010	-	-	-	-	-
2011	-	-	4	6	-
2012	-	-	27	25	-
2013	-	-	46	48	-
2014	3	2	(294)	(328)	2
2015	7	6	(82)	(97)	6
2016	38	34	(472)	(480)	34
2017	129	111	(729)	(714)	111
2018	302	246	(2)	(231)	246
2019	392	491	156	702	491
2020	715	1,081	(629)	1,306	1,081
2021	1,329	1,901	(429)	2,330	1,901
2022	2,770	2,583	(112)	2,308	2,583
Total	5,685	6,456	(2,617)	4,774	6,456

Notes: (2) to (5) - Per Appendix A
(6) - Incurred Born/Ferg Method for all years

Manitoba Public Insurance
 Summary of Direct & Agency IBNR Estimates
 (Including External Adjustment Expenses)
 As of March 31, 2023
 (\$000)

Exhibit 4
 Sheet 2

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR
(1)	(2)	(3)	(4)	(5)	(6)
Property Damage - Basic					
2004 & Prior					
2005	-	-	-	-	-
2006	-	-	-	-	-
2007	-	-	(3)	(3)	-
2008	-	-	-	-	-
2009	-	-	-	-	-
2010	-	-	-	-	-
2011	-	-	-	-	-
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	(20)	(20)	(20)	(20)	(20)
2015	(41)	(41)	-	-	(41)
2016	(66)	(66)	21	21	(66)
2017	(70)	(70)	64	64	(70)
2018	(22)	(22)	(225)	(223)	(22)
2019	58	63	(251)	(234)	63
2020	154	208	233	412	208
2021	1,455	1,329	756	540	1,329
2022	8,032	7,594	2,900	4,008	8,032
Total	9,480	8,976	3,475	4,564	9,414

Notes: (2) to (5) - Per Appendix B
 (6) - Incurred Born/Ferg Method for all years except 2022 which uses the Incurred Developmental method

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 3

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Claims Frequency-Severity Method	Selected IBNR	Bulk IBNR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Collision - Basic							
2004 & Prior							
2005	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-
2012	-	-	(2)	(2)	-	-	-
2013	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-
2015	-	-	(3)	(3)	-	-	-
2016	-	-	(6)	(6)	-	-	-
2017	-	-	182	182	204	-	-
2018	205	206	350	353	409	205	-
2019	611	630	723	749	813	611	-
2020	1,263	1,612	1,162	1,555	1,260	1,263	-
2021	5,551	5,463	5,483	5,364	5,611	5,551	-
2022	20,939	21,243	(10,727)	(2,369)	20,038	20,939	10,482
Total	28,568	29,155	(2,837)	5,824	28,336	28,568	10,482

Notes: (2) to (5) - Per Appendix C
(7) - Incurred Developmental method for all years
(8)- Bulk IBNR was added for Insurance Year 2022 due to Late Reporting and LVAA agreement

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 4

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR
(1)	(2)	(3)	(4)	(5)	(6)
Comprehensive - Basic					
2004 & Prior					
2005	-	-	-	-	-
2006	-	-	-	-	-
2007	-	-	-	-	-
2008	-	-	-	-	-
2009	-	-	-	-	-
2010	-	-	-	-	-
2011	-	-	-	-	-
2012	-	-	(4)	(4)	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	-	(3)	(3)	-
2016	-	-	(13)	(13)	-
2017	-	-	34	34	-
2018	(290)	(290)	(1,121)	(1,115)	(290)
2019	-	-	(415)	(421)	-
2020	-	-	154	187	-
2021	933	957	1,246	1,298	933
2022	10,585	10,050	4,510	4,594	10,585
Total	11,228	10,717	4,388	4,557	11,228

Notes: (2) to (5) - Per Appendix D
(6) - Incurred Development Method for all years

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 5

Insurance Year April-March	Tabular Reserve Method	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR	Bulk IBNR
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

Accident Benefits - Weekly Indemnity

2004 & Prior	23,685					23,685	695
2005	2,249	3,080	3,080	2,719	2,815	2,249	63
2006	2,074	3,968	3,968	(365)	866	2,074	63
2007	2,087	4,091	4,091	1,500	2,285	2,087	63
2008	2,603	4,134	4,134	1,876	2,607	2,603	63
2009	2,398	4,003	4,003	3,819	3,883	2,398	63
2010	4,327	5,191	5,191	3,747	4,280	4,327	63
2011	4,020	4,996	4,996	1,817	3,068	4,020	63
2012	3,155	4,658	4,658	9,857	7,681	3,155	63
2013		4,147	4,147	8,094	6,337	4,147	63
2014		4,226	4,226	1,659	2,871	4,226	63
2015		4,867	4,867	2,720	3,794	4,867	63
2016		5,127	5,127	3,515	4,368	5,127	63
2017		5,133	5,133	5,893	5,466	5,133	63
2018		5,279	5,511	8,939	8,964	5,511	63
2019		7,537	8,016	2,275	9,168	8,016	63
2020		11,361	11,817	2,858	11,011	11,817	63
2021		58,087	57,290	57,359	56,981	57,290	63
2022		59,958	66,381	65,556	67,711	67,711	442
Total	46,599	199,843	206,637	183,839	204,153	220,443	2,210

Notes: (2) to (6) - Per Appendix E
 (7) - Tabular Reserve Method for 2012 & prior; greater of Incurred Born/Ferg Method or Paid Born/Ferg Method for 2020 & after ; Incurred Born/Ferg Method for all other years
 (8) - The bulk IBNR was added to account for the minimum wage increase higher than the CPI, the impact to IBNR is from 20% was assigned to the current year and 80% was assigned to prior years evenly.

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 6

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR	Bulk IBNR
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Accident Benefits - Other (Indexed)						
2004 & Prior					13,375	343
2005	2,468	2,468	(6,056)	(4,603)	2,468	31
2006	2,849	2,849	(9,133)	(6,929)	2,849	31
2007	3,288	3,288	(9,128)	(6,675)	3,288	31
2008	2,789	2,789	2,673	2,697	2,789	31
2009	3,381	3,381	(480)	409	3,381	31
2010	3,460	3,460	3,052	3,154	3,460	31
2011	4,064	4,064	(555)	706	4,064	31
2012	3,857	3,857	7,516	6,439	3,857	31
2013	3,566	3,566	10,532	8,340	3,566	31
2014	3,164	3,164	9,186	7,170	3,164	31
2015	3,949	3,949	13,061	9,835	3,949	31
2016	4,593	4,593	2,677	3,391	4,593	31
2017	4,175	4,175	6,559	5,627	4,175	31
2018	3,069	3,355	10,559	9,327	3,355	31
2019	2,711	3,068	(58)	3,637	3,068	31
2020	2,278	2,385	(10,701)	(3,651)	2,385	31
2021	7,820	8,210	4,161	7,408	8,210	31
2022	16,894	19,300	12,808	20,873	20,873	218
Total	78,375	81,921	46,671	67,156	96,870	1,090

Notes:

- (2) to (5) - Per Appendix F;(2) & (3) - There is an adjustment to remove the additional expense reserve and excess reserve after BI 3 was implemented.
- (6) - Greater of Incurred Born/Ferg Method or Paid Born/Ferg Method for 2020 & after ; Incurred Born/Ferg Method for all other years
- (8) - The bulk IBNR was added to account for the minimum wage increase higher than the CPI, the impact to IBNR is from Claims. 20% was assigned to the current year and 80% was assigned to prior years evenly.

Manitoba Public Insurance
Summary of Direct & Agency IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 7

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR
(1)	(2)	(3)	(4)	(5)	(6)
Accident Benefits - Other (Non-Indexed)					
2004 & Prior					
2005	29	29	(3)	(3)	29
2006	52	52	(80)	(80)	52
2007	74	74	14	14	74
2008	117	117	91	91	117
2009	165	165	214	213	165
2010	203	203	283	282	203
2011	274	274	189	190	274
2012	299	299	435	433	299
2013	320	320	481	478	320
2014	408	408	433	433	408
2015	545	545	492	494	545
2016	726	726	706	707	726
2017	797	797	1,053	1,040	797
2018	730	765	(308)	(128)	765
2019	672	729	36	525	729
2020	722	706	(1,049)	(608)	706
2021	1,847	1,613	(5,192)	(3,527)	1,613
2022	6,420	5,702	5,342	3,307	5,702
Total	14,400	13,525	3,137	3,861	13,525

Notes: (2) to (5) - Per Appendix G
(6) - Incurred Born/Ferg Method for all years

Manitoba Public Insurance
 Summary of Direct & Agency IBNR Estimates
 (Including External Adjustment Expenses)
 As of March 31, 2023
 (\$000)

Exhibit 4
 Sheet 8

Insurance Year April-March	Selected IBNR
(1)	(2)
Accident Benefits - Total*	
2004 & Prior	38,097
2005	4,840
2006	5,069
2007	5,543
2008	5,603
2009	6,038
2010	8,085
2011	8,453
2012	7,406
2013	8,128
2014	7,892
2015	9,455
2016	10,540
2017	10,200
2018	9,726
2019	11,907
2020	15,003
2021	67,207
2022	94,946
Total	334,139

*Including Bulk IBNR

Manitoba Public Insurance
 Summary of Direct & Agency IBNR Estimates
 (Including External Adjustment Expenses)
 As of March 31, 2023
 (\$000)

Exhibit 4
 Sheet 9

Insurance Year April-March	Selected IBNR
(1)	(2)
Basic - Total All Coverage*	
2004 & Prior	38,097
2005	4,840
2006	5,069
2007	5,543
2008	5,603
2009	6,038
2010	8,085
2011	8,453
2012	7,406
2013	8,128
2014	7,874
2015	9,421
2016	10,508
2017	10,241
2018	9,865
2019	13,071
2020	17,555
2021	76,922
2022	147,567
Total	400,287

*Including Bulk IBNR; Not including PIPP Enhancements (see PE Exhibit 1,
 Sheet 8 & PE Exhibit 4)

Manitoba Public Insurance
Summary of Net IBNR Estimates
(Including External Adjustment Expenses)
As of March 31, 2023
(\$000)

Exhibit 4
Sheet 10

Insurance Year April-March	Incurred Development Method	Incurred Born/Ferg Method	Paid Development Method	Paid Born/Ferg Method	Selected IBNR
(1)	(2)	(3)	(4)	(5)	(6)
Comprehensive - Basic					
2004 & Prior					
2005	-	-	-	-	-
2006	-	-	-	-	-
2007	-	-	-	-	-
2008	-	-	-	-	-
2009	-	-	-	-	-
2010	-	-	-	-	-
2011	-	-	-	-	-
2012	-	-	(4)	(4)	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	-	(3)	(3)	-
2016	-	-	(13)	(13)	-
2017	-	-	34	34	-
2018	-	-	52	58	-
2019	-	-	(415)	(421)	-
2020	-	-	154	187	-
2021	933	957	1,246	1,298	933
2022	10,585	10,050	4,510	4,594	10,585
Total	11,518	11,007	5,561	5,730	11,518

Notes: (2) to (5) - Per Appendix D
(6) - Incurred Development Method for all years

Manitoba Public Insurance
 Summary of Net IBNR Estimates
 (Including External Adjustment Expenses)
 As of March 31, 2023
 (\$000)

Exhibit 4
 Sheet 11

Insurance Year April-March	Selected IBNR
(1)	(2)
Basic - Total All Coverage*	
2004 & Prior	38,097
2005	4,840
2006	5,069
2007	5,543
2008	5,603
2009	6,038
2010	8,085
2011	8,453
2012	7,406
2013	8,128
2014	7,874
2015	9,421
2016	10,508
2017	10,241
2018	10,155
2019	13,071
2020	17,555
2021	76,922
2022	147,567
<hr style="border: 1px solid black;"/> Total	400,576

*Including Bulk IBNR; Not including PIPP Enhancements (see PE Exhibit 1,
 Sheet 8 & PE Exhibit 4)



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 5
Unallocated Loss Adjustment Expenses Provision

Manitoba Public Insurance
Automobile Insurance Division
Unallocated Loss Adjustment Expense (ULAE) Provision
As of March 31, 2023
(\$000)

Exhibit 5
Sheet 1

A. Calculation of Claims Base

	Valuation as at		Change
	March 2023	March 2022	
1. Direct & Agency Unpaid Claims [a, b]	1,826,768	1,736,707	90,061
2. Direct & Agency Paid Claims in Fiscal Year 2022 as of March 31, 2023 [b, c]			761,557
3. Direct & Agency Incurred Claims in Fiscal Year 2022 as of March 31, 2023 [(2)+Change in (1)]			851,618
4a. Direct & Agency Claims Base: Kittel's Paid ULAE to Paid Plus Incurred Claims Method [(2)+(3)]			1,613,176
4b. Direct & Agency Claims Base: Traditional Paid ULAE to Paid Claims Method [(2)*2]			1,523,114

B. Calculation of Unallocated Loss Adjustment Expense Provision:

	Valuation as at				
	Feb 2019	Feb 2020	Feb 2021	March 2022	March 2023
5a. Direct & Agency Claims Base: Kittel's Method [d]	1,510,015	1,586,327	1,205,543	1,328,510	1,613,176
5b. Direct & Agency Claims Base: Traditional Method [d]	1,388,144	1,583,764	1,232,318	1,223,486	1,523,114
6. Unallocated Loss Adjustment Expenses Paid [c]	126,871	142,354	141,720	146,278	146,918
7a. Ratio of ULAE Paid To Direct & Agency Claims Base: Kittel [(6)/(5a)]	8.40%	8.97%	11.76%	11.01%	9.11%
7b. Ratio of ULAE Paid To Direct & Agency Claims Base: Trad [(6)/(5b)]	9.14%	8.99%	11.50%	11.96%	9.65%
8. Selected Ratio of ULAE Paid To Direct & Agency Claims Base	9.00%	9.40%	9.40%	9.50%	9.25%
9. Direct & Agency Unpaid Claims (1)					1,826,768
10. Direct & Agency IBNR [b, e]					400,287
11. Direct & Agency Reserve Base: Unpaid Claims Plus IBNR [(9)+(10)]					2,227,054
12. Ultimate Direct & Agency ULAE Provision [(8)x(11)] [f]					206,003
13. CIA Rules Direct & Agency ULAE Provision [g]					203,888
14. MPI Carried Before Review [c]					209,620

Notes:

- [a] March 2023: From Exhibit 1, Total Selected IBNR plus Case Reserve Outstanding;
March 2022: From respective year-end valuation
- [b] Not including PIPP Enhancements
- [c] From MPI
- [d] March 2023: From Line 4; Other Years: From respective year-end valuations
- [e] From Exhibit 1, Total Selected IBNR
- [f] Selected Ratio applied twice to IBNR
- [g] From Exhibit 7, Sheet 1

July 13, 2023



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 6
Maximum Deferred Policy Acquisition Expense

Manitoba Public Insurance
Automobile Insurance Division
Calculation of Equity in Unearned Premium - Direct & Agency
As of March 31, 2023
(\$000)

Exhibit 6
Sheet 1

A. Claims (Including External Adjustment Expense) Data

	Estimated Ultimate Loss Ratio For Insurance Year [a]					Selected	Selected
	2018	2019	2020	2021	2022	Undisc [c1]	Disc [c2]
1a. Bodily Injury	0.60%	0.40%	0.36%	0.39%	0.51%	0.46%	
1b. Property Damage	4.11%	3.56%	2.48%	3.83%	4.03%	4.00%	
1c. Collision	39.20%	37.06%	27.91%	38.10%	40.12%	39.80%	
1d. Comprehensive [b]	8.24%	7.93%	7.48%	7.51%	10.00%	8.89%	9.95%
1e. Accident Benefits - Weekly Indemnity	7.90%	7.67%	6.91%	7.59%	7.39%	7.63%	
1f. Accident Benefits - Other (Indexed)	5.31%	5.44%	5.09%	4.39%	4.74%	4.65%	
1g. Accident Benefits - Other (Non-Indexed)	2.54%	2.22%	2.31%	2.60%	2.89%	2.79%	
1. Total All Coverage	67.90%	64.28%	52.54%	64.41%	69.69%		
2. Trend/Rate Adjustment [Sheet 2]	0.9897	1.0239	1.0380	1.0418	0.9947		
3a. Adjusted Loss Ratio [(1) x (2)]	67.20%	65.82%	54.53%	67.10%	69.32%	68.21%	70.27%
3b. Gross Hail Loss Load% [i]						1.07%	1.10%

B. Actual Data Other Than Losses

	2018	2019	2020	2021	2022	Selected
4. Direct & Agency Earned Premium [d]	1,044,467	1,099,731	1,134,690	1,159,166	1,126,492	
5. Operating Expenses as Percentage of Earned Premium [d]	9.03%	8.84%	7.80%	8.38%	9.31%	8.84%
6. Maintenance Expense Rate [(5) x 1/3]	3.01%	2.95%	2.60%	2.79%	3.10%	2.95%
7. Unallocated Loss Adjustment Expense Ratio to Losses [e]	18.00%	18.80%	18.80%	19.00%	18.50%	18.50%

C. Equity in Unearned Premium

	Discounted
8. Direct & Agency Unearned Premium as of March 31, 2023 [d]	585,267
9. Expected Claims (Including Ext Adj Expenses) [Max(Sheet 5, Row 10, (8) x (3a+3b))]	417,693
10. Maintenance Expense [Sheet 5, Row 12]	17,083
11. Unallocated Loss Adjustment Expense [(7) x (9)]	77,273
12. Expected Claims (Including Ext Adj Expenses) for PIPP Enhancement [f]	3,309
13. Equity in Unearned Premium [(8) - Sum((9) to (12))]	69,908
14. Carried Deferred Policy Acquisition Expenses [d]	39,383
15. Write Down Deferred Policy Acquisition Expenses [g]	-
16. Premium Deficiency [h]	-

Notes:

- [a] [Exhibit 2, Column 7] / (4)
- [b] 2018: Removed impact of Hail
- [c] [c1] Undiscounted loss ratio is selected based on the recent three year average excluding the Covid year of 2020. [c2] From Sheet 3
- [d] From MPI; For 2021, the capital release of unearned premium was \$73.3M was adjusted. For 2022, this amount was \$28.6M
- [e] [Exhibit 5, Row 8] x 2
- [f] From PE Exhibit 3
- [g] Min((14) - (13), (14)) if greater than 0, otherwise 0
- [h] Negative of (13) if less than 0, otherwise 0
- [i] Recent 15 year average

Manitoba Public Insurance
 Automobile Insurance Division
 Trend/Rate Adjustment - Direct & Agency
 As of March 31, 2023
 (\$000)

Exhibit 6
 Sheet 2

Insurance Year	Earned Premium	Earned Premium Increase	Ultimate Claims	Ultimate Claims Increase
(1)	(2)	(3)	(4)	(5)
2012	769,715		606,233	
2013	781,394	1.52%	631,621	4.19%
2014	822,358	5.24%	587,206	-7.03%
2015	877,262	6.68%	705,215	20.10%
2016	923,168	5.23%	760,149	7.79%
2017	977,104	5.84%	730,848	-3.85%
2018	1,044,467	6.89%	709,163	-2.97%
2019	1,099,731	5.29%	706,945	-0.31%
2020	1,134,690	3.18%	596,164	-15.67%
2021	1,159,166	2.16%	746,634	25.24%
2022	1,126,492	-2.82%	785,016	5.14%

(6) Average Claims Increase	3.26%
(7) Selected Claims Increase	1.78%
(8) 3-Year Average Premium Increase	0.84%
(9) Selected Premium Increase	2.50%
(10) 2022 Trend/Rate Adjustment	0.9947
(11) 2021 Trend/Rate Adjustment	1.0418
(12) 2020 Trend/Rate Adjustment	1.0380
(13) 2019 Trend/Rate Adjustment	1.0239
(14) 2018 Trend/Rate Adjustment	0.9897

Notes:

- (2) From MPI
- (4) From Exhibit 2, Sheet 9, Column 7; Removed impact of Hail
- (7) Selected based on the indicated exponential trend for Ultimate Claims
- (10) = $\frac{[1+(7)]}{[1+(9)]}^{[9/12]}$; Trended from the average accident date for the current year to the average accident date of the unearned premium (per Sheet 3)
- (11) = $(10) * [1+(7)] / [(1+(3) \text{ for } 2022)]$
- (12) = $(11) * [1+(7)] / [(1+(3) \text{ for } 2021)]$
- (13) = $(12) * [1+(7)] / [(1+(3) \text{ for } 2020)]$
- (14) = $(13) * [1+(7)] / [(1+(3) \text{ for } 2019)]$

Manitoba Public Insurance
Automobile Insurance Division
Discounted Loss Ratio with Margins - Direct & Agency
As of March 31, 2023
(\$000)

Exhibit 6
Sheet 3

Selected Undiscounted Loss Ratio [a] 68.21%

	12	24	36	48	60	72	84	96
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Cumulative % Paid

ABWI	11.94%	23.47%	30.01%	35.32%	39.86%	43.75%	47.05%	50.01%
ABO (Indexed)	21.92%	44.97%	51.94%	55.92%	58.80%	60.88%	62.71%	64.59%
ABO (Non-Indexed)	22.95%	47.73%	63.01%	81.91%	92.23%	94.90%	96.14%	97.05%
TPL-BI	2.43%	20.64%	40.25%	58.87%	73.71%	85.06%	91.31%	94.55%
TPL-PD	58.29%	93.12%	98.19%	99.50%	99.75%	99.85%	99.95%	100.00%
Collision	78.06%	98.27%	99.55%	99.80%	99.90%	99.95%	100.00%	100.00%
Comprehensive	77.94%	97.28%	99.20%	99.65%	99.85%	99.95%	100.00%	100.00%

Discount to Valuation Date [b]

Without Margin (1) [c]	100.46%	101.86%	101.43%	99.71%	97.80%	95.87%	93.97%	92.11%
Without Margin (2) [d]	99.01%	95.15%	91.43%	87.87%	84.44%	81.14%	77.98%	74.94%
With Margin (1) [c & e]	100.57%	102.38%	102.36%	101.01%	99.48%	97.89%	96.33%	94.79%
With Margin (2) [d & e]	99.11%	95.61%	92.23%	88.97%	85.83%	82.80%	79.88%	77.06%

Discounted % Paid; Includes Discount Rate Margin and Claims Development Margin [f]

ABWI [g]	13.81%	13.56%	7.69%	6.16%	5.18%	4.36%	3.65%	3.22%
ABO (Indexed) [g]	25.34%	27.13%	8.20%	4.61%	3.29%	2.34%	2.02%	2.04%
ABO (Non-Indexed) [h]	25.01%	26.05%	15.48%	18.48%	9.73%	2.43%	1.08%	0.77%
TPL-BI [h]	2.77%	20.01%	20.78%	19.02%	14.61%	10.78%	5.73%	2.86%
TPL-PD [h]	60.66%	34.95%	4.91%	1.22%	0.22%	0.09%	0.08%	0.04%
Collision [h]	81.22%	20.29%	1.24%	0.23%	0.09%	0.04%	0.04%	0.00%
Comprehensive [h]	81.10%	19.41%	1.87%	0.42%	0.18%	0.09%	0.04%	0.00%

	Estimated Ultimate Claims [i]				% by Cvrgr 3-yr Total	% by Cvrgr Disc [j]
	2020	2021	2022	3-yr Total		
ABWI	78,429	87,974	83,287	249,690	11.73%	11.83%
ABO (Indexed)	57,766	50,887	53,421	162,074	7.62%	8.15%
ABO (Non-Indexed)	26,175	30,183	32,545	88,904	4.18%	4.23%
TPL-BI	4,062	4,564	5,764	14,391	0.68%	0.68%
TPL-PD	28,133	44,374	45,406	117,912	5.54%	5.66%
Collision	316,677	441,587	451,933	1,210,197	56.88%	58.67%
Comprehensive	84,920	87,065	112,661	284,647	13.38%	13.79%
Total All Coverage	596,164	746,634	785,016	2,127,814	100.00%	103.02%
Selected Discounted Loss Ratio with Margins [k]						70.27%

Notes:

[a] From Sheet 1

[b] Accounts for Investable Assets

Months from Valuation Date to Average Accident Date 3
Percent in Non-Investable Assets 0.00%

[c] March 31, 2023 & After - Interest Rate with Inflation

[d] March 31, 2023 & After - 4.06%

[e] Discount Rate Margin - 40 bps

[f] Claims Development Margin - From Exhibit 7, Sheet 1

[g] Discounted Using (1)

[h] Discounted Using (2)

[i] From Exhibit 2, Column 7;
Removed impact of Hail

[j] % by Cvrgr 3-yr Total x Cumulative
Discounted % Paid

[k] Selected Undiscounted Loss Ratio x
Total All Coverage % Disc

Manitoba Public Insurance
 Automobile Insurance Division
 Discounted Loss Ratio with Margins - Direct & Agency
 As of March 31, 2023
 (\$000)

Exhibit 6
 Sheet 4

	108	120	132	144	156	168	180	192	204	216	
	52.81%	55.48%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	66.53%	68.53%	70.58%	72.70%	74.88%	76.98%	78.75%	80.24%	81.61%	100.00%	100.00%
	97.73%	98.12%	98.41%	98.71%	99.01%	99.30%	99.60%	99.85%	100.00%	100.00%	100.00%
	96.77%	98.22%	99.35%	99.85%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	90.28%	88.50%	86.74%	85.03%	83.34%	81.69%	80.08%	78.49%	76.94%	75.41%	
	72.01%	69.20%	66.50%	63.91%	61.41%	59.02%	56.72%	54.50%	52.38%	50.33%	
	93.28%	91.79%	90.33%	88.89%	87.47%	86.08%	84.71%	83.36%	82.03%	80.72%	
	74.34%	71.71%	69.18%	66.74%	64.38%	62.11%	59.92%	57.80%	55.76%	53.79%	
											<u>Cumulative</u>
	2.99%	2.80%	37.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.82%
	2.07%	2.10%	2.12%	2.15%	2.18%	2.06%	1.71%	1.42%	1.28%	14.92%	106.98%
	0.55%	0.31%	0.22%	0.22%	0.21%	0.20%	0.20%	0.16%	0.09%	0.00%	101.20%
	1.89%	1.19%	0.89%	0.38%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	101.02%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	102.18%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	103.16%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	103.10%

Manitoba Public Insurance
Automobile Insurance Division
Calculation of Equity in Unearned Premium - Net
As of March 31, 2023
(\$000)

Exhibit 6
Sheet 5

A. Claims (Including External Adjustment Expense) Data

	Estimated Ultimate Loss Ratio For Insurance Year [a]					Selected Undisc [c1]	Selected Disc [c2]
	2018	2019	2020	2021	2022		
1a. Bodily Injury	0.61%	0.41%	0.36%	0.40%	0.52%	0.47%	
1b. Property Damage	4.17%	3.60%	2.51%	3.88%	4.09%	4.06%	
1c. Collision	39.68%	37.54%	28.25%	38.62%	40.71%	40.38%	
1d. Comprehensive [b]	8.37%	8.04%	7.58%	7.61%	10.15%	9.02%	
1e. Accident Benefits - Weekly Indemnity	7.99%	7.77%	7.00%	7.69%	7.50%	7.74%	
1f. Accident Benefits - Other (Indexed)	5.38%	5.51%	5.15%	4.45%	4.81%	4.71%	
1g. Accident Benefits - Other (Non-Indexed)	2.57%	2.25%	2.34%	2.64%	2.93%	2.83%	
1. Total All Coverage	68.76%	65.12%	53.18%	65.29%	70.72%		
2. Trend/Rate Adjustment [Sheet 2]	0.9921	1.0256	1.0405	1.0429	0.9947		
3a. Adjusted Loss Ratio [(1) x (2)]	68.22%	66.79%	55.34%	68.09%	70.34%	69.22%	71.31%
3b. Retained Hail Loss Load % [l]						0.43%	0.44%

B. Actual Data Other Than Losses

	2018	2019	2020	2021	2022	Selected
4. Net Earned Premium [d]	1,031,748	1,085,549	1,120,929	1,143,507	1,110,100	
5. Operating Expenses as Percentage of Earned Premium [d]	9.14%	8.96%	7.90%	8.49%	9.45%	8.97%
6. Maintenance Expense Rate [(5) x 1/3]	3.05%	2.99%	2.63%	2.83%	3.15%	2.99%
7. Unallocated Loss Adjustment Expense Ratio to Losses [e]	18.00%	18.80%	18.80%	19.00%	18.50%	18.50%

C. Equity in Unearned Premium

	Discounted
8. Net Unearned Premium as of March 31, 2023 [d]	585,267
9. Additional Expected Cost of Non-Proportional Reinsurance [f]	8,137
10. Expected Claims (Including Ext Adj Expenses) [((8) - (9)) x (3a+3b)]	414,073
11. Reinsurance PFAD [g]	181
12. Maintenance Expense [h]	17,083
13. Unallocated Loss Adjustment Expense [Sheet 1, Row 11]	77,273
14. Expected Claims (Including Ext Adj Expenses) - PIPP Enhancement [i]	3,309
15. Equity in Unearned Premium [(8) - Sum(9) to (14)]	65,211
16. Carried Deferred Policy Acquisition Expenses [d]	39,383
17. Write Down Deferred Policy Acquisition Expenses [j]	-
18. Premium Deficiency [k]	-

Notes:

- [a] [Exhibit 2, Column 7] / (4)
- [b] 2018: Removed impact of Hail
- [c] [c1] Undiscounted loss ratio is selected based on the recent three year average excluding the Covid year of 2020. [c2] From Sheet 3
- [d] From MPI
- [e] [Exhibit 5, Row 8] x 2
- [f] Ceded Unearned Premium x (-1) + (16,273 X (6/12));
16,273: Annual premium on reinsurance effective April 1, 2023
- [g] (Sheet 1, Row 9 - (10)) x 5.00%
- [h] ((8) - (9)) x (6) x Discount to Valuation Date Without Margin
- [i] From PE Exhibit 3
- [j] Min((16) - (15), (16)) if greater than 0, otherwise 0
- [k] Negative of (15) if less than 0, otherwise 0
- [l] Recent 15 year average

Manitoba Public Insurance
 Automobile Insurance Division
 Trend/Rate Adjustment - Net
 As of March 31, 2023
 (\$000)

Exhibit 6
 Sheet 6

Insurance Year	Earned Premium	Earned Premium Increase	Ultimate Claims	Ultimate Claims Increase
(1)	(2)	(3)	(4)	(5)
2012	757,411		606,234	
2013	767,939	1.39%	631,360	4.14%
2014	808,646	5.30%	587,205	-6.99%
2015	864,905	6.96%	705,215	20.10%
2016	911,562	5.39%	759,773	7.74%
2017	965,709	5.94%	730,848	-3.81%
2018	1,031,748	6.84%	709,452	-2.93%
2019	1,085,549	5.21%	706,945	-0.35%
2020	1,120,929	3.26%	596,164	-15.67%
2021	1,143,507	2.01%	746,635	25.24%
2022	1,110,100	-2.92%	785,007	5.14%
(6) Average Claims Increase				3.26%
(7) Selected Claims Increase				1.78%
(8) 3-Year Average Premium Increase				0.78%
(9) Selected Premium Increase				2.50%
(10) 2022 Trend/Rate Adjustment				0.9947
(11) 2021 Trend/Rate Adjustment				1.0429
(12) 2020 Trend/Rate Adjustment				1.0405
(13) 2019 Trend/Rate Adjustment				1.0256
(14) 2018 Trend/Rate Adjustment				0.9921

Notes:

- (2) From MPI
- (4) From Exhibit 2, Sheet 14, Column 7; Removed impact of Hail
- (7) Sheet 2, Row 7
- (9) Sheet 2, Row 9
- (10) = $\frac{[1+(7)]/[1+(9)]^{9/12}}$; Trended from the average accident date for the current year to the average accident date of the unearned premium (per Sheet 7)
- (11) = $(10)*[1+(7)]/[(1+(3) \text{ for } 2022)]$
- (12) = $(11)*[1+(7)]/[(1+(3) \text{ for } 2021)]$
- (13) = $(12)*[1+(7)]/[(1+(3) \text{ for } 2020)]$
- (14) = $(13)*[1+(7)]/[(1+(3) \text{ for } 2019)]$

Manitoba Public Insurance
Automobile Insurance Division
Discounted Loss Ratio with Margins - Net
As of March 31, 2023
(\$000)

Exhibit 6
Sheet 7

Selected Undiscounted Loss Ratio [a] 69.22%

	12	24	36	48	60	72	84	96
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Cumulative % Paid

ABWI	11.94%	23.47%	30.01%	35.32%	39.86%	43.75%	47.05%	50.01%
ABO (Indexed)	21.92%	44.97%	51.94%	55.92%	58.80%	60.88%	62.71%	64.59%
ABO (Non-Indexed)	22.95%	47.73%	63.01%	81.91%	92.23%	94.90%	96.14%	97.05%
TPL-BI	2.43%	20.64%	40.25%	58.87%	73.71%	85.06%	91.31%	94.55%
TPL-PD	58.29%	93.12%	98.19%	99.50%	99.75%	99.85%	99.95%	100.00%
Collision	78.06%	98.27%	99.55%	99.80%	99.90%	99.95%	100.00%	100.00%
Comprehensive	77.94%	97.28%	99.20%	99.65%	99.85%	99.95%	100.00%	100.00%

Discount to Valuation Date [b]

Without Margin (1) [c]	100.46%	101.86%	101.43%	99.71%	97.80%	95.87%	93.97%	92.11%
Without Margin (2) [d]	99.01%	95.15%	91.43%	87.87%	84.44%	81.14%	77.98%	74.94%
With Margin (1) [c & e]	100.57%	102.38%	102.36%	101.01%	99.48%	97.89%	96.33%	94.79%
With Margin (2) [d & e]	99.11%	95.61%	92.23%	88.97%	85.83%	82.80%	79.88%	77.06%

Discounted % Paid; Includes Discount Rate Margin and Claims Development Margin [f]

ABWI [g]	13.81%	13.56%	7.69%	6.16%	5.18%	4.36%	3.65%	3.22%
ABO (Indexed) [g]	25.34%	27.13%	8.20%	4.61%	3.29%	2.34%	2.02%	2.04%
ABO (Non-Indexed) [h]	25.01%	26.05%	15.48%	18.48%	9.73%	2.43%	1.08%	0.77%
TPL-BI [h]	2.77%	20.01%	20.78%	19.02%	14.61%	10.78%	5.73%	2.86%
TPL-PD [h]	60.66%	34.95%	4.91%	1.22%	0.22%	0.09%	0.08%	0.04%
Collision [h]	81.22%	20.29%	1.24%	0.23%	0.09%	0.04%	0.04%	0.00%
Comprehensive [h]	81.10%	19.41%	1.87%	0.42%	0.18%	0.09%	0.04%	0.00%

	Estimated Ultimate Claims [i]				% by Cvrgr	% by Cvrgr
	2020	2021	2022	3-yr Total	3-yr Total	Disc [j]
ABWI	78,430	87,973	83,284	249,687	11.73%	11.83%
ABO (Indexed)	57,767	50,887	53,414	162,068	7.62%	8.15%
ABO (Non-Indexed)	26,175	30,183	32,545	88,904	4.18%	4.23%
TPL-BI	4,062	4,564	5,764	14,391	0.68%	0.68%
TPL-PD	28,133	44,374	45,406	117,912	5.54%	5.66%
Collision	316,677	441,587	451,933	1,210,197	56.88%	58.67%
Comprehensive	84,920	87,065	112,661	284,647	13.38%	13.79%
Total All Coverage	596,164	746,635	785,007	2,127,806	100.00%	103.02%
Selected Discounted Loss Ratio with Margins [k]						71.31%

Notes:

[a] From Sheet 5

[b] Accounts for Investable Assets

Months from Valuation Date to Average Accident Date 3
Percent in Non-Investable Assets 0.00%

[c] March 31, 2023 & After - Interest Rate with Inflation

[d] March 31, 2023 & After - 4.06%

[e] Discount Rate Margin - 40 bps

[f] Claims Development Margin - From Exhibit 7, Sheet 2

[g] Discounted Using (1)

[h] Discounted Using (2)

[i] From Exhibit 2, Column 7;

Removed impact of Hail

[j] % by Cvrgr 3-yr Total x Cumulative

Discounted % Paid

[k] Selected Undiscounted Loss Ratio x

Total All Coverage % Disc

Manitoba Public Insurance
Automobile Insurance Division
Discounted Loss Ratio with Margins - Net
As of March 31, 2023
(\$000)

Exhibit 6
Sheet 8

	108	120	132	144	156	168	180	192	204	216	
	52.81%	55.48%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	66.53%	68.53%	70.58%	72.70%	74.88%	76.98%	78.75%	80.24%	81.61%	100.00%	100.00%
	97.73%	98.12%	98.41%	98.71%	99.01%	99.30%	99.60%	99.85%	100.00%	100.00%	100.00%
	96.77%	98.22%	99.35%	99.85%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	90.28%	88.50%	86.74%	85.03%	83.34%	81.69%	80.08%	78.49%	76.94%	75.41%	
	72.01%	69.20%	66.50%	63.91%	61.41%	59.02%	56.72%	54.50%	52.38%	50.33%	
	93.28%	91.79%	90.33%	88.89%	87.47%	86.08%	84.71%	83.36%	82.03%	80.72%	
	74.34%	71.71%	69.18%	66.74%	64.38%	62.11%	59.92%	57.80%	55.76%	53.79%	
											<u>Cumulative</u>
	2.99%	2.80%	37.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.82%
	2.07%	2.10%	2.12%	2.15%	2.18%	2.06%	1.71%	1.42%	1.28%	14.92%	106.98%
	0.55%	0.31%	0.22%	0.22%	0.21%	0.20%	0.20%	0.16%	0.09%	0.00%	101.20%
	1.89%	1.19%	0.89%	0.38%	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	101.02%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	102.18%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	103.16%
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	103.10%

July 13, 2023



Building a better
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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 7
Actuarial Present Value Calculations

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities - Direct and Agency
As of March 31, 2023

Exhibit 7
Sheet 1

Coverage	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid Claims		Discount Amount		Interest Rate PFAD
		With Margin	Without Margin	With Margin [a]	Without Margin [a]	With Margin	Without Margin	
	(1)	(2)=(4)/(1)	(3)=(5)/(1)	(4)	(5)	(6)=(1)-(4)	(7)=(1)-(5)	(8)=(7)-(6)
Bodily Injury - Basic	20,129	92.06%	91.28%	18,531	18,374	1,598	1,755	157
Pre-PIPP	-	0.00%	0.00%	-	-	-	-	-
Accident Benefits:								
Weekly Indemnity (2021 & After)	141,237	86.54%	82.86%	122,221	117,032	19,016	24,205	5,189
Weekly Indemnity (Prior to 2021)	802,573	86.70%	82.95%	695,823	665,711	106,750	136,861	30,112
Pre-PIPP	17,609	92.68%	89.89%	16,321	15,829	1,288	1,780	492
Other (Indexed) (2013 & After)	262,359	89.00%	85.58%	233,511	224,532	28,848	37,827	8,979
Other (Indexed) (Prior to 2013)	295,771	94.60%	92.14%	279,787	272,532	15,985	23,240	7,255
Other (Non-Indexed)	69,213	92.49%	91.76%	64,015	63,511	5,198	5,702	505
Pre-PIPP	2,871	98.20%	98.02%	2,819	2,814	52	57	5
Collision - Basic	142,293	97.71%	97.47%	139,031	138,692	3,261	3,600	339
Comprehensive - Basic	33,975	97.44%	97.17%	33,104	33,014	871	961	90
Property Damage - Basic	26,651	97.25%	96.96%	25,917	25,841	734	810	76
ULAE Provision [d]	206,003	89.88%	86.95%	185,160	179,121	20,842	26,881	6,039
Total	2,020,683	89.88%	86.95%	1,816,240	1,757,002	204,442	263,681	59,238

Coverage	Claims Development Margin	Claims Development PFAD	Reinsurance Margin	Reinsurance PFAD	CIA Rules Unpaid Claims [b]	Selected IBNR	Required IBNR [c]
	(9)	(10)=(5)x(9)	(11)	(12)	(13)	(14)	(15)
Bodily Injury - Basic	15.00%	2,756			21,287	6,456	7,614
Pre-PIPP	12.50%	-			-	-	-
Accident Benefits:							
Weekly Indemnity (2021 & After)	15.00%	17,555			139,776	125,506	124,045
Weekly Indemnity (Prior to 2021)	10.00%	66,571			762,394	87,629	47,450
Pre-PIPP	5.00%	791			17,112	9,519	9,022
Other (Indexed) (2013 & After)	15.00%	33,680			267,191	57,837	62,669
Other (Indexed) (Prior to 2013)	10.00%	27,253			307,040	40,123	51,392
Other (Non-Indexed)	10.00%	6,351			70,366	13,525	14,678
Pre-PIPP	5.00%	141			2,960	-	89
Collision - Basic	5.00%	6,935			145,966	39,050	42,723
Comprehensive - Basic	5.00%	1,651			34,755	11,228	12,008
Property Damage - Basic	5.00%	1,292			27,209	9,414	9,972
ULAE Provision [d]	10.46%	18,728			203,888	206,003	203,888
Total	10.46%	183,703			1,999,944	606,289	585,550

Notes:

[a] Summarized from the respective Exhibit 7 sheets

[b] (5) + (8) + (10) + (12)

[c] ((13) - (1)) + (14)

[d] Unallocated Loss Adjustment Expense (ULAE) Provision:

(1) From Exhibit 5, Row 12

(4) [Sum (4) all other coverage] / [Sum (1) all other coverage] * (1)

(5) [Sum (5) all other coverage] / [Sum (1) all other coverage] * (1)

(9) [Sum (9) all other coverage] / [Sum (5) all other coverage]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities - Net
As of March 31, 2023

Exhibit 7
Sheet 2

Coverage	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid Claims		Discount Amount		Interest Rate PFAD
		With Margin	Without Margin	With Margin [a]	Without Margin [a]	With Margin	Without Margin	
	(1)	(2)=(4)/(1)	(3)=(5)/(1)	(4)	(5)	(6)=(1)-(4)	(7)=(1)-(5)	(8)=(7)-(6)
Bodily Injury - Basic	20,129	92.06%	91.28%	18,531	18,374	1,598	1,755	157
Pre-PIPP	-	0.00%	0.00%	-	-	-	-	-
Accident Benefits:								
Weekly Indemnity (2021 & After)	141,235	86.54%	82.86%	122,219	117,030	19,016	24,205	5,189
Weekly Indemnity (Prior to 2021)	800,326	86.66%	82.90%	693,576	663,464	106,750	136,861	30,112
Pre-PIPP	17,609	92.68%	89.89%	16,321	15,829	1,288	1,780	492
Other (Indexed) (2013 & After)	262,200	89.00%	85.57%	233,352	224,373	28,848	37,827	8,979
Other (Indexed) (Prior to 2013)	294,682	94.58%	92.11%	278,698	271,443	15,985	23,240	7,255
Other (Non-Indexed)	69,213	92.49%	91.76%	64,015	63,511	5,198	5,702	505
Pre-PIPP	2,871	98.20%	98.02%	2,819	2,814	52	57	5
Collision - Basic	142,293	97.71%	97.47%	139,031	138,692	3,261	3,600	339
Comprehensive - Basic	32,995	97.45%	97.18%	32,153	32,066	842	929	87
Property Damage - Basic	26,651	97.25%	96.96%	25,917	25,841	734	810	76
ULAE Provision [e]	206,003	89.88%	86.95%	185,160	179,121	20,842	26,881	6,039
Total	2,016,206	89.86%	86.92%	1,811,792	1,752,557	204,413	263,649	59,235

Coverage	Claims Development Margin	Claims Development PFAD	Reinsurance Margin	Reinsurance PFAD [b]	CIA Rules Unpaid Claims [c]	Selected IBNR	Required IBNR [d]
	(9)	(10)=(5)x(9)	(11)	(12)	(13)	(14)	(15)
Bodily Injury - Basic	15.00%	2,756			21,287	6,456	7,614
Pre-PIPP	12.50%	-			-	-	-
Accident Benefits:							
Weekly Indemnity (2021 & After)	15.00%	17,554	5.00%	0	139,773	125,506	124,044
Weekly Indemnity (Prior to 2021)	10.00%	66,346	5.00%	112	760,035	87,629	47,338
Pre-PIPP	5.00%	791			17,112	9,519	9,022
Other (Indexed) (2013 & After)	15.00%	33,656	5.00%	8	267,016	57,837	62,653
Other (Indexed) (Prior to 2013)	10.00%	27,144	5.00%	54	305,896	40,123	51,337
Other (Non-Indexed)	10.00%	6,351			70,366	13,525	14,678
Pre-PIPP	5.00%	141			2,960	-	89
Collision - Basic	5.00%	6,935			145,966	39,050	42,723
Comprehensive - Basic	5.00%	1,603	2.50%	24	33,780	11,518	12,303
Property Damage - Basic	5.00%	1,292			27,209	9,414	9,972
ULAE Provision [e]	10.46%	18,728			203,888	206,003	203,888
Total	10.46%	183,298		199	1,995,289	606,579	585,662

Notes:

[a] Summarized from the respective Exhibit 7 sheets:

Other than Accident Benefits - Weekly indemnity, Accident Benefits - Other (Indexed), and Comprehensive - Basic, Net amounts are equal to Direct & Agency

Accident Benefits - Weekly Indemnity reduced by ceded unpaid claims of 2,249

Accident Benefits - Other (Indexed) reduced by ceded unpaid claims of 1,248

[b] [Exhibit 7, Sheet 1, Column 5 less corresponding amount from above] * (11)

[c] (5) + (8) + (10) + (12)

[d] ((13) - (1)) + (14)

[e] Unallocated Loss Adjustment Expense (ULAE) Provision per Exhibit 7, Sheet 1

Manitoba Public Insurance
Automobile Insurance Division
Development of Direct & Agency Unpaid Claims
As of March 31, 2023
Accident Benefits - Weekly Indemnity
(\$000)

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	-2.20%	-0.36%	1.30%	1.55%	1.65%	1.65%
Without Margin	-1.80%	0.04%	1.70%	1.95%	2.05%	2.05%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31																				
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033											
2012 & Prior	378,433	47,799	426,232	426,232																				
2013	29,151	4,210	33,361	33,361																				
2014	35,460	4,289	39,749	2,247	37,502																			
2015	42,976	4,931	47,907	2,684	2,556	42,666																		
2016	47,813	5,190	53,003	2,967	2,803	2,670	44,563																	
2017	50,041	5,196	55,237	3,243	2,910	2,750	2,619	43,715																
2018	43,812	5,574	49,386	3,191	2,712	2,434	2,300	2,190	36,559															
2019	49,236	8,079	57,315	4,022	3,444	2,927	2,627	2,482	2,363	39,451														
2020	46,112	11,880	57,992	4,401	3,761	3,220	2,737	2,456	2,321	2,210	36,888													
2021	10,231	57,353	67,584	5,778	4,690	4,008	3,432	2,917	2,617	2,473	2,355	39,314												
2022	5,500	68,153	73,653	9,642	5,472	4,443	3,796	3,250	2,762	2,479	2,342	2,231	37,236											
Total	738,765	222,653	961,418	497,767	65,851	65,117	62,073	57,010	46,622	46,613	41,585	41,544	37,236											
Total Payments				38,174	28,349	22,451	17,510	13,295	10,064	7,162	4,698	2,231	-											
Total Commuted Reserve				459,593	37,502	42,666	44,563	43,715	36,559	39,451	36,888	39,314	37,236											
Discounted with Margin [b]				401,597	30,529	34,733	36,276	35,586	29,761	32,115	30,028	32,003	30,312											
Discounted without Margin [b]				385,236	29,184	33,203	34,679	34,019	28,450	30,701	28,706	30,594	28,977											
Paid Factor to Ultimate [c]			8.3762	4.2614	3.3323	2.8312	2.5088	2.2859	2.1255	1.9995	1.8935	1.8024	1.0000											
Cumulative % Paid [c]			11.94%	23.47%	30.01%	35.32%	39.86%	43.75%	47.05%	50.01%	52.81%	55.48%	100.00%											
Discount Factor for Payments [d]																								
With Margin				101.12%	102.43%	101.96%	100.53%	98.94%	97.34%	95.76%	94.20%	92.67%	91.17%											
Without Margin				100.91%	101.81%	100.94%	99.13%	97.19%	95.23%	93.32%	91.45%	89.61%	87.81%											
Discount Factor for Commuted Reserve [d]																								
With Margin				100.00%	102.25%	102.62%	101.30%	99.76%	98.14%	96.54%	94.98%	93.43%	91.92%											
Without Margin				100.00%	101.83%	101.79%	100.09%	98.18%	96.20%	94.27%	92.38%	90.52%	88.70%											
Adjustment Factor [g]																								
With Margin				106.50%	102.47%	100.44%	100.10%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%											
Without Margin				106.48%	102.46%	100.44%	100.10%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%											
Discounted Unpaid [d]		Discount Factor [f]	Total [e]																					
With Margin		86.78%	834,364	441,965	61,026	58,691	54,387	48,654	39,002	37,863	32,945	31,970	27,862											
Without Margin		83.06%	798,572	425,440	59,313	56,609	52,101	46,319	36,954	35,625	30,814	29,693	25,703											

Notes:

[a] From Exhibit 2
[e] Sum of Row

[b] Discounted to the beginning of the development year
[f] Total Discounted Unpaid / Total Unpaid

[c] Per Appendix E
[g] To adjust for variable inflation rate

[d] Discounted to Mar 31, 2023

Manitoba Public Insurance
Automobile Insurance Division
Development of Direct & Agency Unpaid Claims
As of March 31, 2023
Accident Benefits - Other (Indexed)

Exhibit 7
Sheet 4a

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	-2.20%	-0.36%	1.30%	1.55%	1.65%	1.65%
Without Margin	-1.80%	0.04%	1.70%	1.95%	2.05%	2.05%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31																			
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041		
			12	24	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228		
1994	11,594	449	12,042	2,227	2,135	2,046	1,960	1,877	1,796														
1995	16,532	732	17,263	2,791	2,677	2,566	2,459	2,356	2,256	2,159													
1996	8,334	581	8,916	1,285	1,234	1,183	1,134	1,087	1,041	997	954												
1997	9,860	730	10,590	1,383	1,327	1,274	1,222	1,171	1,123	1,075	1,030	985											
1998	7,515	873	8,388	1,003	964	926	888	852	817	783	750	718	687										
1999	8,938	1,215	10,153	1,124	1,080	1,038	996	956	917	879	843	807	773	740									
2000	5,875	1,312	7,187	742	713	686	659	633	607	582	558	535	512	491	470								
2001	12,195	1,730	13,926	1,348	1,298	1,248	1,200	1,153	1,107	1,062	1,019	977	936	897	859	822							
2002	13,830	1,790	15,620	1,427	1,374	1,323	1,272	1,223	1,175	1,128	1,083	1,038	996	954	914	875	837						
2003	11,252	2,036	13,288	1,150	1,109	1,068	1,028	989	950	913	877	841	807	774	741	710	680	651					
2004	17,505	2,268	19,773	1,629	1,571	1,514	1,458	1,404	1,350	1,298	1,247	1,197	1,149	1,102	1,056	1,012	970	928	889				
2005	16,312	2,499	18,811	1,497	1,426	1,375	1,326	1,277	1,229	1,182	1,136	1,092	1,048	1,006	965	925	886	849	813	778			
2006	21,551	2,880	24,431	1,789	1,802	1,717	1,656	1,596	1,537	1,479	1,423	1,368	1,314	1,262	1,211	1,161	1,113	1,067	1,022	979	937		
2007	22,394	3,319	25,713	1,775	1,752	1,765	1,682	1,622	1,564	1,506	1,449	1,394	1,340	1,288	1,236	1,186	1,138	1,091	1,045	1,001	959		
2008	10,208	2,820	13,028	917	836	825	832	792	764	736	709	683	657	631	606	582	559	536	514	492	472		
2009	15,644	3,412	19,056	1,465	1,238	1,129	1,114	1,123	1,070	1,032	994	958	922	887	852	819	786	754	724	694	665		
2010	13,767	3,491	17,258	1,440	1,216	1,028	937	925	932	888	856	825	795	765	736	707	680	653	626	601	576		
2011	19,367	4,096	23,463	1,874	1,802	1,521	1,286	1,172	1,157	1,166	1,111	1,071	1,032	994	957	921	885	850	816	783	751		
2012	12,977	3,888	16,865	1,214	1,250	1,202	1,015	858	782	772	728	741	715	689	663	638	614	590	567	545	523		
2013	10,562	3,598	14,160	925	953	981	943	796	673	614	606	610	581	561	540	521	501	482	463	445	427		
2014	10,935	3,195	14,130	843	868	894	921	885	747	632	576	568	573	546	526	507	489	470	452	435	418		
2015	14,158	3,980	18,138	993	1,022	1,053	1,085	1,117	1,074	907	766	699	690	695	662	639	615	593	571	549	528		
2016	26,949	4,624	31,573	1,593	1,641	1,690	1,741	1,793	1,847	1,775	1,499	1,267	1,155	1,140	1,149	1,094	1,055	1,017	980	943	907		
2017	23,322	4,206	27,528	1,285	1,324	1,364	1,405	1,447	1,490	1,535	1,475	1,246	1,053	960	948	955	909	877	846	814	784		
2018	16,209	3,387	19,596	993	869	895	922	949	978	1,007	1,037	997	842	712	649	640	645	615	593	571	550		
2019	25,663	3,099	28,762	1,879	1,362	1,192	1,227	1,264	1,302	1,341	1,382	1,423	1,368	1,155	976	890	879	885	843	813	784		
2020	32,502	2,416	34,918	2,887	2,092	1,517	1,327	1,367	1,408	1,450	1,494	1,539	1,585	1,523	1,286	1,087	991	978	986	939	906		
2021	21,785	8,241	30,026	3,804	2,168	1,571	1,139	997	1,027	1,057	1,089	1,122	1,155	1,190	1,144	966	816	744	735	740	705		
2022	22,437	21,091	43,528	12,853	3,886	2,215	1,605	1,164	1,018	1,049	1,080	1,113	1,146	1,180	1,216	1,169	987	834	760	751	756		
Total	460,170	97,960	558,130	56,134	42,990	38,806	36,439	34,844	33,737	31,005	27,821	25,814	23,830	22,140	20,363	18,827	17,037	15,466	14,245	12,873	11,646		
Payments prior to 2004				16,109	15,483	14,872	14,278	13,700	13,139	10,877	8,359	7,099	5,860	4,957	4,040	3,419	2,487	1,579	889	-	-	-	
Payments 2004 & after				40,025	27,508	23,934	22,161	21,144	20,598	20,128	19,461	18,715	17,971	17,183	16,323	15,408	14,550	13,886	13,356	12,873	11,646		
Paid Factor to Ultimate [c]			4,5628	2,2236	1,9252	1,7884	1,7008	1,6425	1,5946	1,5482	1,5031	1,4593	1,4168	1,3755	1,3355	1,2991	1,2699	1,2462	1,2254	1,2055	1,1861		
Cumulative % Paid [c]			21.92%	44.97%	51.94%	55.92%	58.80%	60.88%	62.71%	64.59%	66.53%	68.53%	70.58%	72.70%	74.88%	76.98%	78.75%	80.24%	81.61%	82.95%	84.31%		
Discount Factor for Payments [d]																							
With Margin				101.12%	102.43%	101.96%	100.53%	98.94%	97.34%	95.76%	94.20%	92.67%	91.17%	89.69%	88.23%	86.80%	85.39%	84.01%	82.64%	81.30%	79.98%		
Without Margin				100.91%	101.81%	100.94%	99.13%	97.19%	95.23%	93.32%	91.45%	89.61%	87.81%	86.04%	84.32%	82.62%	80.96%	79.34%	77.74%	76.18%	74.65%		
Discounted Unpaid [d]		Discount Factor [f]	Total [c]																				
With Margin		91.97%	513,298	56,762	44,037	39,566	36,631	34,475	32,839	29,689	26,208	23,923	21,726	19,857	17,967	16,342	14,548	12,992	11,772	10,466	9,315		
Without Margin		89.06%	497,063	56,647	43,770	39,170	36,122	33,863	32,129	28,933	25,441	23,131	20,925	19,050	17,169	15,555	13,793	12,270	11,074	9,807	8,694		

Notes:
[a] From Exhibit 2
[b] Discounted to the beginning of the development year
[c] Per Appendix F
[d] Discounted to Mar 31, 2023
[e] Sum of Row
[f] Total Discounted Unpaid / Total Unpaid

	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058
	240	252	264	276	288	300	312	324	336	348	360	372	384	396	408	420	432
918																	
452	432																
637	610	584															
552	529	506	484														
720	690	661	633	606													
501	481	461	441	422	404												
410	393	377	361	346	331	317											
401	385	369	354	339	325	311	298										
507	487	467	448	429	411	394	377	361									
872	838	804	772	740	710	680	651	624	597								
754	725	696	668	642	615	590	565	542	518	496							
530	509	490	470	452	434	416	399	382	366	350	335						
755	727	699	672	645	620	595	570	547	524	502	481	460					
873	841	809	778	748	719	690	662	635	609	584	559	535	512				
680	656	631	608	585	562	540	518	497	477	457	438	420	402	385			
720	695	670	645	621	597	574	551	530	508	487	467	448	429	411	393		
10,282	8,996	8,224	7,336	6,576	5,728	5,107	4,593	4,118	3,600	2,877	2,281	1,863	1,343	795	393	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10,282	8,996	8,224	7,336	6,576	5,728	5,107	4,593	4,118	3,600	2,877	2,281	1,863	1,343	795	393	-	-
1.1682	1.1514	1.1357	1.1210	1.1072	1.0942	1.0820	1.0705	1.0598	1.0496	1.0401	1.0311	1.0226	1.0146	1.0071	1.0000	1.0000	1.0000
85.60%	86.85%	88.05%	89.21%	90.32%	91.39%	92.42%	93.41%	94.36%	95.27%	96.15%	96.99%	97.79%	98.56%	99.29%	100.00%	100.00%	100.00%
78.68%	77.41%	76.15%	74.91%	73.70%	72.50%	71.32%	70.17%	69.03%	67.91%	66.80%	65.72%	64.65%	63.60%	62.57%	61.56%	60.56%	59.56%
73.15%	71.68%	70.24%	68.83%	67.45%	66.09%	64.76%	63.46%	62.19%	60.94%	59.72%	58.52%	57.34%	56.19%	55.06%	53.95%	52.87%	51.87%
8,090	6,963	6,263	5,495	4,846	4,153	3,643	3,223	2,842	2,445	1,922	1,499	1,205	854	498	242	-	-
7,521	6,448	5,777	5,049	4,435	3,786	3,308	2,915	2,561	2,194	1,718	1,335	1,068	755	438	212	-	-

Manitoba Public Insurance
Automobile Insurance Division
Development of Direct & Agency Unpaid Claims
As of March 31, 2023
Bodily Injury - Basic
(\$000)

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
Without Margin	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31																	
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
2004 & Prior	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	100	-	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	20	-	20	13	6	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	459	2	461	207	161	71	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	333	6	339	138	90	70	31	9	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	875	34	909	339	232	152	118	52	16	-	-	-	-	-	-	-	-	-	-	-	-
2017	1,433	111	1,544	646	335	230	150	117	51	15	-	-	-	-	-	-	-	-	-	-	-
2018	1,584	246	1,830	790	435	226	155	101	79	35	10	-	-	-	-	-	-	-	-	-	-
2019	1,526	491	2,017	727	557	307	159	109	71	55	24	7	-	-	-	-	-	-	-	-	-
2020	2,034	1,081	3,115	971	774	592	326	169	116	76	59	26	8	-	-	-	-	-	-	-	-
2021	2,202	1,901	4,103	1,014	963	767	587	323	168	115	75	58	26	8	-	-	-	-	-	-	-
2022	3,107	2,583	5,690	1,062	1,144	1,086	865	662	365	189	130	85	66	29	9	-	-	-	-	-	-
Total	13,673	6,456	20,129	6,008	4,696	3,501	2,412	1,542	865	485	298	176	99	37	9	-	-	-	-	-	-
Paid Factor to Ultimate [b]			41.1764	4.8443	2.4842	1.6986	1.3567	1.1757	1.0952	1.0576	1.0334	1.0181	1.0065	1.0015	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Cumulative % Paid [b]			2.43%	20.64%	40.25%	58.87%	73.71%	85.06%	91.31%	94.55%	96.77%	98.22%	99.35%	99.85%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Discount Factor for Payments [c]																					
With Margin				98.20%	94.71%	91.34%	88.09%	84.95%	81.93%	79.02%	76.20%	73.49%	70.88%	68.35%	65.92%	63.58%	61.31%	59.13%	57.03%	55.00%	53.04%
Without Margin				98.02%	94.16%	90.46%	86.91%	83.49%	80.21%	77.06%	74.03%	71.13%	68.33%	65.65%	63.07%	60.59%	58.21%	55.92%	53.72%	51.61%	49.58%
Discounted Unpaid [c]		Discount Factor [c]	Total [d]																		
With Margin		92.06%	18,531	5,900	4,448	3,198	2,125	1,310	709	383	227	130	70	25	6	-	-	-	-	-	-
Without Margin		91.28%	18,374	5,889	4,422	3,167	2,096	1,288	694	374	221	125	68	24	6	-	-	-	-	-	-

Notes:

[a] From Exhibit 2

[b] Per Appendix A

[c] Discounted to Mar 31, 2023

[d] Sum of Row

[e] Total Discounted Unpaid / Total Unpaid

Manitoba Public Insurance
Automobile Insurance Division
Development of Direct & Agency Unpaid Claims
As of March 31, 2023
Property Damage - Basic
(\$000)

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
Without Margin	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31															
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
2004 & Prior	(2)	-	(2)	(2)															
2005	-	-	-	-															
2006	-	-	-	-															
2007	3	-	3	3															
2008	-	-	-	-															
2009	-	-	-	-															
2010	-	-	-	-															
2011	-	-	-	-															
2012	-	-	-	-															
2013	-	-	-	-															
2014	20	(20)	(0)	(0)															
2015	-	(41)	(41)	(41)															
2016	1	(66)	(65)	(65)															
2017	6	(70)	(64)	(42)	(21)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	332	(22)	310	124	124	62	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	444	63	507	253	101	102	51	-	-	-	-	-	-	-	-	-	-	-	-
2020	276	208	484	351	67	27	27	13	-	-	-	-	-	-	-	-	-	-	-
2021	2,260	1,329	3,589	2,646	683	130	52	52	26	-	-	-	-	-	-	-	-	-	-
2022	13,897	8,032	21,929	18,309	2,669	689	131	52	52	26	-	-	-	-	-	-	-	-	-
Total	17,237	9,414	26,651	21,536	3,623	1,009	260	118	79	26	-	-	-	-	-	-	-	-	-
Paid Factor to Ultimate [b]			1.7155	1.0739	1.0184	1.0050	1.0025	1.0015	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Cumulative % Paid [b]			58.29%	93.12%	98.19%	99.50%	99.75%	99.85%	99.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Discount Factor for Payments [c]																			
With Margin				98.20%	94.71%	91.34%	88.09%	84.95%	81.93%	79.02%	76.20%	73.49%	70.88%	68.35%	65.92%	63.58%	61.31%	59.13%	57.03%
Without Margin				98.02%	94.16%	90.46%	86.91%	83.49%	80.21%	77.06%	74.03%	71.13%	68.33%	65.65%	63.07%	60.59%	58.21%	55.92%	53.72%
Discounted Unpaid [c]		Discount Factor [c]	Total [d]																
With Margin		97.25%	25,917	21,149	3,431	922	229	100	64	21	-	-	-	-	-	-	-	-	-
Without Margin		96.96%	25,841	21,108	3,412	913	226	98	63	20	-	-	-	-	-	-	-	-	-

Notes:
[a] From Exhibit 2 [b] Per Appendix B [c] Discounted to Mar 31, 2023 [d] Sum of Row [e] Total Discounted Unpaid / Total Unpaid

Manitoba Public Insurance
 Automobile Insurance Division
 Development of Direct & Agency Unpaid Claims
 As of March 31, 2023
 Collision - Basic
 (\$000)

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
Without Margin	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31															
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
2004 & Prior	(1)	-	(1)	(1)															
2005	-	-	-	-															
2006	-	-	-	-															
2007	-	-	-	-															
2008	-	-	-	-															
2009	-	-	-	-															
2010	-	-	-	-															
2011	-	-	-	-															
2012	2	-	2	2															
2013	-	-	-	-															
2014	-	-	-	-															
2015	3	-	3	3															
2016	6	-	6	6															
2017	22	-	22	22															
2018	59	205	264	132	132														
2019	91	611	702	351	175	176	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	258	1,263	1,521	844	338	169	169	-	-	-	-	-	-	-	-	-	-	-	-
2021	2,151	5,551	7,702	5,704	1,109	445	222	223	-	-	-	-	-	-	-	-	-	-	-
2022	100,652	31,421	132,073	121,666	7,707	1,498	601	301	301	-	-	-	-	-	-	-	-	-	-
Total	103,243	39,050	142,293	128,728	9,461	2,287	993	523	301	-	-	-	-	-	-	-	-	-	-
Paid Factor to Ultimate [b]			1.2811	1.0176	1.0045	1.0020	1.0010	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Cumulative % Paid [b]			78.06%	98.27%	99.55%	99.80%	99.90%	99.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Discount Factor for Payments [c]																			
With Margin				98.20%	94.71%	91.34%	88.09%	84.95%	81.93%	79.02%	76.20%	73.49%	70.88%	68.35%	65.92%	63.58%	61.31%	59.13%	57.03%
Without Margin				98.02%	94.16%	90.46%	86.91%	83.49%	80.21%	77.06%	74.03%	71.13%	68.33%	65.65%	63.07%	60.59%	58.21%	55.92%	53.72%
Discounted Unpaid [c]		Discount Factor [c]	Total [d]																
With Margin		97.71%	139,031	126,417	8,960	2,089	874	445	246	-	-	-	-	-	-	-	-	-	-
Without Margin		97.47%	138,692	126,174	8,909	2,069	863	437	241	-	-	-	-	-	-	-	-	-	-

Notes:
 [a] From Exhibit 2 [b] Per Appendix C [c] Discounted to Mar 31, 2023 [d] Sum of Row [e] Total Discounted Unpaid / Total Unpaid

Manitoba Public Insurance
Automobile Insurance Division
Development of Direct & Agency Unpaid Claims
As of March 31, 2023
Comprehensive - Basic
(\$000)

Discount Rates	Year Ending March 31					
	2024	2025	2026	2027	2028	After 28
With Margin	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
Without Margin	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%

Exhibit 7
Sheet 9

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31															
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
2004 & Prior	(2)	-	(2)	(2)															
2005	-	-	-	-															
2006	-	-	-	-															
2007	-	-	-	-															
2008	-	-	-	-															
2009	-	-	-	-															
2010	-	-	-	-															
2011	-	-	-	-															
2012	4	-	4	4															
2013	-	-	-	-															
2014	-	-	-	-															
2015	3	-	3	3															
2016	13	-	13	13															
2017	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	1,347	(290)	1,057	705	353	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	718	-	718	410	205	103	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	523	-	523	293	131	66	33	-	-	-	-	-	-	-	-	-	-	-	-
2021	1,134	933	2,067	1,464	339	151	76	38	-	-	-	-	-	-	-	-	-	-	-
2022	19,005	10,585	29,590	25,936	2,586	599	267	134	67	-	-	-	-	-	-	-	-	-	-
Total	22,747	11,228	33,975	28,828	3,614	918	376	172	67	-	-	-	-	-	-	-	-	-	-
Paid Factor to Ultimate [b]			1.2831	1.0280	1.0080	1.0035	1.0015	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Cumulative % Paid [b]			77.94%	97.28%	99.20%	99.65%	99.85%	99.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Discount Factor for Payments [c]																			
With Margin				98.20%	94.71%	91.34%	88.09%	84.95%	81.93%	79.02%	76.20%	73.49%	70.88%	68.35%	65.92%	63.58%	61.31%	59.13%	57.03%
Without Margin				98.02%	94.16%	90.46%	86.91%	83.49%	80.21%	77.06%	74.03%	71.13%	68.33%	65.65%	63.07%	60.59%	58.21%	55.92%	53.72%
Discounted Unpaid [c]		Discount Factor [c]	Total [d]																
With Margin		97.44%	33,104	28,310	3,423	839	331	146	55	-	-	-	-	-	-	-	-	-	-
Without Margin		97.17%	33,014	28,256	3,403	831	327	143	54	-	-	-	-	-	-	-	-	-	-

Notes:
 [a] From Exhibit 2 [b] Per Appendix D [c] Discounted to Mar 31, 2023 [d] Sum of Row [e] Total Discounted Unpaid / Total Unpaid

Manitoba Public Insurance
Automobile Insurance Division
Development of Net Unpaid Claims
As of March 31, 2023
Comprehensive - Basic
(\$000)

	Year Ending March 31					
Discount Rates	2024	2025	2026	2027	2028	After 28
With Margin	3.69%	3.69%	3.69%	3.69%	3.69%	3.69%
Without Margin	4.09%	4.09%	4.09%	4.09%	4.09%	4.09%

Insurance Year	Case Reserve [a]	Selected IBNR [a]	Total Unpaid [a]	Amount Paid for Development Year Ending March 31																	
				2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
2004 & Prior	(2)	-	(2)	(2)																	
2005	-	-	-	-																	
2006	-	-	-	-																	
2007	-	-	-	-																	
2008	-	-	-	-																	
2009	-	-	-	-																	
2010	-	-	-	-																	
2011	-	-	-	-																	
2012	4	-	4	4																	
2013	-	-	-	-																	
2014	-	-	-	-																	
2015	3	-	3	3																	
2016	13	-	13	13																	
2017	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	77	-	77	51	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	718	-	718	410	205	103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	523	-	523	293	131	66	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	1,134	933	2,067	1,464	339	151	76	38	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	19,005	10,585	29,590	25,936	2,586	599	267	134	67	-	-	-	-	-	-	-	-	-	-	-	-
Total	21,477	11,518	32,995	28,174	3,287	918	376	172	67	-	-	-	-	-	-	-	-	-	-	-	-
Paid Factor to Ultimate [b]			1.2831	1.0280	1.0080	1.0035	1.0015	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Cumulative % Paid [b]			77.94%	97.28%	99.20%	99.65%	99.85%	99.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Discount Factor for Payments [c]																					
With Margin				98.20%	94.71%	91.34%	88.09%	84.95%	81.93%	79.02%	76.20%	73.49%	70.88%	68.35%	65.92%	63.58%	61.31%	59.13%	57.03%		
Without Margin				98.02%	94.16%	90.46%	86.91%	83.49%	80.21%	77.06%	74.03%	71.13%	68.33%	65.65%	63.07%	60.59%	58.21%	55.92%	53.72%		
Discounted Unpaid [c]		Discount Factor [c]	Total [d]																		
With Margin		97.45%	32,153	27,669	3,113	839	331	146	55	-	-	-	-	-	-	-	-	-	-	-	-
Without Margin		97.18%	32,066	27,615	3,095	831	327	143	54	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
 [a] From Exhibit 2
 [b] Per Appendix D
 [c] Discounted to Mar 31, 2023
 [d] Sum of Row
 [e] Total Discounted Unpaid / Total Unpaid

July 13, 2023



Building a better
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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 8
Actuarial Present Value by Insurance Year

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 1

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Bodily Injury - Basic											
2004 & Prior	-	100.00%	100.00%	-	-	-	0.00%	-	-	-	-
2005	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2007	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2008	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2009	100	98.20%	98.02%	98	98	0	15.00%	15	113	-	13
2010	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2012	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2013	20	96.65%	96.30%	19	19	0	15.00%	3	22	-	2
2014	461	95.46%	94.99%	440	438	2	15.00%	66	506	2	47
2015	339	94.56%	94.01%	321	319	2	15.00%	48	369	6	36
2016	909	93.81%	93.19%	853	847	6	15.00%	127	980	34	105
2017	1,544	93.71%	93.08%	1,447	1,437	10	15.00%	216	1,663	111	230
2018	1,830	93.75%	93.13%	1,716	1,704	11	15.00%	256	1,972	246	388
2019	2,017	93.23%	92.55%	1,880	1,867	14	15.00%	280	2,160	491	634
2020	3,115	92.49%	91.75%	2,881	2,858	23	15.00%	429	3,310	1,081	1,276
2021	4,103	91.43%	90.59%	3,751	3,717	35	15.00%	558	4,309	1,901	2,107
2022	5,690	90.05%	89.08%	5,124	5,069	55	15.00%	760	5,884	2,583	2,777
Total	20,129	92.06%	91.28%	18,531	18,374	157	15.00%	2,756	21,287	6,456	7,614

Notes:
 (2) - Exhibit 2, Column 9
 (8) - Exhibit 7, Sheet 1, Column 9
 (10) = (6)+(7)+(9)
 (11) - Exhibit 2, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 2

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Property Damage - Basic											
2004 & Prior	(2)	98.20%	98.02%	(2)	(2)	(0)	5.00%	(0)	(2)	-	(0)
2005	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2007	3	98.20%	98.02%	3	3	0	5.00%	0	3	-	0
2008	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2009	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2010	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2012	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2013	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2014	(0)	98.20%	98.02%	(0)	(0)	(0)	5.00%	(0)	(0)	(20)	(20)
2015	(41)	98.20%	98.02%	(40)	(40)	(0)	5.00%	(2)	(42)	(41)	(42)
2016	(65)	98.20%	98.02%	(63)	(63)	(0)	5.00%	(3)	(67)	(66)	(68)
2017	(64)	97.04%	96.73%	(62)	(62)	(0)	5.00%	(3)	(65)	(70)	(71)
2018	310	95.43%	94.96%	296	295	1	5.00%	15	311	(22)	(21)
2019	507	95.11%	94.62%	482	480	3	5.00%	24	506	63	62
2020	484	96.42%	96.06%	467	465	2	5.00%	23	490	208	214
2021	3,589	96.83%	96.51%	3,476	3,464	12	5.00%	173	3,649	1,329	1,389
2022	21,929	97.41%	97.14%	21,361	21,302	59	5.00%	1,065	22,426	8,032	8,529
Total	26,651	97.25%	96.96%	25,917	25,841	76	5.00%	1,292	27,209	9,414	9,972

Notes:
(2) - Exhibit 2, Column 9
(8) - Exhibit 7, Sheet 1, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 3

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Collision - Basic											
2004 & Prior	(1)	98.20%	98.02%	(1)	(1)	(0)	5.00%	(0)	(1)	-	(0)
2005	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2007	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2008	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2009	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2010	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2012	2	98.20%	98.02%	2	2	0	5.00%	0	2	-	0
2013	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2014	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2015	3	98.20%	98.02%	3	3	0	5.00%	0	3	-	0
2016	6	98.20%	98.02%	6	6	0	5.00%	0	6	-	0
2017	22	98.20%	98.02%	22	22	0	5.00%	1	23	-	1
2018	264	96.46%	96.09%	254	253	1	5.00%	13	267	205	208
2019	702	95.61%	95.16%	671	668	3	5.00%	33	704	611	613
2020	1,521	95.54%	95.08%	1,453	1,446	7	5.00%	72	1,525	1,263	1,267
2021	7,702	96.63%	96.28%	7,442	7,416	27	5.00%	371	7,813	5,551	5,662
2022	132,073	97.81%	97.58%	129,179	128,878	302	5.00%	6,444	135,623	31,421	34,971
Total	142,293	97.71%	97.47%	139,031	138,692	339	5.00%	6,935	145,966	39,050	42,723

Notes:
(2) - Exhibit 2, Column 9
(8) - Exhibit 7, Sheet 1, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 4

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Comprehensive - Basic											
2004 & Prior	(2)	98.20%	98.02%	(2)	(2)	(0)	5.00%	(0)	(2)	-	(0)
2005	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2007	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2008	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2009	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2010	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2012	4	98.20%	98.02%	4	4	0	5.00%	0	4	-	0
2013	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2014	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-
2015	3	98.20%	98.02%	3	3	0	5.00%	0	3	-	0
2016	13	98.20%	98.02%	13	13	0	5.00%	1	13	-	0
2017	2	98.20%	98.02%	2	2	0	5.00%	0	2	-	0
2018	1,057	97.04%	96.73%	1,026	1,023	3	5.00%	51	1,077	(290)	(270)
2019	718	96.22%	95.83%	691	688	3	5.00%	34	725	-	7
2020	523	95.83%	95.41%	501	499	2	5.00%	25	526	-	3
2021	2,067	96.52%	96.16%	1,995	1,988	7	5.00%	99	2,095	933	961
2022	29,590	97.57%	97.32%	28,871	28,797	75	5.00%	1,440	30,311	10,585	11,306
Total	33,975	97.44%	97.17%	33,104	33,014	90	5.00%	1,651	34,755	11,228	12,008

Notes:
(2) - Exhibit 2, Column 9
(8) - Exhibit 7, Sheet 1, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 5

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Accident Benefits - Weekly Indemnity											
2004 & Prior	189,420	88.58%	85.15%	167,791	161,286	6,505	9.51%	15,337	183,128	24,380	18,088
2005	17,677	88.40%	84.95%	15,626	15,017	609	10.00%	1,502	17,128	2,312	1,763
2006	25,851	86.69%	82.92%	22,409	21,435	975	10.00%	2,143	24,553	2,137	839
2007	26,365	87.21%	83.56%	22,993	22,030	963	10.00%	2,203	25,196	2,151	982
2008	28,087	88.36%	84.87%	24,817	23,838	978	10.00%	2,384	27,201	2,666	1,780
2009	26,965	88.24%	84.74%	23,794	22,850	944	10.00%	2,285	26,079	2,461	1,575
2010	38,657	87.29%	83.62%	33,743	32,324	1,419	10.00%	3,232	36,976	4,390	2,709
2011	39,848	87.05%	83.36%	34,687	33,217	1,470	10.00%	3,322	38,008	4,084	2,244
2012	33,362	85.66%	81.76%	28,579	27,277	1,303	10.00%	2,728	31,307	3,218	1,163
2013	33,361	86.70%	82.86%	28,924	27,643	1,281	10.00%	2,764	31,688	4,210	2,537
2014	39,749	86.19%	82.31%	34,259	32,718	1,541	10.00%	3,272	37,530	4,289	2,070
2015	47,907	85.86%	81.95%	41,133	39,259	1,875	10.00%	3,926	45,059	4,931	2,083
2016	53,003	85.62%	81.67%	45,379	43,287	2,092	10.00%	4,329	49,707	5,190	1,894
2017	55,237	85.44%	81.48%	47,196	45,006	2,190	10.00%	4,501	51,697	5,196	1,656
2018	49,386	85.39%	81.43%	42,172	40,217	1,955	10.00%	4,022	46,194	5,574	2,382
2019	57,315	85.46%	81.53%	48,980	46,727	2,253	10.00%	4,673	53,653	8,079	4,417
2020	57,992	85.63%	81.75%	49,661	47,410	2,251	10.00%	4,741	54,402	11,880	8,290
2021	67,584	85.98%	82.17%	58,106	55,536	2,570	15.00%	8,330	66,436	57,353	56,205
2022	73,653	87.05%	83.49%	64,115	61,496	2,619	15.00%	9,224	73,339	68,153	67,839
Total	961,418	86.78%	83.06%	834,364	798,572	35,792	10.63%	84,917	919,282	222,653	180,517

Notes:
(2) - Exhibit 2, Column 9
(8) - Exhibit 7, Sheet 1, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Accident Benefits - Other (Indexed)											
2004 & Prior	137,146	97.26%	95.35%	133,383	130,765	2,617	10.00%	13,077	146,459	13,718	23,031
2005	18,811	93.94%	91.31%	17,670	17,177	493	10.00%	1,718	19,388	2,499	3,076
2006	24,431	93.37%	90.63%	22,811	22,143	669	10.00%	2,214	25,025	2,880	3,474
2007	25,713	92.79%	89.94%	23,860	23,127	733	10.00%	2,313	26,173	3,319	3,779
2008	13,028	92.26%	89.32%	12,020	11,636	384	10.00%	1,164	13,184	2,820	2,976
2009	19,056	91.84%	88.83%	17,501	16,927	574	10.00%	1,693	19,193	3,412	3,549
2010	17,258	91.54%	88.49%	15,798	15,272	526	10.00%	1,527	17,325	3,491	3,558
2011	23,463	91.26%	88.16%	21,411	20,685	726	10.00%	2,069	23,480	4,096	4,113
2012	16,865	90.91%	87.75%	15,333	14,800	533	10.00%	1,480	16,813	3,888	3,836
2013	14,160	90.50%	87.26%	12,814	12,355	459	15.00%	1,853	14,667	3,598	4,105
2014	14,130	90.02%	86.70%	12,720	12,250	470	15.00%	1,838	14,558	3,195	3,623
2015	18,138	89.50%	86.08%	16,234	15,613	621	15.00%	2,342	18,576	3,980	4,418
2016	31,573	88.94%	85.41%	28,081	26,967	1,114	15.00%	4,045	32,126	4,624	5,177
2017	27,528	88.35%	84.71%	24,320	23,320	1,000	15.00%	3,498	27,818	4,206	4,496
2018	19,596	87.83%	84.11%	17,211	16,483	728	15.00%	2,472	19,683	3,387	3,474
2019	28,762	87.57%	83.83%	25,186	24,112	1,075	15.00%	3,617	28,803	3,099	3,140
2020	34,918	87.62%	83.93%	30,597	29,309	1,288	15.00%	4,396	34,993	2,416	2,491
2021	30,026	88.38%	84.90%	26,536	25,491	1,045	15.00%	3,824	30,359	8,241	8,574
2022	43,528	91.46%	88.75%	39,812	38,633	1,179	15.00%	5,795	45,607	21,091	23,170
Total	558,130	91.97%	89.06%	513,298	497,063	16,234	12.26%	60,933	574,231	97,960	114,061

Notes:
(2) - Exhibit 2, Column 9
(8) - Exhibit 7, Sheet 1, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 7

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
Accident Benefits - Other (Non-Indexed)											
2004 & Prior	2,935	98.20%	98.02%	2,882	2,877	6	5.11%	147	3,029	-	94
2005	32	98.20%	98.02%	31	31	0	10.00%	3	34	29	31
2006	132	98.20%	98.02%	129	129	0	10.00%	13	142	52	62
2007	104	98.20%	98.02%	102	102	0	10.00%	10	112	74	82
2008	143	96.89%	96.57%	139	138	0	10.00%	14	153	117	127
2009	161	95.48%	95.02%	153	153	1	10.00%	15	169	165	173
2010	211	93.91%	93.29%	199	197	1	10.00%	20	218	203	210
2011	502	92.32%	91.55%	463	460	4	10.00%	46	509	274	281
2012	343	90.74%	89.83%	312	308	3	10.00%	31	342	299	298
2013	368	89.19%	88.14%	328	324	4	10.00%	32	361	320	313
2014	620	88.11%	86.97%	547	540	7	10.00%	54	601	408	389
2015	929	88.02%	86.88%	818	807	11	10.00%	81	898	545	514
2016	1,282	88.04%	86.91%	1,129	1,115	15	10.00%	111	1,240	726	684
2017	1,313	88.13%	87.01%	1,157	1,143	15	10.00%	114	1,272	797	756
2018	3,050	89.54%	88.55%	2,731	2,701	30	10.00%	270	3,001	765	716
2019	4,986	93.11%	92.46%	4,643	4,610	33	10.00%	461	5,104	729	847
2020	10,789	94.09%	93.52%	10,152	10,090	62	10.00%	1,009	11,161	706	1,078
2021	19,024	92.93%	92.23%	17,678	17,547	132	10.00%	1,755	19,433	1,613	2,022
2022	25,159	92.38%	91.63%	23,242	23,054	187	10.00%	2,305	25,547	5,702	6,090
Total	72,084	92.72%	92.01%	66,835	66,325	510	9.79%	6,492	73,327	13,525	14,768

Notes:
 (2) - Exhibit 2, Column 9
 (8) - Exhibit 7, Sheet 1, Column 9
 (10) = (6)+(7)+(9)
 (11) - Exhibit 2, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 8

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)=(9)/(6)	(9)	(10)	(11)	(12)
Accident Benefits - Total											
2004 & Prior	329,500	92.28%	89.51%	304,056	294,928	9,128	9.68%	28,561	332,617	38,097	41,214
2005	36,520	91.26%	88.24%	33,327	32,224	1,103	10.00%	3,222	36,550	4,840	4,870
2006	50,414	89.95%	86.69%	45,350	43,706	1,643	10.00%	4,371	49,720	5,069	4,375
2007	52,181	89.98%	86.73%	46,955	45,259	1,696	10.00%	4,526	51,481	5,543	4,843
2008	41,258	89.62%	86.32%	36,976	35,613	1,363	10.00%	3,561	40,537	5,603	4,882
2009	46,182	89.75%	86.46%	41,448	39,929	1,519	10.00%	3,993	45,441	6,038	5,297
2010	56,127	88.62%	85.15%	49,740	47,793	1,947	10.00%	4,779	54,519	8,085	6,477
2011	63,812	88.64%	85.19%	56,561	54,361	2,200	10.00%	5,436	61,997	8,453	6,638
2012	50,571	87.45%	83.81%	44,224	42,385	1,839	10.00%	4,239	48,462	7,406	5,297
2013	47,889	87.84%	84.20%	42,066	40,323	1,743	11.53%	4,650	46,716	8,128	6,955
2014	54,499	87.20%	83.50%	47,526	45,507	2,018	11.35%	5,163	52,689	7,892	6,082
2015	66,973	86.88%	83.13%	58,184	55,678	2,506	11.40%	6,348	64,533	9,455	7,015
2016	85,858	86.87%	83.12%	74,589	71,369	3,220	11.89%	8,485	83,074	10,540	7,756
2017	84,079	86.44%	82.62%	72,674	69,469	3,205	11.68%	8,113	80,787	10,200	6,908
2018	72,032	86.23%	82.46%	62,114	59,401	2,713	11.39%	6,764	68,878	9,726	6,572
2019	91,063	86.54%	82.85%	78,809	75,449	3,360	11.60%	8,750	87,559	11,907	8,403
2020	103,700	87.18%	83.71%	90,410	86,808	3,601	11.69%	10,146	100,556	15,003	11,859
2021	116,634	87.73%	84.52%	102,320	98,573	3,746	14.11%	13,909	116,228	67,207	66,801
2022	142,340	89.34%	86.54%	127,169	123,183	3,986	14.06%	17,325	144,493	94,946	97,099
Total	1,591,633	88.87%	85.57%	1,414,497	1,361,961	52,536	11.19%	152,342	1,566,839	334,139	309,345

Notes:
(2) - Exhibit 2, Column 9
(10) = (6)+(7)+(9)
(11) - Exhibit 2, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 9

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)=(9)/(6)	(9)	(10)	(11)	(12)
Basic - Total All Coverage*											
2004 & Prior	329,495	92.28%	89.51%	304,051	294,923	9,128	9.68%	28,560	332,611	38,097	41,213
2005	36,520	91.26%	88.24%	33,327	32,224	1,103	10.00%	3,222	36,550	4,840	4,870
2006	50,414	89.95%	86.69%	45,350	43,706	1,643	10.00%	4,371	49,720	5,069	4,375
2007	52,184	89.98%	86.74%	46,958	45,262	1,696	10.00%	4,526	51,484	5,543	4,843
2008	41,258	89.62%	86.32%	36,976	35,613	1,363	10.00%	3,561	40,537	5,603	4,882
2009	46,282	89.77%	86.49%	41,546	40,027	1,519	10.01%	4,008	45,554	6,038	5,310
2010	56,127	88.62%	85.15%	49,740	47,793	1,947	10.00%	4,779	54,519	8,085	6,477
2011	63,812	88.64%	85.19%	56,561	54,361	2,200	10.00%	5,436	61,997	8,453	6,638
2012	50,577	87.45%	83.81%	44,229	42,391	1,839	10.00%	4,239	48,468	7,406	5,297
2013	47,909	87.85%	84.21%	42,086	40,342	1,743	11.53%	4,653	46,739	8,128	6,958
2014	54,960	87.27%	83.60%	47,965	45,945	2,020	11.38%	5,229	53,194	7,874	6,108
2015	67,278	86.91%	83.18%	58,471	55,963	2,508	11.43%	6,395	64,866	9,421	7,009
2016	86,721	86.94%	83.22%	75,397	72,171	3,225	11.93%	8,610	84,007	10,508	7,794
2017	85,583	86.56%	82.81%	74,083	70,868	3,215	11.75%	8,327	82,409	10,241	7,067
2018	75,493	86.64%	83.02%	65,406	62,676	2,730	11.33%	7,098	72,505	9,865	6,877
2019	95,006	86.87%	83.31%	82,533	79,151	3,382	11.53%	9,122	91,655	13,071	9,720
2020	109,343	87.53%	84.21%	95,712	92,077	3,635	11.62%	10,696	106,408	17,555	14,620
2021	134,096	88.73%	85.88%	118,985	115,158	3,826	13.12%	15,110	134,094	76,922	76,920
2022	331,622	93.99%	92.64%	311,704	307,228	4,476	8.80%	27,034	338,738	147,567	154,683
Total	1,814,681	89.88%	86.95%	1,631,080	1,577,881	53,199	10.46%	164,975	1,796,056	400,287	381,662

Notes: (2) - Exhibit 2, Column 9
 (10) = (6)+(7)+(9)
 (11) - Exhibit 2, Column 6
 (12) = (11)+[(10)-(2)]
 *Not including PIPP Enhancements (see PE Exhibit 2, Sheet 8 & PE Exhibit 4)

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Net)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 10

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	Reins PFAD	CIA Rules		Required IBNR
		With Margin	Without Margin	With Margin	Without Margin					Unpaid Claims	Selected IBNR	
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)	(13)
Comprehensive - Basic												
2004 & Prior	(2)	98.20%	98.02%	(2)	(2)	(0)	5.00%	(0)	-	(2)	-	(0)
2005	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2007	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2008	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2009	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2010	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2012	4	98.20%	98.02%	4	4	0	5.00%	0	-	4	-	0
2013	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2014	-	100.00%	100.00%	-	-	-	5.00%	-	-	-	-	-
2015	3	98.20%	98.02%	3	3	0	5.00%	0	-	3	-	0
2016	13	98.20%	98.02%	13	13	0	5.00%	1	-	13	-	0
2017	2	98.20%	98.02%	2	2	0	5.00%	0	-	2	-	0
2018	77	97.04%	96.73%	75	74	0	5.00%	4	24	102	-	25
2019	718	96.22%	95.83%	691	688	3	5.00%	34	-	725	-	7
2020	523	95.83%	95.41%	501	499	2	5.00%	25	-	526	-	3
2021	2,067	96.52%	96.16%	1,995	1,988	7	5.00%	99	-	2,095	933	961
2022	29,590	97.57%	97.32%	28,871	28,797	75	5.00%	1,440	-	30,311	10,585	11,306
Total	32,995	97.45%	97.18%	32,153	32,066	87	5.00%	1,603	24	33,780	11,518	12,303

Notes:
 (2) - Exhibit 2, Column 9
 (8) - Exhibit 7, Sheet 2, Column 9
 (10) = [Column 6 from Sheet 4 less corresponding amount from above] * 2.50%
 (11) = (6)+(7)+(9)+(10)
 (12) - Exhibit 2, Column 6
 (13) = (12)+[(11)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Net)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 11

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims		Reins PFAD	CIA Rules		
		With Margin	Without Margin	With Margin	Without Margin		Devt. Margin	Devt. PFAD		Unpaid Claims	Selected IBNR	Required IBNR
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)	(13)
Accident Benefits - Weekly Indemnity												
2004 & Prior	189,420	88.58%	85.15%	167,791	161,286	6,505	9.51%	15,337	-	183,128	24,380	18,088
2005	17,673	88.39%	84.95%	15,622	15,013	609	10.00%	1,501	0	17,124	2,312	1,763
2006	25,851	86.69%	82.92%	22,409	21,435	975	10.00%	2,143	-	24,553	2,137	839
2007	25,972	87.02%	83.31%	22,600	21,637	963	10.00%	2,164	20	24,784	2,151	963
2008	28,087	88.36%	84.87%	24,817	23,838	978	10.00%	2,384	-	27,201	2,666	1,780
2009	26,922	88.22%	84.71%	23,751	22,807	944	10.00%	2,281	2	26,034	2,461	1,573
2010	37,712	86.97%	83.21%	32,798	31,379	1,419	10.00%	3,138	47	35,984	4,390	2,662
2011	39,269	86.86%	83.11%	34,108	32,638	1,470	10.00%	3,264	29	37,400	4,084	2,215
2012	33,362	85.66%	81.76%	28,579	27,277	1,303	10.00%	2,728	-	31,307	3,218	1,163
2013	33,318	86.68%	82.84%	28,881	27,600	1,281	10.00%	2,760	2	31,643	4,210	2,535
2014	39,749	86.19%	82.31%	34,259	32,718	1,541	10.00%	3,272	-	37,530	4,289	2,070
2015	47,907	85.86%	81.95%	41,133	39,259	1,875	10.00%	3,926	-	45,059	4,931	2,083
2016	52,763	85.55%	81.59%	45,139	43,047	2,092	10.00%	4,305	12	49,455	5,190	1,882
2017	55,237	85.44%	81.48%	47,196	45,006	2,190	10.00%	4,501	-	51,697	5,196	1,656
2018	49,386	85.39%	81.43%	42,172	40,217	1,955	10.00%	4,022	-	46,194	5,574	2,382
2019	57,315	85.46%	81.53%	48,980	46,727	2,253	10.00%	4,673	-	53,653	8,079	4,417
2020	57,992	85.63%	81.75%	49,661	47,410	2,251	10.00%	4,741	-	54,402	11,880	8,290
2021	67,584	85.98%	82.17%	58,106	55,536	2,570	15.00%	8,330	-	66,436	57,353	56,205
2022	73,651	87.05%	83.49%	64,113	61,494	2,619	15.00%	9,224	0	73,337	68,153	67,839
Total	959,169	86.75%	83.02%	832,115	796,323	35,792	10.64%	84,692	112	916,920	222,653	180,404

Notes:
 (2) - Exhibit 2, Column 9
 (8) - Exhibit 7, Sheet 2, Column 9
 (10) = [Column 6 from Sheet 5 less corresponding amount from above] * 5.00%
 (11) = (6)+(7)+(9)+(10)
 (12) - Exhibit 2, Column 6
 (13) = (12)+[(11)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Net)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 12

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	Reins PFAD	CIA Rules		
		With Margin	Without Margin	With Margin	Without Margin					Unpaid Claims	Selected IBNR	Required IBNR
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)	(13)
Accident Benefits - Other (Indexed)												
2004 & Prior	137,146	97.26%	95.35%	133,383	130,765	2,617	10.00%	13,077	-	146,459	13,718	23,031
2005	18,807	93.93%	91.31%	17,666	17,173	493	10.00%	1,717	0	19,383	2,499	3,075
2006	24,431	93.37%	90.63%	22,811	22,143	669	10.00%	2,214	-	25,025	2,880	3,474
2007	25,350	92.69%	89.80%	23,497	22,764	733	10.00%	2,276	18	25,792	3,319	3,761
2008	13,028	92.26%	89.32%	12,020	11,636	384	10.00%	1,164	-	13,184	2,820	2,976
2009	19,028	91.83%	88.81%	17,473	16,899	574	10.00%	1,690	1	19,164	3,412	3,548
2010	16,878	91.35%	88.23%	15,418	14,892	526	10.00%	1,489	19	16,926	3,491	3,539
2011	23,149	91.14%	88.00%	21,097	20,371	726	10.00%	2,037	16	23,150	4,096	4,097
2012	16,865	90.91%	87.75%	15,333	14,800	533	10.00%	1,480	-	16,813	3,888	3,836
2013	14,144	90.49%	87.24%	12,798	12,339	459	15.00%	1,851	1	14,650	3,598	4,104
2014	14,130	90.02%	86.70%	12,720	12,250	470	15.00%	1,838	-	14,558	3,195	3,623
2015	18,138	89.50%	86.08%	16,234	15,613	621	15.00%	2,342	-	18,576	3,980	4,418
2016	31,437	88.89%	85.35%	27,945	26,831	1,114	15.00%	4,025	7	31,976	4,624	5,163
2017	27,528	88.35%	84.71%	24,320	23,320	1,000	15.00%	3,498	-	27,818	4,206	4,496
2018	19,596	87.83%	84.11%	17,211	16,483	728	15.00%	2,472	-	19,683	3,387	3,474
2019	28,762	87.57%	83.83%	25,186	24,112	1,075	15.00%	3,617	-	28,803	3,099	3,140
2020	34,918	87.62%	83.93%	30,597	29,309	1,288	15.00%	4,396	-	34,993	2,416	2,491
2021	30,026	88.38%	84.90%	26,536	25,491	1,045	15.00%	3,824	-	30,359	8,241	8,574
2022	43,521	91.46%	88.75%	39,805	38,626	1,179	15.00%	5,794	0	45,599	21,091	23,169
Total	556,882	91.95%	89.03%	512,050	495,815	16,234	12.26%	60,800	62	572,912	97,960	113,990

Notes:
 (2) - Exhibit 2, Column 9
 (8) - Exhibit 7, Sheet 2, Column 9
 (10) = [Column 6 from Sheet 6 less corresponding amount from above] * 5.00%
 (11) = (6)+(7)+(9)+(10)
 (12) - Exhibit 2, Column 6
 (13) = (12)+[(11)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Net)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 13

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims		Reins PFAD	CIA Rules		
		With Margin	Without Margin	With Margin	Without Margin		Devt. Margin	Devt. PFAD		Unpaid Claims	Selected IBNR	Required IBNR
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)=(9)/(6)	(9)	(10)	(11)	(12)	(13)
Accident Benefits - Total												
2004 & Prior	329,500	92.28%	89.51%	304,056	294,928	9,128	9.68%	28,561	-	332,617	38,097	41,214
2005	36,512	91.26%	88.24%	33,319	32,216	1,103	10.00%	3,222	0	36,541	4,840	4,869
2006	50,414	89.95%	86.69%	45,350	43,706	1,643	10.00%	4,371	-	49,720	5,069	4,375
2007	51,425	89.84%	86.54%	46,199	44,503	1,696	10.00%	4,450	38	50,687	5,543	4,805
2008	41,258	89.62%	86.32%	36,976	35,613	1,363	10.00%	3,561	-	40,537	5,603	4,882
2009	46,111	89.73%	86.44%	41,377	39,858	1,519	10.00%	3,986	4	45,366	6,038	5,293
2010	54,802	88.35%	84.79%	48,415	46,468	1,947	10.00%	4,647	66	53,128	8,085	6,411
2011	62,919	88.48%	84.98%	55,668	53,468	2,200	10.00%	5,347	45	61,060	8,453	6,594
2012	50,571	87.45%	83.81%	44,224	42,385	1,839	10.00%	4,239	-	48,462	7,406	5,297
2013	47,830	87.83%	84.18%	42,007	40,264	1,743	11.53%	4,643	3	46,654	8,128	6,952
2014	54,499	87.20%	83.50%	47,526	45,507	2,018	11.35%	5,163	-	52,689	7,892	6,082
2015	66,973	86.88%	83.13%	58,184	55,678	2,506	11.40%	6,348	-	64,533	9,455	7,015
2016	85,482	86.82%	83.05%	74,213	70,993	3,220	11.89%	8,441	19	82,672	10,540	7,730
2017	84,079	86.44%	82.62%	72,674	69,469	3,205	11.68%	8,113	-	80,787	10,200	6,908
2018	72,032	86.23%	82.46%	62,114	59,401	2,713	11.39%	6,764	-	68,878	9,726	6,572
2019	91,063	86.54%	82.85%	78,809	75,449	3,360	11.60%	8,750	-	87,559	11,907	8,403
2020	103,700	87.18%	83.71%	90,410	86,808	3,601	11.69%	10,146	-	100,556	15,003	11,859
2021	116,634	87.73%	84.52%	102,320	98,573	3,746	14.11%	13,909	-	116,228	67,207	66,801
2022	142,331	89.34%	86.54%	127,160	123,174	3,986	14.06%	17,323	0	144,484	94,946	97,099
Total	1,588,136	88.85%	85.54%	1,411,000	1,358,464	52,536	11.19%	151,984	175	1,563,159	334,139	309,162

Notes: (2) - Exhibit 2, Column 9
(11) = (6)+(7)+(9)+(10)
(12) - Exhibit 2, Column 6
(13) = (12)+[(11)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Unpaid Claims Liabilities Including Provision for Adverse Deviation (Net)
As of March 31, 2023
(\$000)

Exhibit 8
Sheet 14

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	Reins PFAD	CIA Rules		
		With Margin	Without Margin	With Margin	Without Margin					Unpaid Claims	Selected IBNR	Required IBNR
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)=(9)/(6)	(9)	(10)	(11)	(12)	(13)
Basic - Total All Coverage*												
2004 & Prior	329,495	92.28%	89.51%	304,051	294,923	9,128	9.68%	28,560	-	332,611	38,097	41,213
2005	36,512	91.26%	88.24%	33,319	32,216	1,103	10.00%	3,222	0	36,541	4,840	4,869
2006	50,414	89.95%	86.69%	45,350	43,706	1,643	10.00%	4,371	-	49,720	5,069	4,375
2007	51,428	89.84%	86.54%	46,202	44,506	1,696	10.00%	4,450	38	50,690	5,543	4,805
2008	41,258	89.62%	86.32%	36,976	35,613	1,363	10.00%	3,561	-	40,537	5,603	4,882
2009	46,211	89.75%	86.47%	41,475	39,956	1,519	10.01%	4,001	4	45,479	6,038	5,306
2010	54,802	88.35%	84.79%	48,415	46,468	1,947	10.00%	4,647	66	53,128	8,085	6,411
2011	62,919	88.48%	84.98%	55,668	53,468	2,200	10.00%	5,347	45	61,060	8,453	6,594
2012	50,577	87.45%	83.81%	44,229	42,391	1,839	10.00%	4,239	-	48,468	7,406	5,297
2013	47,850	87.83%	84.19%	42,027	40,283	1,743	11.53%	4,646	3	46,676	8,128	6,954
2014	54,960	87.27%	83.60%	47,965	45,945	2,020	11.38%	5,229	-	53,194	7,874	6,108
2015	67,278	86.91%	83.18%	58,471	55,963	2,508	11.43%	6,395	-	64,866	9,421	7,009
2016	86,345	86.88%	83.15%	75,021	71,795	3,225	11.93%	8,566	19	83,605	10,508	7,768
2017	85,583	86.56%	82.81%	74,083	70,868	3,215	11.75%	8,327	-	82,409	10,241	7,067
2018	74,513	86.50%	82.84%	64,455	61,728	2,727	11.42%	7,051	24	71,530	10,155	7,172
2019	95,006	86.87%	83.31%	82,533	79,151	3,382	11.53%	9,122	-	91,655	13,071	9,720
2020	109,343	87.53%	84.21%	95,712	92,077	3,635	11.62%	10,696	-	106,408	17,555	14,620
2021	134,096	88.73%	85.88%	118,985	115,158	3,826	13.12%	15,110	-	134,094	76,922	76,920
2022	331,613	93.99%	92.64%	311,695	307,219	4,476	8.80%	27,033	0	338,728	147,567	154,682
Total	1,810,203	89.86%	86.92%	1,626,632	1,573,436	53,196	10.46%	164,570	199	1,791,401	400,576	381,774

Notes: (2) - Exhibit 2, Column 9
 (11) = (6)+(7)+(9)+(10)
 (12) - Exhibit 2, Column 6
 (13) = (12)+[(11)-(2)]
 *Not including PIPP Enhancements (see PE Exhibit 2, Sheet 8 & PE Exhibit 4)

July 13, 2023



Building a better
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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 9
Determination of Discount Rate

July 13, 2023

Manitoba Public Insurance
Automobile Insurance Division
Calculation of Basic Discount Rate
As of March 31, 2023

Exhibit 9
Sheet 1

Claims Liability Discount Rate

	Market Value \$000	% of Portfolio	Market Yield
Government Bonds	1,034,643	48.58%	3.88%
Corporate Bonds	520,401	24.43%	4.96%
Real Return Bonds	82,016	3.85%	3.00%
Non-Marketable Bonds	448,716	21.07%	4.20%
Short Term Bonds	44,087	2.07%	3.73%
Total	2,129,864	100.0%	4.17%
Market value (MV) weighted yield		4.17%	
Investment management fees		0.08%	
MV weighted yield less mgmt. fees		4.09%	



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Exhibit 10
Calculation of Claims Duration

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Paid Losses as at Mar 31, 2023
(Claim Liabilities Only)
(\$000)
Direct & Agency

Coverage	Amount Paid for Development Year Ending Mar 31																				
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Accident Benefits - Pre-PIPP																					
Weekly Indemnity	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	0	0	0	0
Other - Non-Indexed	2,871	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accident Benefits - PIPP																					
Weekly Indemnity (2021 & After)	15,419	10,163	8,450	7,228	6,167	5,380	4,952	4,698	4,582	4,460	4,285	4,117	3,861	3,628	3,417	3,278	3,104	2,806	2,529	2,274	2,040
Weekly Indemnity (Prior to 2021)	48,989	45,162	42,039	39,487	37,454	35,676	33,997	32,400	30,821	29,388	28,019	26,764	25,635	24,632	23,773	22,940	21,355	19,600	18,490	17,552	16,526
Other - Indexed (2014 & After)	28,053	16,184	13,371	12,314	11,779	11,564	11,367	11,004	10,583	10,148	9,662	9,096	8,468	7,888	7,496	7,228	7,000	6,765	6,502	6,254	6,013
Other - Indexed (Prior to 2014)	28,081	26,806	25,435	24,125	23,065	22,173	19,638	16,816	15,231	13,683	12,478	11,267	10,360	9,149	7,970	7,016	5,873	4,882	3,780	2,742	2,212
Other - Non-Indexed	24,789	17,175	12,211	5,845	2,448	1,587	1,223	942	726	603	509	419	319	232	136	49	0	0	0	0	0
PIPP Enhancement - Perm Imp	2,471	630	377	282	167	87	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP Enhancement - Other than Perm Imp	4,148	4,207	4,255	4,314	4,373	4,402	4,180	4,214	3,999	3,871	3,864	3,848	3,821	3,785	3,740	3,688	3,628	3,561	3,489	3,412	3,330
Public Liability - Bodily Injury																					
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	6,008	4,696	3,501	2,412	1,542	865	485	298	176	99	37	9	0	0	0	0	0	0	0	0	0
Property Damage																					
Collision	128,728	9,461	2,287	993	523	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	28,828	3,614	918	376	172	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE -for Non-Indexed																					
ULAE - for Indexed	13,802	11,278	10,254	9,557	9,025	8,608	8,059	7,487	7,067	6,665	6,298	5,935	5,603	5,260	4,960	4,711	4,356	3,866	3,553	3,272	3,041
ULAE - Total	37,954	15,657	12,517	10,679	9,570	8,937	8,256	7,628	7,169	6,745	6,360	5,983	5,639	5,286	4,975	4,716	4,356	3,866	3,553	3,272	3,041

Net

Coverage	Amount Paid for Development Year Ending Mar 31																				
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Accident Benefits - Pre-PIPP																					
Weekly Indemnity	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	0	0	0	0
Other - Non-Indexed	2,871	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accident Benefits - PIPP																					
Weekly Indemnity (2021 & After)	15,419	10,163	8,450	7,228	6,167	5,380	4,952	4,698	4,582	4,460	4,285	4,117	3,861	3,628	3,417	3,278	3,104	2,806	2,529	2,274	2,040
Ceded	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weekly Indemnity (Prior to 2021)	48,989	45,162	42,039	39,487	37,454	35,676	33,997	32,400	30,821	29,388	28,019	26,764	25,635	24,632	23,773	22,940	21,355	19,600	18,490	17,552	16,526
Ceded	-137	-126	-118	-111	-105	-100	-95	-91	-86	-82	-78	-75	-72	-69	-67	-64	-60	-55	-52	-49	-46
Other - Indexed (2014 & After)	28,053	16,184	13,371	12,314	11,779	11,564	11,367	11,004	10,583	10,148	9,662	9,096	8,468	7,888	7,496	7,228	7,000	6,765	6,502	6,254	6,013
Ceded	-17	-10	-8	-7	-7	-7	-7	-7	-6	-6	-6	-6	-5	-5	-5	-4	-4	-4	-4	-4	-4
Other - Indexed (Prior to 2014)	28,081	26,806	25,435	24,125	23,065	22,173	19,638	16,816	15,231	13,683	12,478	11,267	10,360	9,149	7,970	7,016	5,873	4,882	3,780	2,742	2,212
Ceded	-103	-99	-94	-89	-85	-82	-72	-62	-56	-50	-46	-41	-38	-34	-29	-26	-22	-18	-14	-10	-8
Other - Non-Indexed	24,789	17,175	12,211	5,845	2,448	1,587	1,223	942	726	603	509	419	319	232	136	49	0	0	0	0	0
PIPP Enhancement - Perm Imp	2,471	630	377	282	167	87	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP Enhancement - Other than Perm Imp	4,148	4,207	4,255	4,314	4,373	4,402	4,180	4,214	3,999	3,871	3,864	3,848	3,821	3,785	3,740	3,688	3,628	3,561	3,489	3,412	3,330
Public Liability - Bodily Injury																					
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	6,008	4,696	3,501	2,412	1,542	865	485	298	176	99	37	9	0	0	0	0	0	0	0	0	0
Property Damage																					
Collision	128,728	9,461	2,287	993	523	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	28,174	3,287	918	376	172	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE -for Non-Indexed																					
ULAE - for Indexed	13,802	11,278	10,254	9,557	9,025	8,608	8,059	7,487	7,067	6,665	6,298	5,935	5,603	5,260	4,960	4,711	4,356	3,866	3,553	3,272	3,041
ULAE - Total	37,954	15,657	12,517	10,679	9,570	8,937	8,256	7,628	7,169	6,745	6,360	5,983	5,639	5,286	4,975	4,716	4,356	3,866	3,553	3,272	3,041

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Paid Losses as at Mar 31, 2023
(Claim Liabilities Only)
(\$000)
Direct & Agency

2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,609
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,871
1,826	1,632	1,456	1,382	1,395	1,409	1,423	1,436	1,450	1,464	1,479	1,493	1,507	1,522	1,537	1,552	1,567	1,582	1,597	1,613	1,629	1,644	804	0	141,237
15,613	14,805	14,243	13,540	13,033	12,531	12,005	11,238	10,504	9,764	9,101	8,172	7,269	6,566	5,903	5,143	4,263	3,333	2,413	1,640	796	0	0	0	802,573
5,777	5,547	5,324	5,107	4,593	4,118	3,600	2,877	2,281	1,863	1,343	795	393	0	0	0	0	0	0	0	0	0	0	0	262,359
1,559	1,028	404	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	295,771
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69,213
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,063
3,245	3,156	3,065	2,973	2,879	1,994	1,832	1,646	1,460	1,351	1,223	1,068	949	863	780	703	640	522	396	326	272	177	88	0	113,735
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,129
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26,651
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142,293
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,975
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,503
2,813	2,612	2,432	2,274	2,159	2,050	1,933	1,765	1,616	1,486	1,354	1,188	1,041	918	845	760	662	558	455	369	275	187	91	0	172,499
2,813	2,612	2,432	2,274	2,159	2,050	1,933	1,765	1,616	1,486	1,354	1,188	1,041	918	845	760	662	558	455	369	275	187	91	0	206,003

Net

2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,609
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,871
1,826	1,632	1,456	1,382	1,395	1,409	1,423	1,436	1,450	1,464	1,479	1,493	1,507	1,522	1,537	1,552	1,567	1,582	1,597	1,613	1,629	1,644	804	0	141,237
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-2
15,613	14,805	14,243	13,540	13,033	12,531	12,005	11,238	10,504	9,764	9,101	8,172	7,269	6,566	5,903	5,143	4,263	3,333	2,413	1,640	796	0	0	0	802,573
-44	-41	-40	-38	-36	-35	-34	-31	-29	-27	-25	-23	-20	-18	-17	-14	-12	-9	-7	-5	-2	0	0	0	-2,247
5,777	5,547	5,324	5,107	4,593	4,118	3,600	2,877	2,281	1,863	1,343	795	393	0	0	0	0	0	0	0	0	0	0	0	262,359
-4	-3	-3	-3	-3	-2	-2	-2	-1	-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	-159
1,559	1,028	404	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	295,771
-6	-4	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1,089
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69,213
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,063
3,245	3,156	3,065	2,973	2,879	1,994	1,832	1,646	1,460	1,351	1,223	1,068	949	863	780	703	640	522	396	326	272	177	88	0	113,735
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,129
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26,651
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142,293
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32,995
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,503
2,813	2,612	2,432	2,274	2,159	2,050	1,933	1,765	1,616	1,486	1,354	1,188	1,041	918	845	760	662	558	455	369	275	187	91	0	172,499
2,813	2,612	2,432	2,274	2,159	2,050	1,933	1,765	1,616	1,486	1,354	1,188	1,041	918	845	760	662	558	455	369	275	187	91	0	206,003

**Accident Benefits - Weekly Indemnity: Commuted Reserve Portion
(\$000)**

Pre-PIPP (Appendix E)	Unpaid	Runoff (a)	Annual
Prior to 1984	5,524	17	325
1984	785	17	46
1985	339	17	20
1986	683	17	40
1987	1,653	17	97
1988	1,297	17	76
1989	1,074	17	63
1990	2,155	17	127
1991	1,635	17	96
1992	976	17	57
1993	1,487	17	87

Amount Paid for Development Year Ending Mar 31

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Pre-PIPP - Total	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	1,036	0

Note: (a) Given the small group of claimants , assumed an average run-off period of 17 years; when selecting the average run-off period, consider the run-off period for 1994, as well as the difference in discounted unpaid.

Accident Benefits - Weekly Indemnity: Commuted Reserve Portion
(\$000)

2012 & Prior (Appendix E)

Insurance Year	Unpaid	Amount Paid for Development Year Ending Mar 31																				
		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	
1994	13,354	776	783	791	798	806	814	822	830	838	846	854	862	871	879	888	896					
1995	19,044	1,036	1,046	1,056	1,066	1,077	1,087	1,098	1,108	1,119	1,130	1,141	1,152	1,163	1,174	1,186	1,197	1,209				
1996	11,794	603	609	615	621	627	633	639	645	651	658	664	670	677	683	690	697	704	710			
1997	11,833	570	576	581	587	593	598	604	610	616	622	628	634	640	646	653	659	665	672	678		
1998	16,252	740	747	755	762	769	777	784	792	800	807	815	823	831	839	847	856	864	872	881	889	
1999	16,777	815	727	734	741	748	756	763	770	778	785	793	801	808	816	824	832	840	848	857	865	
2000	17,503	903	807	719	726	733	740	748	755	762	770	777	785	792	800	808	815	823	831	839	848	
2001	14,972	817	731	652	582	587	593	599	605	610	616	622	628	635	641	647	653	660	666	672	679	
2002	18,929	1,086	973	871	778	693	700	707	714	721	728	735	742	749	756	764	771	778	786	794	801	
2003	15,276	918	824	738	660	590	526	531	536	541	547	552	557	563	568	574	579	585	590	596	602	
2004	16,077	1,006	905	813	729	652	582	519	524	529	534	539	544	550	555	560	566	571	577	583	588	
2005	17,677	1,146	1,034	931	836	749	670	598	533	539	544	549	555	560	565	571	576	582	588	593	599	
2006	25,851	1,727	1,564	1,411	1,270	1,141	1,022	914	817	728	735	742	749	757	764	771	779	787	794	802	810	
2007	26,365	1,667	1,650	1,494	1,348	1,214	1,090	977	874	780	696	702	709	716	723	730	737	744	751	759	766	
2008	28,087	1,789	1,662	1,646	1,490	1,345	1,211	1,087	974	871	778	694	701	707	714	721	728	735	742	750	757	
2009	26,965	1,687	1,610	1,496	1,481	1,341	1,210	1,090	978	877	784	700	624	630	637	643	649	655	662	668	675	
2010	38,657	2,449	2,265	2,162	2,009	1,989	1,801	1,625	1,463	1,314	1,177	1,053	940	838	847	855	863	872	880	889	897	
2011	39,848	2,489	2,366	2,189	2,090	1,941	1,922	1,740	1,571	1,414	1,270	1,138	1,018	909	810	818	826	834	842	850	859	
2012	33,362	2,016	1,958	1,861	1,722	1,644	1,527	1,512	1,369	1,236	1,112	999	895	801	715	637	644	650	656	663	669	

2013 & After (Exh 7, Sht 3)

2013	33,361	1,995	1,895	1,841	1,750	1,619	1,545	1,436	1,422	1,287	1,162	1,046	939	842	753	672	599	605	611	617	623	
2014	39,749	2,247	2,243	2,130	2,070	1,967	1,820	1,737	1,614	1,598	1,447	1,306	1,176	1,056	946	846	756	674	680	687	693	
2015	47,907	2,684	2,556	2,552	2,424	2,355	2,238	2,070	1,976	1,836	1,818	1,646	1,486	1,337	1,201	1,076	963	860	766	774	781	
2016	53,003	2,967	2,803	2,670	2,665	2,531	2,459	2,338	2,162	2,064	1,918	1,899	1,719	1,552	1,397	1,254	1,124	1,005	898	801	808	
2017	55,237	3,243	2,910	2,750	2,619	2,615	2,483	2,412	2,293	2,121	2,025	1,882	1,863	1,687	1,522	1,370	1,231	1,103	986	881	785	
2018	49,386	3,191	2,712	2,434	2,300	2,190	2,187	2,077	2,018	1,918	1,774	1,694	1,574	1,558	1,411	1,273	1,146	1,029	922	825	737	
2019	57,315	4,022	3,444	2,927	2,627	2,482	2,363	2,360	2,241	2,177	2,070	1,914	1,828	1,698	1,681	1,522	1,374	1,237	1,110	995	890	
2020	57,992	4,401	3,761	3,220	2,737	2,456	2,321	2,210	2,206	2,095	2,036	1,935	1,790	1,709	1,588	1,572	1,423	1,285	1,156	1,038	930	
2021	67,584	5,778	4,690	4,008	3,432	2,917	2,617	2,473	2,355	2,351	2,233	2,170	2,062	1,907	1,821	1,692	1,675	1,517	1,369	1,232	1,107	
2022	73,653	9,642	5,472	4,443	3,796	3,250	2,762	2,479	2,342	2,231	2,227	2,115	2,055	1,953	1,807	1,725	1,603	1,587	1,437	1,297	1,167	

2020 & Prior - Total
2021 & After - Total

802,573	48,989	45,162	42,039	39,487	37,454	35,676	33,997	32,400	30,821	29,388	28,019	26,764	25,635	24,632	23,773	22,940	21,355	19,600	18,490	17,552	
141,237	15,419	10,163	8,450	7,228	6,167	5,380	4,952	4,698	4,582	4,460	4,285	4,117	3,861	3,628	3,417	3,278	3,104	2,806	2,529	2,274	

Evaluation in Months	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348	348-360	360-372
Selected Factors (Paid)	1.0480	1.0435	1.0405	1.0370	1.0330	1.0305	1.0275	1.0265	1.0234	1.0206	1.0182	1.0160	1.0141	1.0125	1.0110	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097
Selected Ultimate (Paid)	1.8026	1.7200	1.6483	1.5841	1.5276	1.4788	1.4350	1.3966	1.3606	1.3295	1.3027	1.2794	1.2592	1.2416	1.2263	1.2130	1.2014	1.1898	1.1784	1.1671	1.1558
1/Selected Ultimate (Paid)	0.5548	0.5814	0.6067	0.6313	0.6546	0.6762	0.6968	0.7160	0.7350	0.7522	0.7677	0.7816	0.7942	0.8054	0.8154	0.8244	0.8324	0.8405	0.8486	0.8569	0.8652
Selected Decay Rate (a)	0.8820																				

Note: (a) Assume decay until 312 months; Goal seek the Decay Rate so that the tail factor 216 to ult equals 1.3605

Accident Benefits - Weekly Indemnity: Commuted Reserve Portion
(\$000)

Exhibit 10
Sheet 5

2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068
873																								
856	864																							
685	692	699																						
809	817	825	833																					
608	614	620	626	632																				
594	600	605	611	617	623																			
605	611	617	623	629	635	641																		
817	825	833	842	850	858	866	875																	
774	781	789	796	804	812	820	828	836																
764	772	779	787	794	802	810	818	826	834															
681	688	694	701	708	715	722	729	736	743	750														
906	915	923	932	941	951	960	969	979	988	998	1,007													
867	875	884	892	901	910	919	928	937	946	955	964	973												
675	682	689	695	702	709	716	723	730	737	744	751	758	766											
629	635	641	647	654	660	666	673	679	686	693	699	706	713	720										
700	707	714	721	728	735	742	749	756	764	771	779	786	794	802	809									
789	797	804	812	820	828	836	844	852	861	869	877	886	895	903	912	921								
816	824	832	840	848	857	865	873	882	890	899	908	916	925	934	943	952	962							
793	801	808	816	824	832	840	848	857	865	873	882	890	899	908	916	925	934	943						
657	663	670	676	683	689	696	703	709	716	723	730	737	745	752	759	766	774	781	789					
795	709	716	723	730	737	744	751	758	766	773	781	788	796	803	811	819	827	835	843	851				
832	743	663	669	676	682	689	695	702	709	716	723	730	737	744	751	759	766	773	781	788	796			
992	887	792	706	713	720	727	734	741	748	756	763	770	778	785	793	801	808	816	824	832	840	848		
1,048	939	840	750	669	675	682	689	695	702	709	716	723	730	737	744	751	758	766	773	781	788	796	804	
16,526	15,613	14,805	14,243	13,540	13,033	12,531	12,005	11,238	10,504	9,764	9,101	8,172	7,269	6,566	5,903	5,143	4,263	3,333	2,413	1,640	796	0	0	0
2,040	1,826	1,632	1,456	1,382	1,395	1,409	1,423	1,436	1,450	1,464	1,479	1,493	1,507	1,522	1,537	1,552	1,567	1,582	1,597	1,613	1,629	1,644	804	0
372-384	384-396	396-408	408-420	420-432	432-444	444-456	456-468	468-480	480-492	492-504	504-516	516-528	528-540	540-Ult										
1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0097	1.0000	1.0000
1.1447	1.1337	1.1228	1.1121	1.1014	1.0908	1.0803	1.0699	1.0596	1.0495	1.0394	1.0294	1.0195	1.0097	1.0000										
0.8736	0.8820	0.8906	0.8992	0.9080	0.9168	0.9257	0.9346	0.9437	0.9529	0.9621	0.9715	0.9809	0.9904	1.0000										

**Accident Benefits: PIPP Enhancement
(\$000)**

Insurance Year	Unpaid* (From PE Exh 1)					Ultimate [a]	1st 10 Yrs			Test: Selected % Paid		
	Weekly Indemnity	Personal Care	Vehicle Purchase	Death Benefits	ASA		Total (1)	Annual Payment (3)	Paid to Ultimate (4)	Paid Factors (5)	Ultimate PE Exh 1	Difference
2004	6,278	9,672	6,028	8,580	1,734	32,292					45,355	
2005	1,793	994	420	987	152	4,346					5,903	
2006	1,390	1,089	1,406	1,513	385	5,783					7,656	
2007	1,143	2,275	1,146	1,332	302	6,197					7,988	
2008	705	528	815	801	168	3,017					4,159	
2009	1,483	957	679	885	200	4,204					5,504	
2010	464	344	677	799	191	2,475					3,189	
2011	659	2,099	334	946	224	4,262					5,235	
2012	616	697	652	646	164	2,774					3,537	
2013	1,018	1,004	0	694	160	2,876	3,383	56	6.6775		3,431	48
2014	314	738	595	865	144	2,656	3,064	51	7.5122	1.1250	2,918	-147
2015	341	428	223	886	179	2,057	2,328	39	8.5853	1.1429	2,213	-115
2016	1,376	1,373	1,280	1,181	303	5,513	6,125	102	10.0162	1.1667	6,500	376
2017	2,248	1,638	1,015	1,138	278	6,318	6,892	115	12.0195	1.2000	6,674	-218
2018	645	713	1,012	772	179	3,321	3,558	59	15.0243	1.2500	3,485	-73
2019	56	250	1,177	833	193	2,510	2,642	44	20.0324	1.3333	2,651	9
2020	1,720	1,140	1,101	1,066	280	5,307	5,490	91	30.0487	1.5000	5,590	100
2021	1,641	1,198	1,054	1,115	267	5,275	5,365	89	60.0973	2.0000	5,367	2
2022	2,006	952	1,028	1,266	274	5,526	5,526	92			5,544	18
Total	25,896	28,088	20,640	26,305	5,781	106,711	44,371	738			132,896	0

% Paid in Years 2 to 10 [b] 1.66%

Evaluation in Months	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-228	228-240	240-252	252-264	264-276	276-288	288-300	300-312	312-324	324-336	336-348
Selected Factors (Paid)	1.1178	1.1110	1.1046	1.0986	1.0929	1.0875	1.0825	1.0777	1.0732	1.0690	1.0650	1.0613	1.0577	1.0544	1.0513	1.0483	1.0455	1.0429	1.0404
Selected Ultimate (Paid)	5.6325	5.0390	4.5356	4.1061	3.7378	3.4202	3.1450	2.9054	2.6959	2.5120	2.3499	2.2064	2.0791	1.9656	1.8642	1.7733	1.6916	1.6180	1.5514
1/Selected Ultimate (Paid)	0.1775	0.1985	0.2205	0.2435	0.2675	0.2924	0.3180	0.3442	0.3709	0.3981	0.4256	0.4532	0.4810	0.5088	0.5364	0.5639	0.5912	0.6181	0.6446
Selected Decay Rate [c]	0.9423																		

Notes: (2)=(1)/(1- %paid); (3)=(1)*1.66%; (4)=(2)/((2)-(1))

[a] Assume 0.0 % paid for year 1; 1.66% paid for years 2 to 10; thereafter decaying per [c] above

[b] Difference in discounted unpaid is minimal (From PE Exhibit 1).

[c] Decay rate is selected so that the difference in discounted unpaid is minimal from PE Exhibit 1.

Accident Benefits: PIPP Enhancement
(\$000)

Exhibit 10
Sheet 7

Insurance Year	Unpaid PE Exh1	PI							
		0-12	12-24	24-36	36-48	48-60	60-72	72-84	
2004	339	339							
2005	0	0							
2006	0	0							
2007	0	0							
2008	0	0							
2009	275	275							
2010	95	95							
2011	91	91							
2012	91	91							
2013	95	95							
2014	209	209							
2015	177	177							
2016	339	339							
2017	194	97		97					
2018	99	50		25	25				
2019	194	83		56	28	28			
2020	308	92		92	62	31	31		
2021	583	194		117	117	78	39	39	
2022	972	243		243	146	146	97	49	49
Total	4,063	2,471		630	377	282	167	87	49
% Paid		25.00%		25.00%	15.00%	15.00%	10.00%	5.00%	5.00%
Note:	Roughly following ABO Non-Indexed, delayed by a year.								

348-360	360-372	372-384	384-396	396-408	408-420	420-432	432-444	444-456	456-468	468-480	480-492	492-504	504-516	516-528	528-540	540-Ult
1.0381	1.0359	1.0338	1.0319	1.0300	1.0283	1.0267	1.0251	1.0237	1.0223	1.0210	1.0198	1.0187	1.0176	1.0166	1.0156	1.0000
1.4912	1.4365	1.3867	1.3414	1.2999	1.2620	1.2273	1.1955	1.1662	1.1392	1.1143	1.0914	1.0702	1.0506	1.0324	1.0156	1.0000
0.6706	0.6962	0.7211	0.7455	0.7693	0.7924	0.8148	0.8365	0.8575	0.8778	0.8974	0.9163	0.9344	0.9518	0.9686	0.9846	1.0000

Accident Benefits: PIPP Enhancement (Five benefits from Exhibit 9 page 8)
(S000)

Insurance Year	Unpaid	Amount Paid for Development Year Ending Mar 31																			
		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
2004	32,292	1,473	1,484	1,490	1,490	1,485	1,475	1,461	1,443	1,422	1,397	1,370	1,340	1,308	1,274	1,239	1,203	1,165	1,127	1,089	1,050
2005	4,346	188	190	191	192	192	191	190	188	186	183	180	176	173	168	164	160	155	150	145	140
2006	5,783	236	239	242	244	245	245	244	242	240	237	234	230	225	220	215	209	204	198	192	185
2007	6,197	238	243	247	250	251	252	252	251	250	247	244	241	237	232	227	222	216	210	204	197
2008	3,017	109	112	114	116	117	118	118	118	118	117	116	115	113	111	109	107	104	101	98	96
2009	4,204	143	147	150	154	156	158	159	159	159	159	158	156	154	152	150	147	143	140	136	133
2010	2,475	79	81	84	86	87	89	90	91	91	91	91	90	89	88	87	85	84	82	80	78
2011	4,262	126	131	136	140	143	146	148	150	151	152	152	151	150	149	147	145	142	140	137	133
2012	2,774	76	80	83	86	89	91	93	94	95	96	96	96	96	95	94	93	92	90	88	86
2013	2,876	73	77	81	84	87	89	92	94	95	96	97	97	97	96	95	94	93	91	89	87
2014	2,656	51	66	70	73	76	79	81	83	85	86	87	88	88	88	87	86	85	84	83	81
2015	2,057	39	39	50	53	55	58	60	62	63	64	65	66	67	67	67	67	66	66	65	64
2016	5,513	102	102	102	132	139	146	152	157	162	166	169	172	174	175	176	176	175	174	172	170
2017	6,318	115	115	115	115	149	157	164	171	177	182	187	191	193	196	197	198	198	197	196	194
2018	3,321	59	59	59	59	59	77	81	85	88	91	94	96	98	100	101	102	102	102	102	101
2019	2,510	44	44	44	44	44	44	57	60	63	66	68	70	72	73	74	75	76	76	76	76
2020	5,307	91	91	91	91	91	91	91	119	125	131	136	141	145	149	152	154	156	157	158	158
2021	5,275	89	89	89	89	89	89	89	89	89	116	122	128	133	138	142	145	148	151	152	154
2022	5,526	92	92	92	92	92	92	92	92	92	119	126	132	137	142	146	150	153	155	157	158
Total Enhancement	106,711	3,423	3,482	3,530	3,589	3,648	3,687	3,715	3,749	3,778	3,804	3,798	3,781	3,754	3,718	3,674	3,621	3,561	3,495	3,423	3,345

Accident Benefits: PIPP Enhancement (Five benefits from Exhibit 9 page 8)
(S000)

Exhibit 10
Sheet 9

2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	
1,012	974	936	898	861	825																			
135	130	125	120	116	111	106																		
179	173	166	160	154	148	142	136																	
191	184	178	171	165	158	152	146	140																
93	90	87	83	80	77	74	71	68	66															
129	125	121	117	112	108	104	100	96	92	88														
76	73	71	69	66	64	62	59	57	55	53	50													
130	126	123	119	115	111	107	103	99	95	92	88	84												
84	82	80	78	75	73	70	68	65	63	60	58	56	53											
87	85	83	81	78	76	73	71	68	66	63	61	59	56	54										
81	79	77	75	73	71	69	67	64	62	60	57	55	53	51	49									
63	61	60	59	57	56	54	52	51	49	47	45	44	42	40	39	37								
168	165	162	158	154	150	146	142	138	133	129	124	119	115	110	106	102	97							
192	189	186	182	178	174	169	165	160	155	150	145	139	134	129	124	119	114	110						
100	99	97	96	94	92	90	87	85	82	80	77	75	72	69	67	64	62	59	57					
75	74	73	72	71	70	68	67	65	63	61	59	57	55	53	52	50	48	46	44	42				
157	156	155	153	150	148	145	142	138	135	131	127	123	119	115	111	107	103	99	95	91	87			
154	153	152	151	149	147	144	142	139	135	132	128	124	120	117	113	109	105	101	97	93	89	85		
159	159	158	157	156	154	151	149	146	143	139	136	132	128	124	120	116	112	108	104	100	96	92	88	
3,264	3,178	3,090	2,999	2,906	2,812	1,928	1,766	1,579	1,393	1,284	1,156	1,068	949	863	780	703	640	522	396	326	272	177	88	

Accident Benefits: PIPP Enhancement
CGWI Death Benefit [a]
(\$000)

Exhibit 10
Sheet 10

Insurance Year	Unpaid PE Exh 1	Amount Paid for Development Year Ending Mar 31																			
		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
2004	0																				
2005	0																				
2006	0																				
2007	0																				
2008	0																				
2009	0																				
2010	0																				
2011	0																				
2012	0																				
2013	0																				
2014	0																				
2015	749	125	125	125	125	125	125														
2016	0	0	0	0	0	0	0	0													
2017	861	108	108	108	108	108	108	108	108												
2018	473	53	53	53	53	53	53	53	53	53											
2019	48	10	10	10	10	10															
2020	755	126	126	126	126	126	126														
2021	914	102	102	102	102	102	102	102	102	102											
2022	1,090	136	136	136	136	136	136	136	136	136											
Total CGWI Death Benefit	4,890	658	658	658	658	658	649	398	398	154	0	0	0	0	0	0	0	0	0	0	0
PI (From Exhibit 9 page 7)	2,471	630	377	282	167	87	49														
Quality of Life - Total (From PE Exh 4) [b]	2,135	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67

Notes [a] Length of payment period was estimated by average years that claimants will receive benefits.
[b] Payments were selected to minimize the difference in the discounted unpaid from PE Exhibit 4.

2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063
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0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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67	67	67	67	67	67	67	67	67	67	67	67								
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Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Discounted Claims Development PFAD as at Mar 31, 2023
(Claim Liabilities Only)

Exhibit 10

Sheet 12

(\$000)

Direct & Agency

APV Amount for Claims Development PFAD for Development Year Ending Mar 31

Coverage	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Accident Benefits - Pre-PIPP																					
Weekly Indemnity	52	53	52	51	50	49	48	47	46	45	45	44	43	42	41	40	39	0	0	0	0
Other - Non-Indexed	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accident Benefits - PIPP																					
Weekly Indemnity (2022 & After)	2,334	1,552	1,279	1,075	899	769	693	644	616	587	553	521	478	441	407	382	355	314	277	244	215
Weekly Indemnity (Prior to 2022)	4,944	4,598	4,243	3,914	3,640	3,398	3,173	2,963	2,762	2,580	2,411	2,257	2,118	1,994	1,886	1,783	1,627	1,463	1,353	1,258	1,161
Other - Indexed (2014 & After)	4,246	2,472	2,024	1,831	1,717	1,652	1,591	1,509	1,423	1,337	1,247	1,150	1,049	958	892	843	800	757	713	672	634
Other - Indexed (Prior to 2014)	2,834	2,729	2,567	2,391	2,242	2,112	1,833	1,538	1,365	1,201	1,074	950	856	741	632	545	447	364	276	197	155
Other - Non-Indexed	2,430	1,617	1,105	508	204	127	94	70	52	41	33	26	19	13	8	3	0	0	0	0	0
PIPP Enhancement - Perm Imp	242	59	34	25	14	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP Enhancement - Other than Perm Imp	463	473	475	473	470	463	431	426	396	376	367	359	349	339	328	317	305	294	282	270	259
Public Liability - Bodily Injury																					
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	883	663	475	314	193	104	56	33	19	10	4	1	0	0	0	0	0	0	0	0	0
Property Damage																					
Collision	1,055	171	46	11	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	6,309	445	103	43	22	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE -for Non-Indexed	1,413	170	42	16	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE - for Indexed	2,475	431	214	102	48	28	16	11	8	6	4	3	2	2	1	0	0	0	0	0	0
ULAE - Total	1,456	1,201	1,082	991	917	857	786	716	662	612	567	523	484	445	411	383	347	302	272	245	223
ULAE - Total	3,931	1,632	1,296	1,093	965	885	802	727	670	618	571	526	486	447	412	383	347	302	272	245	223

Net

APV Amount for Claims Development PFAD for Development Year Ending Mar 31

Coverage	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Accident Benefits - Pre-PIPP																					
Weekly Indemnity	52	53	52	51	50	49	48	47	46	45	45	44	43	42	41	40	39	0	0	0	0
Other - Non-Indexed	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Accident Benefits - PIPP																					
Weekly Indemnity (2022 & After)	2,334	1,552	1,279	1,075	899	769	693	644	616	587	553	521	478	441	407	382	355	314	277	244	215
Ceded	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weekly Indemnity (Prior to 2022)	4,944	4,598	4,243	3,914	3,640	3,398	3,173	2,963	2,762	2,580	2,411	2,257	2,118	1,994	1,886	1,783	1,627	1,463	1,353	1,258	1,161
Ceded	-14	-13	-12	-11	-10	-10	-10	-9	-9	-8	-8	-7	-7	-7	-7	-6	-6	-5	-5	-5	-5
Other - Indexed (2014 & After)	4,246	2,472	2,024	1,831	1,717	1,652	1,591	1,509	1,423	1,337	1,247	1,150	1,049	958	892	843	800	757	713	672	634
Ceded	-3	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
Other - Indexed (Prior to 2014)	2,834	2,729	2,567	2,391	2,242	2,112	1,833	1,538	1,365	1,201	1,074	950	856	741	632	545	447	364	276	197	155
Ceded	-10	-10	-9	-9	-8	-8	-7	-6	-6	-5	-5	-4	-4	-3	-3	-3	-2	-2	-1	-1	-1
Other - Non-Indexed	2,430	1,617	1,105	508	204	127	94	70	52	41	33	26	19	13	8	3	0	0	0	0	0
PIPP Enhancement - Perm Imp	242	59	34	25	14	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP Enhancement - Other than Perm Imp	463	473	475	473	470	463	431	426	396	376	367	359	349	339	328	317	305	294	282	270	259
Public Liability - Bodily Injury																					
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	883	663	475	314	193	104	56	33	19	10	4	1	0	0	0	0	0	0	0	0	0
Property Damage																					
Collision	1,055	171	46	11	5	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	6,309	445	103	43	22	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE -for Non-Indexed	1,381	155	42	16	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULAE - for Indexed	2,475	431	214	102	48	28	16	11	8	6	4	3	2	2	1	0	0	0	0	0	0
ULAE - Total	1,456	1,201	1,082	991	917	857	786	716	662	612	567	523	484	445	411	383	347	302	272	245	223
ULAE - Total	3,931	1,632	1,296	1,093	965	885	802	727	670	618	571	526	486	447	412	383	347	302	272	245	223

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Discounted Claims Development PFAD as at Mar 31, 2023
(Claim Liabilities Only)
(\$000)
Direct & Agency

Exhibit 10
Sheet 13

2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total	PFAD	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	790	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141	5.00%	
189	165	144	134	133	131	130	129	127	126	125	123	122	121	119	118	117	116	114	113	112	111	53	0	17,509	15.00%	
1,075	999	941	877	827	779	732	671	615	560	511	450	392	347	306	261	212	162	115	77	37	0	0	0	66,471	10.00%	
596	561	528	496	437	384	329	258	200	160	113	66	32	0	0	0	0	0	0	0	0	0	0	0	33,680	15.00%	
107	69	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,253	10.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,351	10.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385	10.00%	
247	235	224	213	202	137	123	109	94	86	76	65	57	50	45	39	35	28	21	17	14	9	4	0	10,043	11.05%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.50%
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,756	15.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,292	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,935	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,651	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,350	10.46%	
202	184	168	154	143	133	123	110	99	89	80	68	59	51	46	40	34	28	23	18	13	9	4	0	15,362	10.46%	
202	184	168	154	143	133	123	110	99	89	80	68	59	51	46	40	34	28	23	18	13	9	4	0	18,712	10.46%	

Net

2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total	PFAD	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	790	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141	5.00%	
189	165	144	134	133	131	130	129	127	126	125	123	122	121	119	118	117	116	114	113	112	111	53	0	17,509	15.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.00%	
1,075	999	941	877	827	779	732	671	615	560	511	450	392	347	306	261	212	162	115	77	37	0	0	0	66,246	10.00%	
-4	-4	-4	-4	-4	-4	-3	-3	-3	-3	-3	-2	-2	-2	-2	-1	-1	-1	-1	0	0	0	0	0	0	10.00%	
596	561	528	496	437	384	329	258	200	160	113	66	32	0	0	0	0	0	0	0	0	0	0	0	33,656	15.00%	
-1	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.00%	
107	69	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,144	10.00%	
-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,351	10.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	385	10.00%	
247	235	224	213	202	137	123	109	94	86	76	65	57	50	45	39	35	28	21	17	14	9	4	0	10,043	11.05%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12.50%
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,756	15.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,292	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,935	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,603	5.00%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,350	10.46%	
202	184	168	154	143	133	123	110	99	89	80	68	59	51	46	40	34	28	23	18	13	9	4	0	15,362	10.46%	
202	184	168	154	143	133	123	110	99	89	80	68	59	51	46	40	34	28	23	18	13	9	4	0	18,712	10.46%	

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory

Exhibit 10
Sheet 14

Duration as at Mar 31, 2023

(Claim Liabilities Only)

(\$000)

Direct & Agency

Coverage	APV Amount Paid for Development Year Ending Mar 31																								
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	
Accident Benefits - Pre-PIPP																									
Weekly Indemnity	1,100	1,114	1,108	1,093	1,075	1,058	1,040	1,023	1,006	990	974	958	942	926	911	896	882	0	0	0	0	0	0	0	0
Other - Non-Indexed	2,960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Accident Benefits - Pre-PIPP	4,060	1,114	1,108	1,093	1,075	1,058	1,040	1,023	1,006	990	974	958	942	926	911	896	882	0	0	0	0	0	0	0	0
Accident Benefits - PIPP																									
Weekly Indemnity	72,406	62,822	57,001	51,949	47,698	44,128	41,162	38,554	36,187	34,027	31,937	30,025	28,199	26,567	25,134	23,832	21,867	19,698	18,169	16,849	15,513	14,328	13,277	12,468	
Other - Indexed	63,842	49,238	44,158	40,853	38,434	36,602	33,113	29,255	26,710	24,264	22,178	20,067	18,248	16,247	14,516	13,160	11,714	10,437	9,080	7,832	7,052	6,199	5,477	4,708	
Other - Non-Indexed	26,774	17,884	12,258	5,657	2,284	1,428	1,060	788	585	468	382	303	222	155	88	31	0	0	0	0	0	0	0	0	
PIPP Enhancement - Perm Imp	2,669	656	378	273	156	79	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PIPP Enhancement - Other than Perm Imp	4,657	4,783	4,813	4,809	4,796	4,749	4,433	4,395	4,102	3,904	3,833	3,753	3,666	3,571	3,470	3,365	3,255	3,142	3,028	2,911	2,794	2,678	2,561	2,446	
Total PIPP Enhancement	7,326	5,438	5,191	5,082	4,952	4,827	4,476	4,395	4,102	3,904	3,833	3,753	3,666	3,571	3,470	3,365	3,255	3,142	3,028	2,911	2,794	2,678	2,561	2,446	
Total Accident Benefits - PIPP	170,349	135,381	118,608	103,541	93,369	86,985	79,810	72,993	67,584	62,664	58,330	54,148	50,335	46,540	43,209	40,388	36,835	33,277	30,276	27,593	25,360	23,205	21,315	19,622	
Public Liability - Bodily Injury																									
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	6,783	5,111	3,673	2,439	1,503	813	439	260	148	81	29	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Public Liability - Bodily Injury	6,783	5,111	3,673	2,439	1,503	813	439	260	148	81	29	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Property Damage																									
Collision	132,725	9,406	2,193	917	466	258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	29,723	3,593	880	348	153	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Bodily Injury	181,192	141,606	123,390	107,073	95,947	88,856	81,290	74,276	68,739	63,734	59,332	55,113	51,276	47,466	44,120	41,284	37,717	33,277	30,276	27,593	25,360	23,205	21,315	19,622	
Total Physical Damage	184,653	16,601	4,040	1,506	725	384	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Division	365,845	158,207	127,430	108,579	96,672	89,239	81,312	74,276	68,739	63,734	59,332	55,113	51,276	47,466	44,120	41,284	37,717	33,277	30,276	27,593	25,360	23,205	21,315	19,622	
ULAE - for Non-Indexed																									
ULAE - for Indexed	15,412	12,753	11,538	10,598	9,846	9,236	8,503	7,769	7,211	6,689	6,215	5,760	5,348	4,937	4,578	4,276	3,888	3,393	3,068	2,778	2,539	2,309	2,109	1,932	
ULAE - Total	41,606	17,331	13,818	11,689	10,357	9,533	8,674	7,887	7,294	6,751	6,262	5,795	5,373	4,954	4,588	4,280	3,888	3,393	3,068	2,778	2,539	2,309	2,109	1,932	
Total Division + ULAE	407,451	175,538	141,248	120,268	107,029	98,772	89,986	82,163	76,033	70,485	65,594	60,907	56,650	52,421	48,708	45,564	41,605	36,670	33,343	30,370	27,899	25,514	23,425	21,553	

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Duration as at Mar 31, 2023
(Claim Liabilities Only)
(\$000)
Direct & Agency

Exhibit 10
Sheet 15

2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total P	Total P+	Total P-	Effective Duration y=0.05%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,095	17,027	17,164	8.06	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,960	2,959	2,961	0.48	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,056	19,986	20,125	6.94	
																							0	0	
11,654	11,084	10,533	9,980	9,267	8,598	7,945	7,365	6,621	5,916	5,366	4,857	4,303	3,690	3,066	2,467	1,976	1,458	984	473	0	901,402	896,282	906,574	11.42	
4,139	3,660	3,226	2,774	2,180	1,699	1,365	968	563	274	0	0	0	0	0	0	0	0	0	0	0	574,231	571,899	576,580	8.15	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70,366	70,297	70,436	1.99	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,252	4,250	4,255	1.28	
2,333	2,222	1,514	1,368	1,208	1,054	959	854	733	641	573	509	452	404	324	242	196	161	103	50	0	105,813	105,114	106,519	13.28	
2,333	2,222	1,514	1,368	1,208	1,054	959	854	733	641	573	509	452	404	324	242	196	161	103	50	0	110,066	109,364	110,775	12.82	
18,126	16,966	15,273	14,121	12,655	11,351	10,269	9,186	7,917	6,831	5,939	5,366	4,754	4,095	3,390	2,709	2,171	1,618	1,087	523	0	1,656,065	1,647,841	1,664,365	9.98	
																							0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,287	21,264	21,310	2.14	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,287	21,264	21,310	2.14	
																							0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,209	27,199	27,219	0.74	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145,966	145,921	146,011	0.61	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,755	34,743	34,767	0.68	
																							0	0	
18,126	16,966	15,273	14,121	12,655	11,351	10,269	9,186	7,917	6,831	5,939	5,366	4,754	4,095	3,390	2,709	2,171	1,618	1,087	523	0	1,697,407	1,689,092	1,705,800	9.84	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207,930	207,863	207,996	0.64	
																							0	0	
18,126	16,966	15,273	14,121	12,655	11,351	10,269	9,186	7,917	6,831	5,939	5,366	4,754	4,095	3,390	2,709	2,171	1,618	1,087	523	0	1,905,337	1,896,955	1,913,797	8.84	
																							0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,524	35,505	35,542	1.04	
1,776	1,658	1,548	1,436	1,290	1,161	1,050	940	811	699	607	549	486	416	345	277	221	162	108	52	0	168,276	167,429	169,132	10.12	
1,776	1,658	1,548	1,436	1,290	1,161	1,050	940	811	699	607	549	486	416	345	277	221	162	108	52	0	203,800	202,934	204,674	8.54	
19,902	18,625	16,821	15,557	13,944	12,512	11,319	10,127	8,729	7,530	6,546	5,915	5,240	4,511	3,735	2,986	2,392	1,780	1,195	575	0	2,109,137	2,099,889	2,118,471	8.81	

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory

Exhibit 10
Sheet 16

Duration as at Mar 31, 2023

(Claim Liabilities Only)

(\$000)

Net

Coverage	APV Amount Paid for Development Year Ending Mar 31																							
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Accident Benefits - Pre-PIPP																								
Weekly Indemnity	1,100	1,114	1,108	1,093	1,075	1,058	1,040	1,023	1,006	990	974	958	942	926	911	896	882	0	0	0	0	0	0	0
Other - Non-Indexed	2,960	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Accident Benefits - Pre-PIPP	4,060	1,114	1,108	1,093	1,075	1,058	1,040	1,023	1,006	990	974	958	942	926	911	896	882	0	0	0	0	0	0	0
Accident Benefits - PIPP																								
Weekly Indemnity	72,255	62,682	56,872	51,828	47,583	44,018	41,057	38,455	36,092	33,936	31,851	29,942	28,120	26,491	25,061	23,762	21,801	19,637	18,112	16,795	15,462	14,280	13,232	12,424
Other - Indexed	63,709	49,118	44,046	40,747	38,333	36,504	33,025	29,179	26,641	24,202	22,120	20,015	18,200	16,204	14,479	13,127	11,685	10,412	9,060	7,817	7,038	6,189	5,469	4,702
Other - Non-Indexed	26,774	17,884	12,258	5,657	2,284	1,428	1,060	788	585	468	382	303	222	155	88	31	0	0	0	0	0	0	0	0
PIPP Enhancement - Perm Imp	2,669	656	378	273	156	79	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP Enhancement - Other than Perm Imp	4,657	4,783	4,813	4,809	4,796	4,749	4,433	4,395	4,102	3,904	3,833	3,753	3,666	3,571	3,470	3,365	3,255	3,142	3,028	2,911	2,794	2,678	2,561	2,446
Total PIPP Enhancement	7,326	5,438	5,191	5,082	4,952	4,827	4,476	4,395	4,102	3,904	3,833	3,753	3,666	3,571	3,470	3,365	3,255	3,142	3,028	2,911	2,794	2,678	2,561	2,446
Total Accident Benefits - PIPP	170,064	135,122	118,366	103,313	93,151	86,778	79,618	72,817	67,420	62,511	58,186	54,014	50,208	46,421	43,098	40,284	36,741	33,192	30,199	27,523	25,295	23,146	21,262	19,573
Public Liability - Bodily Injury																								
Pre-PIPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PIPP	6,783	5,111	3,673	2,439	1,503	813	439	260	148	81	29	7	0	0	0	0	0	0	0	0	0	0	0	0
Total Public Liability - Bodily Injury	6,783	5,111	3,673	2,439	1,503	813	439	260	148	81	29	7	0	0	0	0	0	0	0	0	0	0	0	0
Property Damage																								
Collision	132,725	9,406	2,193	917	466	258	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comprehensive	29,049	3,268	880	348	153	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Bodily Injury	180,908	141,347	123,148	106,845	95,730	88,648	81,098	74,101	68,575	63,581	59,188	54,978	51,150	47,348	44,009	41,180	37,622	33,192	30,199	27,523	25,295	23,146	21,262	19,573
Total Physical Damage	183,979	16,276	4,040	1,506	725	384	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Division	364,887	157,623	127,188	108,351	96,455	89,031	81,119	74,101	68,575	63,581	59,188	54,978	51,150	47,348	44,009	41,180	37,622	33,192	30,199	27,523	25,295	23,146	21,262	19,573
ULAE -for Non-Indexed																								
ULAE - for Indexed	15,412	12,753	11,538	10,598	9,846	9,236	8,503	7,769	7,211	6,689	6,215	5,760	5,348	4,937	4,578	4,276	3,888	3,393	3,068	2,778	2,539	2,309	2,109	1,932
ULAE - Total	41,606	17,331	13,818	11,689	10,357	9,533	8,674	7,887	7,294	6,751	6,262	5,795	5,373	4,954	4,588	4,280	3,888	3,393	3,068	2,778	2,539	2,309	2,109	1,932
Total Division + ULAE	406,493	174,954	141,006	120,040	106,812	98,565	89,794	81,988	75,869	70,332	65,450	60,773	56,523	52,302	48,597	45,460	41,510	36,585	33,267	30,301	27,835	25,456	23,371	21,504

Manitoba Public Insurance Corporation
Automobile Insurance Division - Universal Compulsory
Duration as at Mar 31, 2023
(Claim Liabilities Only)
(\$000)

Net

2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	Total P	Total P+	Total P-	Effective Duration y=0.05%	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17,095	17,027	17,164	8.06	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,960	2,959	2,961	0.48	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20,056	19,986	20,125	6.94	
																						0	0	0	
11,612	11,044	10,494	9,943	9,232	8,566	7,915	7,337	6,596	5,894	5,345	4,839	4,287	3,677	3,056	2,460	1,970	1,455	984	473	0	898,928	893,808	904,100	11.45	
4,135	3,657	3,224	2,771	2,178	1,698	1,363	967	563	274	0	0	0	0	0	0	0	0	0	0	0	572,850	570,518	575,200	8.17	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70,366	70,297	70,436	1.99	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,252	4,250	4,255	1.28	
2,333	2,222	1,514	1,368	1,208	1,054	959	854	733	641	573	509	452	404	324	242	196	161	103	50	0	105,813	105,114	106,519	13.28	
2,333	2,222	1,514	1,368	1,208	1,054	959	854	733	641	573	509	452	404	324	242	196	161	103	50	0	110,066	109,364	110,775	12.82	
18,081	16,923	15,232	14,082	12,618	11,317	10,238	9,157	7,892	6,808	5,919	5,348	4,738	4,081	3,380	2,702	2,166	1,616	1,087	523	0	1,652,210	1,643,986	1,660,511	10.00	
																						0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,287	21,264	21,310	2.14	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21,287	21,264	21,310	2.14	
																						0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27,209	27,199	27,219	0.74	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145,966	145,921	146,011	0.61	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33,756	33,745	33,768	0.68	
																						0	0	0	
18,081	16,923	15,232	14,082	12,618	11,317	10,238	9,157	7,892	6,808	5,919	5,348	4,738	4,081	3,380	2,702	2,166	1,616	1,087	523	0	1,693,552	1,685,237	1,701,946	9.87	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206,931	206,865	206,997	0.64	
																						0	0	0	
18,081	16,923	15,232	14,082	12,618	11,317	10,238	9,157	7,892	6,808	5,919	5,348	4,738	4,081	3,380	2,702	2,166	1,616	1,087	523	0	1,900,483	1,892,102	1,908,943	8.86	
																						0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35,524	35,505	35,542	1.04	
1,776	1,658	1,548	1,436	1,290	1,161	1,050	940	811	699	607	549	486	416	345	277	221	162	108	52	0	168,276	167,429	169,132	10.12	
1,776	1,658	1,548	1,436	1,290	1,161	1,050	940	811	699	607	549	486	416	345	277	221	162	108	52	0	203,800	202,934	204,674	8.54	
19,856	18,581	16,780	15,517	13,908	12,478	11,288	10,098	8,703	7,508	6,525	5,897	5,224	4,497	3,725	2,979	2,387	1,778	1,195	575	0	2,104,283	2,095,036	2,113,617	8.83	



Exhibit 11
Calculation of Premium Liabilities Duration

Manitoba Public Insurance Corporation
Automobile Insurance Division - Basic
Premium Liabilities Duration as at Mar 31, 2023
Net of Reinsurance, Salvage and Subrogation

Valuation Date:	31-Mar-23
Discount Rate:	4.06%
Percent in Non-Investable Assets:	0.00%
Average Accident Date Premium Liabilities:	0.25
Annual Ay	0.05%

Indexation Table				
Time	Inflation %	Discount Rate adjusted for Inflation	Discount Rate adjusted for Inflation -ΔY	Discount Rate adjusted for Inflation +ΔY
0.5	6.00%	-1.83%	-1.88%	-1.78%
1.5	4.05%	0.01%	-0.04%	0.06%
2.5	2.35%	1.67%	1.62%	1.72%
3.5	2.10%	1.92%	1.87%	1.97%
4.5	2.00%	2.02%	1.97%	2.07%

UEPR: 585,267
 Maintenance Expense: 2.99%
 ULAE Ratio: 18.50%

Summary of Duration									
Coverage	UEPR	Selected Undisc. Loss Ratio (% Prem)	Undiscounted Premium Liabilities Loss & LAE	Discount Factor	PV of Premium Liabilities Loss & LAE	Total PfAD	APV of Premium Liabilities	Modified Duration	Effective Duration
Bodily Injury	585,267	0.47%	3,197	0.9552	3,053	232	3,286	3.32	3.32
Property Damage	585,267	4.06%	27,813	0.9552	26,566	2,020	28,585	0.71	0.71
Collision	585,267	40.38%	276,801	0.9552	264,389	20,099	284,488	0.47	0.47
Comprehensive	585,267	9.45%	64,738	0.9655	62,504	4,946	67,451	0.48	0.48
Accident Benefits - Weekly Indemnity	585,267	7.74%	53,072	0.9552	50,692	3,854	54,546	5.84	6.01
Accident Benefits - Other (Indexed)	585,267	4.71%	32,307	0.9552	30,859	2,346	33,205	5.36	5.51
Accident Benefits - Other (Non-Indexed)	585,267	2.83%	19,428	0.9552	18,557	1,411	19,967	2.12	2.12
PIPP Enhancement			3,395	0.8667	2,942	367	3,309	10.67	10.94
Maintenance Expense	585,267	2.99%	17,254	0.9901	17,083	0	17,083	0.24	0.24
Expected Reinsurance Premium	8,137		8,137		8,137		8,137		
Total			506,141		484,782	35,274	520,056	1.51	1.54

MCT P&C Lines							
P&C Line	Maintenance Expense Allocation Undiscounted	Maintenance Expense Allocation Discounted	Expected Reinsurance Premium Allocation	Undiscounted Premium Liabilities Loss & LAE	PV of Premium Liabilities Loss & LAE	Total PfAD	APV of Premium Liabilities
Automobile - Liability	6.45%	6.45%	0%	32,122	30,720	2,252	32,972
Automobile - Personal Accident	22.51%	22.42%	15%	113,313	108,108	7,977	116,086
Automobile - Other	71.04%	71.13%	85%	360,706	345,954	25,045	370,999
Total	100%	100%	100%	506,141	484,782	35,274	520,056

Manitoba Public Insurance Corporation
Automobile Insurance Division - Basic
Premium Liabilities Duration as at Mar 31, 2023
Net of Reinsurance, Salvage and Subrogation

Duration											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ABWI											
12	0.5	0.25	11.94%	11.94%	0.9901	1.0046	11.99%	1.0048	1.0045	12.00%	11.99%
24	1.5	1.25	23.47%	11.53%	0.9515	1.0186	11.74%	1.0193	1.0180	11.75%	11.73%
36	2.5	2.25	30.01%	6.54%	0.9143	1.0143	6.64%	1.0155	1.0132	6.64%	6.63%
48	3.5	3.25	35.32%	5.31%	0.8787	0.9971	5.30%	0.9987	0.9954	5.30%	5.29%
60	4.5	4.25	39.86%	4.54%	0.8444	0.9780	4.44%	0.9801	0.9760	4.45%	4.43%
72	5.5	5.25	43.75%	3.89%	0.8114	0.9587	3.73%	0.9612	0.9562	3.74%	3.72%
84	6.5	6.25	47.05%	3.30%	0.7798	0.9397	3.10%	0.9426	0.9368	3.11%	3.09%
96	7.5	7.25	50.01%	2.96%	0.7494	0.9211	2.73%	0.9244	0.9178	2.74%	2.72%
108	8.5	8.25	52.81%	2.80%	0.7201	0.9028	2.53%	0.9065	0.8992	2.54%	2.52%
120	9.5	9.25	55.48%	2.67%	0.6920	0.8850	2.36%	0.8890	0.8809	2.37%	2.35%
132	10.5	10.25	100.00%	44.52%	0.6650	0.8674	38.62%	0.8718	0.8631	38.81%	38.42%
144	11.5	11.25	100.00%	0.00%	0.6391	0.8503	0.00%	0.8550	0.8456	0.00%	0.00%
156	12.5	12.25	100.00%	0.00%	0.6141	0.8334	0.00%	0.8385	0.8284	0.00%	0.00%
168	13.5	13.25	100.00%	0.00%	0.5902	0.8169	0.00%	0.8223	0.8116	0.00%	0.00%
180	14.5	14.25	100.00%	0.00%	0.5672	0.8008	0.00%	0.8064	0.7952	0.00%	0.00%
192	15.5	15.25	100.00%	0.00%	0.5450	0.7849	0.00%	0.7908	0.7790	0.00%	0.00%
204	16.5	16.25	100.00%	0.00%	0.5238	0.7694	0.00%	0.7755	0.7632	0.00%	0.00%
216	17.5	17.25	100.00%	0.00%	0.5033	0.7541	0.00%	0.7606	0.7478	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.7392	0.00%	0.7459	0.7326	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.7246	0.00%	0.7315	0.7177	0.00%	0.00%
Total				100.00%			93.17%			93.45%	92.90%

(13) Macaulay Duration: 6.07
 (14) Modified Duration: 5.84
 (15) Effective Duration: 6.01

ABO (Indexed)											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	0.5	0.25	21.92%	21.92%	0.9901	1.0046	22.02%	1.0048	1.0045	22.02%	22.01%
24	1.5	1.25	44.97%	23.06%	0.9515	1.0186	23.49%	1.0193	1.0180	23.50%	23.47%
36	2.5	2.25	51.94%	6.97%	0.9143	1.0143	7.07%	1.0155	1.0132	7.08%	7.06%
48	3.5	3.25	55.92%	3.97%	0.8787	0.9971	3.96%	0.9987	0.9954	3.97%	3.96%
60	4.5	4.25	58.80%	2.88%	0.8444	0.9780	2.82%	0.9801	0.9760	2.82%	2.81%
72	5.5	5.25	60.88%	2.09%	0.8114	0.9587	2.00%	0.9612	0.9562	2.01%	2.00%
84	6.5	6.25	62.71%	1.83%	0.7798	0.9397	1.72%	0.9426	0.9368	1.72%	1.71%
96	7.5	7.25	64.59%	1.88%	0.7494	0.9211	1.73%	0.9244	0.9178	1.74%	1.73%
108	8.5	8.25	66.53%	1.94%	0.7201	0.9028	1.75%	0.9065	0.8992	1.76%	1.74%
120	9.5	9.25	68.53%	2.00%	0.6920	0.8850	1.77%	0.8890	0.8809	1.77%	1.76%
132	10.5	10.25	70.58%	2.06%	0.6650	0.8674	1.78%	0.8718	0.8631	1.79%	1.77%
144	11.5	11.25	72.70%	2.12%	0.6391	0.8503	1.80%	0.8550	0.8456	1.81%	1.79%
156	12.5	12.25	74.88%	2.18%	0.6141	0.8334	1.82%	0.8385	0.8284	1.83%	1.81%
168	13.5	13.25	76.98%	2.10%	0.5902	0.8169	1.71%	0.8223	0.8116	1.72%	1.70%
180	14.5	14.25	78.75%	1.77%	0.5672	0.8008	1.42%	0.8064	0.7952	1.43%	1.41%
192	15.5	15.25	80.24%	1.50%	0.5450	0.7849	1.17%	0.7908	0.7790	1.18%	1.17%
204	16.5	16.25	81.61%	1.36%	0.5238	0.7694	1.05%	0.7755	0.7632	1.06%	1.04%
216	17.5	17.25	100.00%	18.39%	0.5033	0.7541	13.87%	0.7606	0.7478	13.99%	13.75%
228	18.5	18.25	100.00%	0.00%	0.4837	0.7392	0.00%	0.7459	0.7326	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.7246	0.00%	0.7315	0.7177	0.00%	0.00%
Total				100.00%			92.94%			93.20%	92.69%

(13) Macaulay Duration: 5.57
 (14) Modified Duration: 5.36
 (15) Effective Duration: 5.51

Manitoba Public Insurance Corporation
Automobile Insurance Division - Basic
Premium Liabilities Duration as at Mar 31, 2023
Net of Reinsurance, Salvage and Subrogation

Duration											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
ABO (Non-Indexed)											
12	0.5	0.25	22.95%	22.95%	0.9901	0.9901	22.72%	0.9902	0.9900	22.72%	22.72%
24	1.5	1.25	47.73%	24.78%	0.9515	0.9515	23.58%	0.9520	0.9509	23.60%	23.57%
36	2.5	2.25	63.01%	15.27%	0.9143	0.9143	13.97%	0.9153	0.9134	13.98%	13.95%
48	3.5	3.25	81.91%	18.90%	0.8787	0.8787	16.61%	0.8800	0.8773	16.63%	16.58%
60	4.5	4.25	92.23%	10.32%	0.8444	0.8444	8.71%	0.8461	0.8427	8.73%	8.70%
72	5.5	5.25	94.90%	2.67%	0.8114	0.8114	2.17%	0.8135	0.8094	2.18%	2.16%
84	6.5	6.25	96.14%	1.23%	0.7798	0.7798	0.96%	0.7821	0.7774	0.96%	0.96%
96	7.5	7.25	97.05%	0.91%	0.7494	0.7494	0.68%	0.7520	0.7468	0.69%	0.68%
108	8.5	8.25	97.73%	0.68%	0.7201	0.7201	0.49%	0.7230	0.7173	0.49%	0.49%
120	9.5	9.25	98.12%	0.39%	0.6920	0.6920	0.27%	0.6951	0.6890	0.27%	0.27%
132	10.5	10.25	98.41%	0.29%	0.6650	0.6650	0.20%	0.6683	0.6618	0.20%	0.19%
144	11.5	11.25	98.71%	0.30%	0.6391	0.6391	0.19%	0.6425	0.6356	0.19%	0.19%
156	12.5	12.25	99.01%	0.30%	0.6141	0.6141	0.18%	0.6178	0.6105	0.18%	0.18%
168	13.5	13.25	99.30%	0.30%	0.5902	0.5902	0.18%	0.5940	0.5864	0.18%	0.17%
180	14.5	14.25	99.60%	0.30%	0.5672	0.5672	0.17%	0.5711	0.5633	0.17%	0.17%
192	15.5	15.25	99.85%	0.25%	0.5450	0.5450	0.14%	0.5490	0.5411	0.14%	0.13%
204	16.5	16.25	100.00%	0.15%	0.5238	0.5238	0.08%	0.5279	0.5197	0.08%	0.08%
216	17.5	17.25	100.00%	0.00%	0.5033	0.5033	0.00%	0.5075	0.4992	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.4837	0.00%	0.4880	0.4795	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.4648	0.00%	0.4691	0.4605	0.00%	0.00%
Total				100.00%			91.29%			91.39%	91.20%

(13) Macaulay Duration: 2.20
 (14) Modified Duration: 2.12
 (15) Effective Duration: 2.12

TPL-BI											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	0.5	0.25	2.43%	2.43%	0.9901	0.9901	2.40%	0.9902	0.9900	2.40%	2.40%
24	1.5	1.25	20.64%	18.21%	0.9515	0.9515	17.33%	0.9520	0.9509	17.34%	17.32%
36	2.5	2.25	40.25%	19.61%	0.9143	0.9143	17.93%	0.9153	0.9134	17.95%	17.91%
48	3.5	3.25	58.87%	18.62%	0.8787	0.8787	16.36%	0.8800	0.8773	16.38%	16.33%
60	4.5	4.25	73.71%	14.84%	0.8444	0.8444	12.53%	0.8461	0.8427	12.55%	12.50%
72	5.5	5.25	85.06%	11.35%	0.8114	0.8114	9.21%	0.8135	0.8094	9.23%	9.19%
84	6.5	6.25	91.31%	6.25%	0.7798	0.7798	4.87%	0.7821	0.7774	4.89%	4.86%
96	7.5	7.25	94.55%	3.24%	0.7494	0.7494	2.43%	0.7520	0.7468	2.44%	2.42%
108	8.5	8.25	96.77%	2.22%	0.7201	0.7201	1.60%	0.7230	0.7173	1.61%	1.59%
120	9.5	9.25	98.22%	1.45%	0.6920	0.6920	1.00%	0.6951	0.6890	1.01%	1.00%
132	10.5	10.25	99.35%	1.13%	0.6650	0.6650	0.75%	0.6683	0.6618	0.75%	0.75%
144	11.5	11.25	99.85%	0.50%	0.6391	0.6391	0.32%	0.6425	0.6356	0.32%	0.32%
156	12.5	12.25	100.00%	0.15%	0.6141	0.6141	0.09%	0.6178	0.6105	0.09%	0.09%
168	13.5	13.25	100.00%	0.00%	0.5902	0.5902	0.00%	0.5940	0.5864	0.00%	0.00%
180	14.5	14.25	100.00%	0.00%	0.5672	0.5672	0.00%	0.5711	0.5633	0.00%	0.00%
192	15.5	15.25	100.00%	0.00%	0.5450	0.5450	0.00%	0.5490	0.5411	0.00%	0.00%
204	16.5	16.25	100.00%	0.00%	0.5238	0.5238	0.00%	0.5279	0.5197	0.00%	0.00%
216	17.5	17.25	100.00%	0.00%	0.5033	0.5033	0.00%	0.5075	0.4992	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.4837	0.00%	0.4880	0.4795	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.4648	0.00%	0.4691	0.4605	0.00%	0.00%
Total				100.00%			86.83%			86.98%	86.69%

(13) Macaulay Duration: 3.46
 (14) Modified Duration: 3.32
 (15) Effective Duration: 3.32

Manitoba Public Insurance Corporation
Automobile Insurance Division - Basic
Premium Liabilities Duration as at Mar 31, 2023
Net of Reinsurance, Salvage and Subrogation

Duration											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
TPL-PD											
12	0.5	0.25	58.29%	58.29%	0.9901	0.9901	57.72%	0.9902	0.9900	57.72%	57.71%
24	1.5	1.25	93.12%	34.82%	0.9515	0.9515	33.13%	0.9520	0.9509	33.15%	33.11%
36	2.5	2.25	98.19%	5.08%	0.9143	0.9143	4.64%	0.9153	0.9134	4.65%	4.64%
48	3.5	3.25	99.50%	1.31%	0.8787	0.8787	1.15%	0.8800	0.8773	1.15%	1.15%
60	4.5	4.25	99.75%	0.25%	0.8444	0.8444	0.21%	0.8461	0.8427	0.21%	0.21%
72	5.5	5.25	99.85%	0.10%	0.8114	0.8114	0.08%	0.8135	0.8094	0.08%	0.08%
84	6.5	6.25	99.95%	0.10%	0.7798	0.7798	0.08%	0.7821	0.7774	0.08%	0.08%
96	7.5	7.25	100.00%	0.05%	0.7494	0.7494	0.04%	0.7520	0.7468	0.04%	0.04%
108	8.5	8.25	100.00%	0.00%	0.7201	0.7201	0.00%	0.7230	0.7173	0.00%	0.00%
120	9.5	9.25	100.00%	0.00%	0.6920	0.6920	0.00%	0.6951	0.6890	0.00%	0.00%
132	10.5	10.25	100.00%	0.00%	0.6650	0.6650	0.00%	0.6683	0.6618	0.00%	0.00%
144	11.5	11.25	100.00%	0.00%	0.6391	0.6391	0.00%	0.6425	0.6356	0.00%	0.00%
156	12.5	12.25	100.00%	0.00%	0.6141	0.6141	0.00%	0.6178	0.6105	0.00%	0.00%
168	13.5	13.25	100.00%	0.00%	0.5902	0.5902	0.00%	0.5940	0.5864	0.00%	0.00%
180	14.5	14.25	100.00%	0.00%	0.5672	0.5672	0.00%	0.5711	0.5633	0.00%	0.00%
192	15.5	15.25	100.00%	0.00%	0.5450	0.5450	0.00%	0.5490	0.5411	0.00%	0.00%
204	16.5	16.25	100.00%	0.00%	0.5238	0.5238	0.00%	0.5279	0.5197	0.00%	0.00%
216	17.5	17.25	100.00%	0.00%	0.5033	0.5033	0.00%	0.5075	0.4992	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.4837	0.00%	0.4880	0.4795	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.4648	0.00%	0.4691	0.4605	0.00%	0.00%
Total				100.00%			97.05%			97.08%	97.01%

(13) Macaulay Duration: 0.74
 (14) Modified Duration: 0.71
 (15) Effective Duration: 0.71

Collision											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	0.5	0.25	78.06%	78.06%	0.9901	0.9901	77.28%	0.9902	0.9900	77.29%	77.27%
24	1.5	1.25	98.27%	20.22%	0.9515	0.9515	19.23%	0.9520	0.9509	19.25%	19.22%
36	2.5	2.25	99.55%	1.28%	0.9143	0.9143	1.17%	0.9153	0.9134	1.17%	1.17%
48	3.5	3.25	99.80%	0.25%	0.8787	0.8787	0.22%	0.8800	0.8773	0.22%	0.22%
60	4.5	4.25	99.90%	0.10%	0.8444	0.8444	0.08%	0.8461	0.8427	0.08%	0.08%
72	5.5	5.25	99.95%	0.05%	0.8114	0.8114	0.04%	0.8135	0.8094	0.04%	0.04%
84	6.5	6.25	100.00%	0.05%	0.7798	0.7798	0.04%	0.7821	0.7774	0.04%	0.04%
96	7.5	7.25	100.00%	0.00%	0.7494	0.7494	0.00%	0.7520	0.7468	0.00%	0.00%
108	8.5	8.25	100.00%	0.00%	0.7201	0.7201	0.00%	0.7230	0.7173	0.00%	0.00%
120	9.5	9.25	100.00%	0.00%	0.6920	0.6920	0.00%	0.6951	0.6890	0.00%	0.00%
132	10.5	10.25	100.00%	0.00%	0.6650	0.6650	0.00%	0.6683	0.6618	0.00%	0.00%
144	11.5	11.25	100.00%	0.00%	0.6391	0.6391	0.00%	0.6425	0.6356	0.00%	0.00%
156	12.5	12.25	100.00%	0.00%	0.6141	0.6141	0.00%	0.6178	0.6105	0.00%	0.00%
168	13.5	13.25	100.00%	0.00%	0.5902	0.5902	0.00%	0.5940	0.5864	0.00%	0.00%
180	14.5	14.25	100.00%	0.00%	0.5672	0.5672	0.00%	0.5711	0.5633	0.00%	0.00%
192	15.5	15.25	100.00%	0.00%	0.5450	0.5450	0.00%	0.5490	0.5411	0.00%	0.00%
204	16.5	16.25	100.00%	0.00%	0.5238	0.5238	0.00%	0.5279	0.5197	0.00%	0.00%
216	17.5	17.25	100.00%	0.00%	0.5033	0.5033	0.00%	0.5075	0.4992	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.4837	0.00%	0.4880	0.4795	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.4648	0.00%	0.4691	0.4605	0.00%	0.00%
Total				100.00%			98.07%			98.09%	98.05%

(13) Macaulay Duration: 0.48
 (14) Modified Duration: 0.47
 (15) Effective Duration: 0.47

Manitoba Public Insurance Corporation
Automobile Insurance Division - Basic
Premium Liabilities Duration as at Mar 31, 2023
Net of Reinsurance, Salvage and Subrogation

Duration											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Comprehensive											
12	0.5	0.25	77.94%	77.94%	0.9901	0.9901	77.17%	0.9902	0.9900	77.18%	77.16%
24	1.5	1.25	97.28%	19.34%	0.9515	0.9515	18.40%	0.9520	0.9509	18.41%	18.39%
36	2.5	2.25	99.20%	1.93%	0.9143	0.9143	1.76%	0.9153	0.9134	1.77%	1.76%
48	3.5	3.25	99.65%	0.45%	0.8787	0.8787	0.39%	0.8800	0.8773	0.39%	0.39%
60	4.5	4.25	99.85%	0.20%	0.8444	0.8444	0.17%	0.8461	0.8427	0.17%	0.17%
72	5.5	5.25	99.95%	0.10%	0.8114	0.8114	0.08%	0.8135	0.8094	0.08%	0.08%
84	6.5	6.25	100.00%	0.05%	0.7798	0.7798	0.04%	0.7821	0.7774	0.04%	0.04%
96	7.5	7.25	100.00%	0.00%	0.7494	0.7494	0.00%	0.7520	0.7468	0.00%	0.00%
108	8.5	8.25	100.00%	0.00%	0.7201	0.7201	0.00%	0.7230	0.7173	0.00%	0.00%
120	9.5	9.25	100.00%	0.00%	0.6920	0.6920	0.00%	0.6951	0.6890	0.00%	0.00%
132	10.5	10.25	100.00%	0.00%	0.6650	0.6650	0.00%	0.6683	0.6618	0.00%	0.00%
144	11.5	11.25	100.00%	0.00%	0.6391	0.6391	0.00%	0.6425	0.6356	0.00%	0.00%
156	12.5	12.25	100.00%	0.00%	0.6141	0.6141	0.00%	0.6178	0.6105	0.00%	0.00%
168	13.5	13.25	100.00%	0.00%	0.5902	0.5902	0.00%	0.5940	0.5864	0.00%	0.00%
180	14.5	14.25	100.00%	0.00%	0.5672	0.5672	0.00%	0.5711	0.5633	0.00%	0.00%
192	15.5	15.25	100.00%	0.00%	0.5450	0.5450	0.00%	0.5490	0.5411	0.00%	0.00%
204	16.5	16.25	100.00%	0.00%	0.5238	0.5238	0.00%	0.5279	0.5197	0.00%	0.00%
216	17.5	17.25	100.00%	0.00%	0.5033	0.5033	0.00%	0.5075	0.4992	0.00%	0.00%
228	18.5	18.25	100.00%	0.00%	0.4837	0.4837	0.00%	0.4880	0.4795	0.00%	0.00%
240	19.5	19.25	100.00%	0.00%	0.4648	0.4648	0.00%	0.4691	0.4605	0.00%	0.00%
Total				100.00%			98.01%			98.03%	97.99%

(13) Macaulay Duration: 0.50
 (14) Modified Duration: 0.48
 (15) Effective Duration: 0.48

Maintenance Expense											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	0.5	0.25	100.00%	100.00%	0.9901	0.9901	99.01%	0.9902	0.9900	99.02%	99.00%
24	1.5	1.25	100.00%	0.00%	0.9515	0.9515	0.00%	0.9520	0.9509	0.00%	0.00%
Total							99.01%			99.02%	99.00%

(13) Macaulay Duration: 0.25
 (14) Modified Duration: 0.24
 (15) Effective Duration: 0.24

PIPP Enhancement											
Age (Months)	Claims Average Payment (Years)	Prem Liab Average Payment (Years)	Cumulative Payment Pattern	Incremental Payment Pattern	PV Factor	PV Factor with Indexation	Discounted Payment Pattern	PV Factor with -Δy and Indexation	PV Factor with +Δy and Indexation	Discounted Payment Pattern with -Δy	Discounted Payment Pattern with +Δy
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	0.5	0.25	5.62%	5.62%	0.9901	1.0046	5.65%	1.0048	1.0045	5.65%	5.64%
24	1.5	1.25	9.72%	4.11%	0.9515	1.0186	4.18%	1.0193	1.0180	4.18%	4.18%
36	2.5	2.25	13.66%	3.93%	0.9143	1.0143	3.99%	1.0155	1.0132	3.99%	3.98%
48	3.5	3.25	17.56%	3.90%	0.8787	0.9971	3.89%	0.9987	0.9954	3.90%	3.88%
60	4.5	4.25	21.41%	3.85%	0.8444	0.9780	3.77%	0.9801	0.9760	3.78%	3.76%
72	5.5	5.25	25.22%	3.81%	0.8114	0.9587	3.65%	0.9612	0.9562	3.66%	3.64%
84	6.5	6.25	28.81%	3.59%	0.7798	0.9397	3.37%	0.9426	0.9368	3.38%	3.36%
96	7.5	7.25	32.39%	3.58%	0.7494	0.9211	3.29%	0.9244	0.9178	3.31%	3.28%
108	8.5	8.25	35.78%	3.39%	0.7201	0.9028	3.07%	0.9065	0.8992	3.08%	3.05%
120	9.5	9.25	39.07%	3.29%	0.6920	0.8850	2.91%	0.8890	0.8809	2.92%	2.89%
132	10.5	10.25	42.35%	3.28%	0.6650	0.8674	2.85%	0.8718	0.8631	2.86%	2.83%
144	11.5	11.25	45.62%	3.27%	0.6391	0.8503	2.78%	0.8550	0.8456	2.79%	2.76%
156	12.5	12.25	48.86%	3.24%	0.6141	0.8334	2.70%	0.8385	0.8284	2.72%	2.69%
168	13.5	13.25	52.07%	3.21%	0.5902	0.8169	2.62%	0.8223	0.8116	2.64%	2.61%
180	14.5	14.25	55.25%	3.18%	0.5672	0.8008	2.54%	0.8064	0.7952	2.56%	2.52%
192	15.5	15.25	58.38%	3.13%	0.5450	0.7849	2.46%	0.7908	0.7790	2.48%	2.44%
204	16.5	16.25	61.46%	3.08%	0.5238	0.7694	2.37%	0.7755	0.7632	2.39%	2.35%
216	17.5	17.25	64.48%	3.02%	0.5033	0.7541	2.28%	0.7606	0.7478	2.30%	2.26%
228	18.5	18.25	67.45%	2.96%	0.4837	0.7392	2.19%	0.7459	0.7326	2.21%	2.17%
240	19.5	19.25	100.00%	32.55%	0.4648	0.7246	23.59%	0.7315	0.7177	23.81%	23.37%
Total				100.00%			84.15%			84.61%	83.69%

(13) Macaulay Duration: 11.11
 (14) Modified Duration: 10.67
 (15) Effective Duration: 10.94

Note: Permanent impairment is included, even though it is non-indexed



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix A
Bodily Injury - Undiscounted Gross IBNR
Calculations

Manitoba Public Insurance
Automobile Insurance Division - Bodily Injury - Basic
Reported Loss & ALAE - With Z-Files
March 31, 2023

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Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	1,694,333	2,964,590	3,779,360	3,788,912	3,960,298	4,231,489	4,639,281	4,631,973	5,019,968	5,329,552	5,135,230	5,220,384	5,308,072	5,294,241	5,236,991	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737
2005	1,376,564	2,753,779	2,890,831	3,068,306	3,283,564	3,271,304	3,508,937	3,917,458	4,396,689	4,240,089	4,282,116	4,261,984	4,264,274	4,268,116	4,248,689	4,254,479	4,254,479	4,254,479	4,254,479	4,254,479	4,229,479		
2006	1,302,535	2,603,552	2,563,217	2,732,420	2,857,089	2,884,223	2,942,881	3,342,625	3,303,192	3,329,647	3,354,975	3,564,201	3,445,878	3,463,729	3,464,042	3,447,899	3,447,899	3,447,899	3,447,899	3,447,899			
2007	1,265,295	2,209,183	2,453,826	2,691,083	2,890,796	3,174,460	3,668,430	3,730,174	3,755,599	3,652,433	3,649,143	3,657,462	3,647,464	3,661,599	3,682,547	3,682,855	3,683,204	3,711,428	3,713,583				
2008	981,946	1,951,231	2,503,788	2,700,164	2,822,080	2,878,898	2,950,089	2,751,803	2,905,596	3,168,444	3,109,340	3,119,902	3,123,385	3,123,579	3,154,481	3,156,580	3,159,066	3,134,164					
2009	1,998,095	3,320,976	2,692,373	2,260,117	2,841,196	2,924,149	2,977,001	2,903,570	3,151,609	3,268,778	2,955,973	2,960,891	2,961,311	2,961,932	2,965,187	2,969,517	3,024,710						
2010	1,399,423	3,546,500	3,583,766	3,324,771	3,463,743	3,339,869	3,603,935	4,086,374	4,157,459	4,116,393	4,295,759	4,372,799	4,413,833	4,429,466	4,469,140	4,351,275							
2011	1,036,084	1,992,480	2,166,959	2,011,617	1,595,043	1,739,672	1,795,067	2,151,638	2,298,537	2,409,296	2,410,181	2,469,869	2,459,869	2,459,869	2,395,669								
2012	959,831	1,768,291	2,193,172	2,661,653	3,452,353	3,612,963	3,859,590	4,194,319	4,176,581	4,149,401	4,159,918	4,175,363	4,175,695	4,133,631									
2013	1,247,683	2,632,412	2,283,068	2,284,075	2,797,287	3,194,463	3,699,657	3,702,536	3,628,059	3,655,384	3,644,964	3,649,211	3,654,393										
2014	1,785,731	3,082,362	4,175,017	4,479,958	4,478,129	4,774,913	5,200,476	5,399,820	5,362,218	5,390,665	5,403,847	5,411,512											
2015	1,359,258	2,595,157	3,788,459	3,980,533	4,112,559	4,381,507	4,688,186	4,562,008	4,617,597	4,662,160	4,687,782												
2016	1,586,225	3,181,932	3,336,806	3,333,326	3,708,072	4,020,399	4,841,493	4,822,858	4,732,498	5,111,561													
2017	1,288,120	3,335,111	4,216,662	3,957,340	4,432,870	4,685,358	4,992,473	5,029,503	5,440,345														
2018	808,157	2,875,691	3,340,431	3,690,541	4,554,275	4,815,514	5,539,906	6,018,140															
2019	1,380,105	2,597,607	2,871,462	2,903,771	3,204,240	3,323,152	3,933,040																
2020	1,000,029	1,845,272	1,845,057	1,863,859	2,274,595	2,980,860																	
2021	510,081	1,299,562	2,263,930	2,663,165																			
2022	1,137,065	3,181,099																					

Manitoba Public Insurance
 Automobile Insurance Division - Bodily Injury - Basic
 Reported Loss & ALAE - Z-Files
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Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Manitoba Public Insurance
Automobile Insurance Division - Bodily Injury - Basic
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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	1,694	2,965	3,779	3,789	3,960	4,231	4,639	4,632	5,020	5,330
2005	1,377	2,754	2,891	3,068	3,284	3,271	3,509	3,917	4,397	4,240
2006	1,303	2,604	2,563	2,732	2,857	2,884	2,943	3,343	3,303	3,330
2007	1,265	2,209	2,454	2,691	2,891	3,174	3,668	3,730	3,756	3,652
2008	982	1,951	2,504	2,700	2,822	2,879	2,950	2,752	2,906	3,168
2009	1,998	3,321	2,692	2,260	2,841	2,924	2,977	2,904	3,152	3,269
2010	1,399	3,546	3,584	3,325	3,464	3,340	3,604	4,086	4,157	4,116
2011	1,036	1,992	2,167	2,012	1,595	1,740	1,795	2,152	2,299	2,409
2012	960	1,768	2,193	2,662	3,452	3,613	3,860	4,194	4,177	4,149
2013	1,248	2,632	2,283	2,284	2,797	3,194	3,700	3,703	3,628	3,655
2014	1,786	3,082	4,175	4,480	4,478	4,775	5,200	5,400	5,362	5,391
2015	1,359	2,595	3,788	3,981	4,113	4,382	4,688	4,562	4,618	4,662
2016	1,586	3,182	3,337	3,333	3,708	4,020	4,841	4,823	4,732	5,112
2017	1,288	3,335	4,217	3,957	4,433	4,685	4,992	5,030	5,440	
2018	808	2,876	3,340	3,691	4,554	4,816	5,540	6,018		
2019	1,380	2,598	2,871	2,904	3,204	3,323	3,933			
2020	1,000	1,845	1,845	1,864	2,275	2,981				
2021	510	1,300	2,264	2,663						
2022	1,137	3,181								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	1.7497	1.2748	1.0025	1.0452	1.0685	1.0964	0.9984	1.0838	1.0617	0.9635
2005	2.0005	1.0498	1.0614	1.0702	0.9963	1.0726	1.1164	1.1223	0.9644	1.0099
2006	1.9988	0.9845	1.0660	1.0456	1.0095	1.0203	1.1358	0.9882	1.0080	1.0076
2007	1.7460	1.1107	1.0967	1.0742	1.0981	1.1556	1.0168	1.0068	0.9725	0.9991
2008	1.9871	1.2832	1.0784	1.0452	1.0201	1.0247	0.9328	1.0559	1.0905	0.9813
2009	1.6621	0.8107	0.8395	1.2571	1.0292	1.0181	0.9753	1.0854	1.0372	0.9043
2010	2.5343	1.0105	0.9277	1.0418	0.9642	1.0791	1.1339	1.0174	0.9901	1.0436
2011	1.9231	1.0876	0.9283	0.7929	1.0907	1.0318	1.1986	1.0683	1.0482	1.0004
2012	1.8423	1.2403	1.2136	1.2971	1.0465	1.0683	1.0867	0.9958	0.9935	1.0025
2013	2.1098	0.8673	1.0004	1.2247	1.1420	1.1581	1.0008	0.9799	1.0075	0.9971
2014	1.7261	1.3545	1.0730	0.9996	1.0663	1.0891	1.0383	0.9930	1.0053	1.0024
2015	1.9092	1.4598	1.0507	1.0332	1.0654	1.0700	0.9731	1.0122	1.0097	1.0055
2016	2.0060	1.0487	0.9990	1.1124	1.0842	1.2042	0.9962	0.9813	1.0801	
2017	2.5891	1.2643	0.9385	1.1202	1.0570	1.0655	1.0074	1.0817		
2018	3.5583	1.1616	1.1048	1.2340	1.0574	1.1504	1.0863			
2019	1.8822	1.1054	1.0113	1.1035	1.0371	1.1835				
2020	1.8452	0.9999	1.0102	1.2204	1.3105					
2021	2.5478	1.7421	1.1763							
2022	2.7976									
Latest 9 Volume Weighted	2.2104	1.1994	1.0368	1.1324	1.0840	1.1158	1.0457	1.0193	1.0257	0.9955
Latest 6 Volume Weighted	2.4715	1.1810	1.0301	1.1296	1.0862	1.1229	1.0198	1.0089	1.0227	1.0090
Latest 3 Volume Weighted	2.3897	1.2156	1.0645	1.1862	1.1083	1.1280	1.0323	1.0261	1.0307	1.0021
Simple Average of Middle 4 of Last 6	2.2563	1.1450	1.0313	1.1391	1.0660	1.1233	1.0107	0.9956	1.0177	1.0027
Simple Average of Middle 3 of Last 5	2.3397	1.1771	1.0421	1.1510	1.0662	1.1346	1.0140	0.9955	1.0075	1.0018
Selected March 22	2.1000	1.2000	1.0400	1.1300	1.0700	1.1275	1.0470	1.0260	1.0160	1.0060
Selected Oct 22	2.1000	1.2000	1.0400	1.1300	1.0700	1.1275	1.0470	1.0260	1.0160	1.0060
Selected Factors	2.1000	1.2000	1.0400	1.1300	1.0700	1.1275	1.0470	1.0260	1.0160	1.0060
Selected Ultimate	3.9287	1.8708	1.5590	1.4990	1.3266	1.2398	1.0996	1.0502	1.0236	1.0075

Manitoba Public Insurance
Automobile Insurance Division - Bodily Injury - Basic
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March 31, 2023

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
5,135	5,220	5,308	5,294	5,237	5,253	5,253	5,253	5,253	5,253	5,253	5,253
4,282	4,262	4,264	4,268	4,249	4,254	4,254	4,254	4,254	4,254	4,229	
3,355	3,564	3,446	3,464	3,464	3,448	3,448	3,448	3,448	3,448		
3,649	3,657	3,647	3,662	3,683	3,683	3,683	3,711	3,714			
3,109	3,120	3,123	3,124	3,154	3,157	3,159	3,134				
2,956	2,961	2,961	2,962	2,965	2,970	3,025					
4,296	4,373	4,414	4,429	4,469	4,351						
2,410	2,470	2,460	2,460	2,396							
4,160	4,175	4,176	4,134								
3,645	3,649	3,654									
5,404	5,412										
4,688											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0166	1.0168	0.9974	0.9892	1.0030	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9953	1.0005	1.0009	0.9954	1.0014	1.0000	1.0000	1.0000	1.0000	0.9941	
1.0624	0.9668	1.0052	1.0001	0.9953	1.0000	1.0000	1.0000	1.0000		
1.0023	0.9973	1.0039	1.0057	1.0001	1.0001	1.0077	1.0006			
1.0034	1.0011	1.0001	1.0099	1.0007	1.0008	0.9921				
1.0017	1.0001	1.0002	1.0011	1.0015	1.0186					
1.0179	1.0094	1.0035	1.0090	0.9736						
1.0248	0.9960	1.0000	0.9739							
1.0037	1.0001	0.9899								
1.0012	1.0014									
1.0014										
1.0120	0.9973	0.9999	0.9985	0.9961	1.0025	1.0002	1.0001	1.0000	0.9974	1.0000
1.0074	1.0019	0.9994	1.0015	0.9945	1.0025	1.0002	1.0001	1.0000	0.9974	1.0000
1.0021	0.9996	0.9976	0.9978	0.9895	1.0059	1.0003	1.0002	1.0000	0.9974	1.0000
1.0062	1.0007	1.0010	1.0040	0.9994	1.0002	1.0000	1.0000	1.0000	0.9971	1.0000
1.0077	1.0005	1.0001	1.0053	0.9987	1.0003	1.0000	1.0000	1.0000	0.9971	1.0000
1.0010	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0010	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0010	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0015	1.0005	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Manitoba Public Insurance
Automobile Insurance Division - Bodily Injury - Basic
Reported Loss & ALAE - Without Z-Files
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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	4.1145	4.4193	4.9683	3.7627	4.1104	3.9287	3.9287	3.9287
12	1.8614	1.7881	2.0791	1.6677	1.7568	1.8708	1.8708	1.8708
19	1.5519	1.5141	1.7103	1.4565	1.4925	1.5590	1.5590	1.5590
24	1.4968	1.4699	1.6067	1.4122	1.4322	1.4990	1.4990	1.4990
31	1.3218	1.3012	1.3545	1.2398	1.2443	1.3266	1.3266	1.3266
36	1.2193	1.1980	1.2221	1.1630	1.1671	1.2398	1.2398	1.2398
48	1.0927	1.0669	1.0835	1.0354	1.0286	1.0996	1.0996	1.0996
60	1.0450	1.0462	1.0496	1.0245	1.0144	1.0502	1.0502	1.0502
72	1.0252	1.0370	1.0229	1.0290	1.0190	1.0236	1.0236	1.0236
84	0.9994	1.0140	0.9924	1.0112	1.0114	1.0075	1.0075	1.0075
96	1.0040	1.0050	0.9903	1.0084	1.0096	1.0015	1.0015	1.0015
108	0.9920	0.9976	0.9883	1.0022	1.0019	1.0005	1.0005	1.0005
120	0.9947	0.9957	0.9887	1.0016	1.0014	1.0000	1.0000	1.0000
132	0.9948	0.9962	0.9911	1.0006	1.0013	1.0000	1.0000	1.0000
144	0.9963	0.9947	0.9932	0.9966	0.9961	1.0000	1.0000	1.0000
156	1.0002	1.0002	1.0038	0.9973	0.9974	1.0000	1.0000	1.0000
168	0.9977	0.9977	0.9979	0.9971	0.9971	1.0000	1.0000	1.0000
180	0.9975	0.9975	0.9976	0.9971	0.9971	1.0000	1.0000	1.0000
192	0.9974	0.9974	0.9974	0.9971	0.9971	1.0000	1.0000	1.0000
204	0.9974	0.9974	0.9974	0.9971	0.9971	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Se'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	2.1000	3.9285	25.46%	7		3.9285	2.1000	2.1000	3.9287
12	1.2000	1.8707		12	53.46%	1.8707	1.2000	1.2000	1.8708
19	1.0400	1.5589	64.15%	19		1.5589	1.0400	1.0400	1.5590
24	1.1300	1.4990		24	66.71%	1.4990	1.1300	1.1300	1.4990
31	1.0700	1.3265	75.39%	31		1.3265	1.0700	1.0700	1.3266
36	1.1000	1.2397		36	80.66%	1.2397	1.1275	1.1275	1.2398
43	1.0600	1.1270	88.73%	48	90.95%	1.0995	1.0471	1.0470	1.0996
55	1.0300	1.0632	94.05%	60	95.23%	1.0501	1.0258	1.0260	1.0502
67	1.0200	1.0323	96.87%	72	97.68%	1.0237	1.0158	1.0160	1.0236
79	1.0100	1.0120	98.81%	84	99.22%	1.0078	1.0062	1.0060	1.0075
91	1.0010	1.0020	99.80%	96	99.84%	1.0016	1.0010	1.0010	1.0015
103	1.0010	1.0010	99.90%	108	99.94%	1.0006	1.0006	1.0005	1.0005
115	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
127	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
139	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
151	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
163	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
175	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
187	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	632,408	4,229	1.0000	4,229	-	-	0.67%
2006	656,746	3,448	1.0000	3,448	-	-	0.52%
2007	679,930	3,714	1.0000	3,714	-	-	0.55%
2008	709,787	3,134	1.0000	3,134	-	-	0.44%
2009	741,553	3,025	1.0000	3,025	-	100	0.41%
2010	761,034	4,351	1.0000	4,351	-	-	0.57%
2011	772,649	2,396	1.0000	2,396	-	-	0.31%
2012	769,715	4,134	1.0000	4,134	-	-	0.54%
2013	781,394	3,654	1.0000	3,654	-	20	0.47%
2014	822,358	5,412	1.0005	5,414	3	459	0.66%
2015	877,262	4,688	1.0015	4,695	7	333	0.54%
2016	923,168	5,112	1.0075	5,150	38	875	0.56%
2017	977,104	5,440	1.0236	5,569	129	1,433	0.57%
2018	1,044,467	6,018	1.0502	6,321	302	1,584	0.61%
2019	1,099,731	3,933	1.0996	4,325	392	1,526	0.39%
2020	1,134,690	2,981	1.2398	3,696	715	2,034	0.33%
2021	1,159,166	2,663	1.4990	3,992	1,329	2,202	0.34%
2022	1,126,492	3,181	1.8708	5,951	2,770	3,107	0.53%
	15,669,653	71,512		77,197	5,685	13,673	0.49%

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	4,229			4,229	0.67%	0.67%	100.00%	0.67%	0.49%
2006	656,746	3,448	4,346		4,346	0.66%	0.52%	100.00%	0.52%	0.49%
2007	679,930	3,714	3,543	4,465	4,004	0.59%	0.55%	100.00%	0.55%	0.49%
2008	709,787	3,134	3,816	3,640	3,728	0.53%	0.44%	100.00%	0.44%	0.49%
2009	741,553	3,025	3,220	3,921	3,570	0.48%	0.41%	100.00%	0.41%	0.49%
2010	761,034	4,351	3,108	3,309	3,208	0.42%	0.57%	100.00%	0.57%	0.49%
2011	772,649	2,396	4,471	3,193	3,832	0.50%	0.31%	100.00%	0.31%	0.49%
2012	769,715	4,134	2,462	4,594	3,528	0.46%	0.54%	100.00%	0.54%	0.49%
2013	781,394	3,654	4,247	2,529	3,388	0.43%	0.47%	100.00%	0.47%	0.49%
2014	822,358	5,414	3,755	4,364	4,059	0.49%	0.66%	100.00%	0.66%	0.49%
2015	877,262	4,695	5,563	3,858	4,711	0.54%	0.54%	100.00%	0.54%	0.49%
2016	923,168	5,150	4,824	5,716	5,270	0.57%	0.56%	100.00%	0.56%	0.49%
2017	977,104	5,569	5,292	4,957	5,124	0.52%	0.57%	100.00%	0.57%	0.49%
2018	1,044,467	6,321	5,722	5,437	5,580	0.53%	0.61%	75.00%	0.59%	0.49%
2019	1,099,731	4,325	6,494	5,879	6,187	0.56%	0.39%	50.00%	0.48%	0.49%
2020	1,134,690	3,696	4,444	6,673	5,558	0.49%	0.33%	25.00%	0.45%	0.49%
2021	1,159,166	3,992	3,797	4,566	4,182	0.36%	0.34%	25.00%	0.36%	0.49%
2022	1,126,492	5,951	4,102	3,902	4,002	0.36%	0.53%	25.00%	0.40%	0.49%
	15,669,653	77,197	73,205	71,003	78,507					

Trend in Losses Based on Exponential Regression (a):

2.55%

Selected Trend (b):

2.75%

Notes:

(3) Ultimate Losses from Page 7

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) = Sum [Column (3)] / Sum [Column (2)]

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	0.49%	3,116	100.00%	0.00%	3,116	4,229	-	4,229	0.67%
2006	656,746	0.49%	3,235	100.00%	0.00%	3,235	3,448	-	3,448	0.52%
2007	679,930	0.49%	3,350	100.00%	0.00%	3,350	3,714	-	3,714	0.55%
2008	709,787	0.49%	3,497	100.00%	0.00%	3,497	3,134	-	3,134	0.44%
2009	741,553	0.49%	3,653	100.00%	0.00%	3,653	3,025	-	3,025	0.41%
2010	761,034	0.49%	3,749	100.00%	0.00%	3,749	4,351	-	4,351	0.57%
2011	772,649	0.49%	3,806	100.00%	0.00%	3,806	2,396	-	2,396	0.31%
2012	769,715	0.49%	3,792	100.00%	0.00%	3,792	4,134	-	4,134	0.54%
2013	781,394	0.49%	3,850	100.00%	0.00%	3,850	3,654	-	3,654	0.47%
2014	822,358	0.49%	4,051	99.95%	0.05%	4,049	5,412	2	5,414	0.66%
2015	877,262	0.49%	4,322	99.85%	0.15%	4,315	4,688	6	4,694	0.54%
2016	923,168	0.49%	4,548	99.25%	0.75%	4,514	5,112	34	5,145	0.56%
2017	977,104	0.49%	4,814	97.69%	2.31%	4,703	5,440	111	5,551	0.57%
2018	1,044,467	0.49%	5,146	95.22%	4.78%	4,899	6,018	246	6,264	0.60%
2019	1,099,731	0.49%	5,418	90.94%	9.06%	4,927	3,933	491	4,424	0.40%
2020	1,134,690	0.49%	5,590	80.66%	19.34%	4,509	2,981	1,081	4,062	0.36%
2021	1,159,166	0.49%	5,711	66.71%	33.29%	3,810	2,663	1,901	4,564	0.39%
2022	1,126,492	0.49%	5,550	53.45%	46.55%	2,966	3,181	2,583	5,764	0.51%
	15,669,653		77,197			70,741	71,512	6,456	77,968	0.50%

Notes:
(10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	38,591	160,690	454,659	583,267	1,055,064	1,462,349	2,578,781	3,270,774	3,740,853	4,643,332	4,888,941	5,074,095	5,086,782	5,094,241	5,186,991	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737	5,252,737
2005	22,564	358,540	798,981	981,900	1,207,408	1,618,149	2,252,136	2,587,302	3,181,294	3,502,442	3,777,962	4,017,830	4,020,120	4,223,116	4,223,689	4,229,479	4,229,479	4,229,479	4,229,479	4,229,479	4,229,479	4,229,479
2006	12,135	84,476	424,051	607,895	1,214,391	1,607,832	2,175,483	2,890,125	3,013,192	3,039,647	3,134,975	3,170,677	3,225,878	3,443,729	3,444,042	3,447,899	3,447,899	3,447,899	3,447,899	3,447,899	3,447,899	3,447,899
2007	22,020	230,706	434,106	783,994	1,035,532	1,071,692	1,576,089	2,594,402	3,088,699	3,517,433	3,564,143	3,572,462	3,627,464	3,631,599	3,642,547	3,642,855	3,643,204	3,711,428	3,713,583			
2008	29,946	149,424	346,750	536,195	1,161,881	1,765,404	2,026,845	2,173,559	2,410,351	2,919,976	2,989,340	3,034,902	3,038,385	3,038,579	3,129,481	3,131,580	3,134,066	3,134,164				
2009	15,095	143,506	300,937	563,816	709,385	824,458	1,454,350	2,044,260	2,368,404	2,836,778	2,905,973	2,910,891	2,911,311	2,911,932	2,915,187	2,919,517	2,924,710					
2010	9,855	100,209	801,898	949,403	1,293,492	1,408,218	2,210,987	2,560,068	3,105,577	3,438,958	3,660,759	3,924,289	4,238,833	4,254,466	4,294,140	4,351,275						
2011	6,134	231,380	315,359	429,464	674,312	762,941	1,023,336	1,652,438	1,824,337	1,850,096	2,235,981	2,395,669	2,395,669	2,395,669	2,395,669							
2012	21,831	81,305	189,672	903,153	1,316,927	1,952,722	2,848,977	3,590,847	3,965,531	3,988,351	4,073,868	4,089,313	4,133,631	4,133,631								
2013	683	20,412	386,218	553,478	672,873	964,962	1,583,052	2,432,701	3,057,453	3,615,384	3,624,964	3,629,211	3,634,393									
2014	45,020	565,764	940,364	1,629,978	2,108,369	2,702,657	3,639,219	4,523,320	4,803,218	4,871,665	4,884,847	4,952,512										
2015	10,758	85,013	703,405	1,341,697	1,980,383	2,315,232	3,009,315	3,845,556	4,061,145	4,130,708	4,354,703											
2016	4,000	58,675	800,968	978,853	1,548,072	1,999,219	2,947,901	3,240,805	3,743,621	4,236,735												
2017	17,620	48,683	359,454	1,026,565	1,337,617	1,794,622	2,602,833	2,920,938	4,007,441													
2018	18,157	25,691	404,009	616,571	1,129,857	1,639,374	3,409,806	4,434,206														
2019	11,855	193,666	458,066	760,523	1,282,094	1,672,210	2,407,272															
2020	4,733	15,422	183,006	258,816	690,980	946,845																
2021	81	59,562	181,963	461,198																		
2022	2,065	74,542																				

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	39	161	455	583	1,055	1,462	2,579	3,271	3,741	4,643
2005	23	359	799	982	1,207	1,618	2,252	2,587	3,181	3,502
2006	12	84	424	608	1,214	1,608	2,175	2,890	3,013	3,040
2007	22	231	434	784	1,036	1,072	1,576	2,594	3,089	3,517
2008	30	149	347	536	1,162	1,765	2,027	2,174	2,410	2,920
2009	15	144	301	564	709	824	1,454	2,044	2,368	2,837
2010	10	100	802	949	1,293	1,408	2,211	2,560	3,106	3,439
2011	6	231	315	429	674	763	1,023	1,652	1,824	1,850
2012	22	81	190	903	1,317	1,953	2,849	3,591	3,966	3,988
2013	1	20	386	553	673	965	1,583	2,433	3,057	3,615
2014	45	566	940	1,630	2,108	2,703	3,639	4,523	4,803	4,872
2015	11	85	703	1,342	1,980	2,315	3,009	3,846	4,061	4,131
2016	4	59	801	979	1,548	1,999	2,948	3,241	3,744	4,237
2017	18	49	359	1,027	1,338	1,795	2,603	2,921	4,007	
2018	18	26	404	617	1,130	1,639	3,410	4,434		
2019	12	194	458	761	1,282	1,672	2,407			
2020	5	15	183	259	691	947				
2021	0	60	182	461						
2022	2	75								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	4.1640	2.8294	1.2829	1.8089	1.3860	1.7635	1.2683	1.1437	1.2412	1.0529
2005	15.8896	2.2284	1.2289	1.2297	1.3402	1.3918	1.1488	1.2296	1.1009	1.0787
2006	6.9613	5.0198	1.4335	1.9977	1.3240	1.3531	1.3285	1.0426	1.0088	1.0314
2007	10.4769	1.8816	1.8060	1.3208	1.0349	1.4707	1.6461	1.1905	1.1388	1.0133
2008	4.9897	2.3206	1.5463	2.1669	1.5194	1.1481	1.0724	1.1089	1.2114	1.0238
2009	9.5066	2.0970	1.8735	1.2582	1.1622	1.7640	1.4056	1.1586	1.1978	1.0244
2010	10.1683	8.0022	1.1839	1.3624	1.0887	1.5701	1.1579	1.2131	1.1073	1.0645
2011	37.7219	1.3629	1.3618	1.5701	1.1314	1.3413	1.6148	1.1040	1.0141	1.2086
2012	3.7243	2.3328	4.7617	1.4581	1.4828	1.4590	1.2604	1.1043	1.0058	1.0214
2013	29.8881	18.9210	1.4331	1.2157	1.4341	1.6405	1.5367	1.2568	1.1825	1.0026
2014	12.5669	1.6621	1.7333	1.2935	1.2819	1.3465	1.2429	1.0619	1.0143	1.0027
2015	7.9025	8.2741	1.9074	1.4760	1.1691	1.2998	1.2779	1.0561	1.0171	1.0542
2016	14.6688	13.6509	1.2221	1.5815	1.2914	1.4745	1.0994	1.1552	1.1317	
2017	2.7629	7.3835	2.8559	1.3030	1.3417	1.4504	1.1222	1.3720		
2018	1.4149	15.7256	1.5261	1.8325	1.4510	2.0799	1.3004			
2019	16.3368	2.3652	1.6603	1.6858	1.3043	1.4396				
2020	3.2586	11.8667	1.4142	2.6698	1.3703					
2021	737.6130	3.0550	2.5346							
2022	36.0979									
Latest 9 Volume Weighted	9.8612	4.1173	1.7267	1.4954	1.3249	1.4852	1.2546	1.1539	1.0869	1.0361
Latest 6 Volume Weighted	7.6603	5.9434	1.7184	1.5992	1.3010	1.4861	1.2446	1.1501	1.0577	1.0429
Latest 3 Volume Weighted	21.7385	3.0636	1.7989	1.8968	1.3724	1.6490	1.1825	1.1804	1.0501	1.0196
Simple Average of Middle 4 of Last 6	9.2568	8.9890	1.7838	1.6440	1.3269	1.4277	1.2359	1.1445	1.0443	1.0357
Simple Average of Middle 3 of Last 5	7.4528	7.4351	1.9070	1.6999	1.3387	1.4548	1.2143	1.1579	1.0544	1.0261
Selected Mar 22	9.0000	5.0000	1.7000	1.5000	1.3000	1.4060	1.2325	1.1330	1.0735	1.0355
Selected Oct 22	9.0000	5.0000	1.7000	1.5000	1.3000	1.4625	1.2520	1.1540	1.0735	1.0360
Selected Factors	9.0000	5.0000	1.7000	1.5000	1.3000	1.4625	1.2520	1.1540	1.0735	1.0355
Selected Ultimate	370.5877	41.1764	8.2353	4.8443	3.2295	2.4842	1.6986	1.3567	1.1757	1.0952

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
4,889	5,074	5,087	5,094	5,187	5,253	5,253	5,253	5,253	5,253	5,253	5,253
3,778	4,018	4,020	4,223	4,224	4,229	4,229	4,229	4,229	4,229	4,229	
3,135	3,171	3,226	3,444	3,444	3,448	3,448	3,448	3,448	3,448		
3,564	3,572	3,627	3,632	3,643	3,643	3,643	3,711	3,714			
2,989	3,035	3,038	3,039	3,129	3,132	3,134	3,134				
2,906	2,911	2,911	2,912	2,915	2,920	2,925					
3,661	3,924	4,239	4,254	4,294	4,351						
2,236	2,396	2,396	2,396	2,396							
4,074	4,089	4,134	4,134								
3,625	3,629	3,634									
4,885	4,953										
4,355											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0379	1.0025	1.0015	1.0182	1.0127	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0635	1.0006	1.0505	1.0001	1.0014	1.0000	1.0000	1.0000	1.0000	1.0000	
1.0114	1.0174	1.0675	1.0001	1.0011	1.0000	1.0000	1.0000	1.0000		
1.0023	1.0154	1.0011	1.0030	1.0001	1.0001	1.0187	1.0006			
1.0152	1.0011	1.0001	1.0299	1.0007	1.0008	1.0000				
1.0017	1.0001	1.0002	1.0011	1.0015	1.0018					
1.0720	1.0802	1.0037	1.0093	1.0133						
1.0714	1.0000	1.0000	1.0000							
1.0038	1.0108	1.0000								
1.0012	1.0014									
1.0139										
1.0195	1.0156	1.0137	1.0082	1.0052	1.0004	1.0035	1.0001	1.0000	1.0000	1.0000
1.0241	1.0184	1.0010	1.0074	1.0034	1.0004	1.0035	1.0001	1.0000	1.0000	1.0000
1.0069	1.0049	1.0015	1.0045	1.0061	1.0008	1.0067	1.0002	1.0000	1.0000	1.0000
1.0227	1.0034	1.0004	1.0034	1.0012	1.0002	1.0000	1.0000	1.0000	1.0000	1.0000
1.0297	1.0041	1.0001	1.0045	1.0011	1.0003	1.0000	1.0000	1.0000	1.0000	1.0000
1.0235	1.0150	1.0115	1.0050	1.0015	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0235	1.0150	1.0115	1.0050	1.0015	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0235	1.0150	1.0115	1.0050	1.0015	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0576	1.0334	1.0181	1.0065	1.0015	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	359.1523	404.6397	793.0524	729.4899	553.6082	344.3397	370.7666	370.5877
12	36.4208	52.8230	36.4814	78.8060	74.2822	38.2600	41.1963	41.1764
19	8.8457	8.8877	11.9080	8.7669	9.9908	7.6520	8.2393	8.2353
24	5.1229	5.1722	6.6197	4.9147	5.2390	4.5012	4.8466	4.8443
31	3.4258	3.2342	3.4900	2.9896	3.0819	3.0008	3.2311	3.2295
36	2.5857	2.4859	2.5430	2.2530	2.3021	2.3083	2.4854	2.4842
48	1.7410	1.6728	1.5422	1.5780	1.5824	1.6417	1.6995	1.6986
60	1.3877	1.3440	1.3042	1.2769	1.3031	1.3320	1.3574	1.3567
72	1.2026	1.1687	1.1049	1.1156	1.1253	1.1757	1.1762	1.1757
84	1.1065	1.1049	1.0522	1.0683	1.0673	1.0952	1.0957	1.0952
96	1.0680	1.0595	1.0320	1.0314	1.0401	1.0576	1.0576	1.0576
108	1.0476	1.0345	1.0249	1.0085	1.0101	1.0334	1.0334	1.0334
120	1.0314	1.0158	1.0199	1.0051	1.0060	1.0181	1.0181	1.0181
132	1.0175	1.0148	1.0185	1.0048	1.0059	1.0065	1.0065	1.0065
144	1.0092	1.0074	1.0139	1.0014	1.0014	1.0015	1.0015	1.0015
156	1.0040	1.0040	1.0077	1.0002	1.0003	1.0000	1.0000	1.0000
168	1.0036	1.0036	1.0069	1.0000	1.0000	1.0000	1.0000	1.0000
180	1.0001	1.0001	1.0002	1.0000	1.0000	1.0000	1.0000	1.0000
192	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
204	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	9.0000	370.7432	0.27%	7		370.7432	9.0000	9.0000	370.5877
12	5.0000	41.1937		12	2.43%	41.1937	5.0000	5.0000	41.1764
19	1.7000	8.2387	12.14%	19		8.2387	1.7000	1.7000	8.2353
24	1.5000	4.8463		24	20.63%	4.8463	1.5000	1.5000	4.8443
31	1.3000	3.2309	30.95%	31		3.2309	1.3000	1.3000	3.2295
36	1.3000	2.4853		36	40.24%	2.4853	1.4625	1.4625	2.4842
43	1.3000	1.9118	52.31%	48	58.85%	1.6993	1.2519	1.2520	1.6986
55	1.2000	1.4706	68.00%	60	73.67%	1.3575	1.1538	1.1540	1.3567
67	1.1000	1.2255	81.60%	72	85.00%	1.1765	1.0736	1.0735	1.1757
79	1.0400	1.1141	89.76%	84	91.26%	1.0958	1.0357	1.0355	1.0952
91	1.0300	1.0712	93.35%	96	94.52%	1.0580	1.0236	1.0235	1.0576
103	1.0150	1.0400	96.15%	108	96.75%	1.0336	1.0150	1.0150	1.0334
115	1.0150	1.0247	97.59%	120	98.20%	1.0183	1.0116	1.0115	1.0181
127	1.0070	1.0095	99.06%	132	99.35%	1.0066	1.0051	1.0050	1.0065
139	1.0025	1.0025	99.75%	144	99.85%	1.0015	1.0015	1.0015	1.0015
151	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
163	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
175	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
187	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	4,229	1.0000	4,229	-	-	-	0.67%
2006	656,746	3,448	1.0000	3,448	-	-	-	0.52%
2007	679,930	3,714	1.0000	3,714	-	-	-	0.55%
2008	709,787	3,134	1.0000	3,134	-	-	-	0.44%
2009	741,553	2,925	1.0000	2,925	-	100	(100)	0.39%
2010	761,034	4,351	1.0000	4,351	-	-	-	0.57%
2011	772,649	2,396	1.0015	2,399	4	-	4	0.31%
2012	769,715	4,134	1.0065	4,161	27	-	27	0.54%
2013	781,394	3,634	1.0181	3,700	66	20	46	0.47%
2014	822,358	4,953	1.0334	5,118	165	459	(294)	0.62%
2015	877,262	4,355	1.0576	4,606	251	333	(82)	0.53%
2016	923,168	4,237	1.0952	4,640	403	875	(472)	0.50%
2017	977,104	4,007	1.1757	4,711	704	1,433	(729)	0.48%
2018	1,044,467	4,434	1.3567	6,016	1,582	1,584	(2)	0.58%
2019	1,099,731	2,407	1.6986	4,089	1,682	1,526	156	0.37%
2020	1,134,690	947	2.4842	2,352	1,405	2,034	(629)	0.21%
2021	1,159,166	461	4.8443	2,234	1,773	2,202	(429)	0.19%
2022	1,126,492	75	41.1764	3,069	2,995	3,107	(112)	0.27%
	15,669,653	57,840		68,897	11,056	13,673	(2,617)	0.44%

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	4,229			4,229	0.67%	0.67%	100.00%	0.67%	0.49%
2006	656,746	3,448	4,346		4,346	0.66%	0.52%	100.00%	0.52%	0.49%
2007	679,930	3,714	3,543	4,465	4,004	0.59%	0.55%	100.00%	0.55%	0.49%
2008	709,787	3,134	3,816	3,640	3,728	0.53%	0.44%	100.00%	0.44%	0.49%
2009	741,553	2,925	3,220	3,921	3,570	0.48%	0.39%	100.00%	0.39%	0.49%
2010	761,034	4,351	3,005	3,309	3,157	0.41%	0.57%	100.00%	0.57%	0.49%
2011	772,649	2,399	4,471	3,088	3,779	0.49%	0.31%	100.00%	0.31%	0.49%
2012	769,715	4,161	2,465	4,594	3,530	0.46%	0.54%	100.00%	0.54%	0.49%
2013	781,394	3,700	4,275	2,533	3,404	0.44%	0.47%	100.00%	0.47%	0.49%
2014	822,358	5,118	3,802	4,393	4,097	0.50%	0.62%	100.00%	0.62%	0.49%
2015	877,262	4,606	5,258	3,906	4,582	0.52%	0.53%	100.00%	0.53%	0.49%
2016	923,168	4,640	4,732	5,403	5,068	0.55%	0.50%	100.00%	0.50%	0.49%
2017	977,104	4,711	4,768	4,862	4,815	0.49%	0.48%	100.00%	0.48%	0.49%
2018	1,044,467	6,016	4,841	4,899	4,870	0.47%	0.58%	75.00%	0.55%	0.49%
2019	1,099,731	4,089	6,181	4,974	5,578	0.51%	0.37%	50.00%	0.44%	0.49%
2020	1,134,690	2,352	4,202	6,351	5,276	0.47%	0.21%	25.00%	0.40%	0.49%
2021	1,159,166	2,234	2,417	4,317	3,367	0.29%	0.19%	25.00%	0.27%	0.49%
2022	1,126,492	3,069	2,296	2,483	2,389	0.21%	0.27%	25.00%	0.23%	0.49%
	15,669,653	68,897	67,638	67,139	73,791					

Trend in Losses Based on Exponential Regression (a):

-0.41%

Selected Trend (b):

2.75%

Notes:

(3) Ultimate Losses from Page 15

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) Selected Initial Ult Loss Ratio from Page 8

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 8

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage: Paid Unpaid		Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	632,408	0.49%	3,116	100.00%	0.00%	3,116	4,229	-	4,229	-	0.67%
2006	656,746	0.49%	3,235	100.00%	0.00%	3,235	3,448	-	3,448	-	0.52%
2007	679,930	0.49%	3,350	100.00%	0.00%	3,350	3,714	-	3,714	-	0.55%
2008	709,787	0.49%	3,497	100.00%	0.00%	3,497	3,134	-	3,134	-	0.44%
2009	741,553	0.49%	3,653	100.00%	0.00%	3,653	2,925	-	2,925	(100)	0.39%
2010	761,034	0.49%	3,749	100.00%	0.00%	3,749	4,351	-	4,351	-	0.57%
2011	772,649	0.49%	3,806	99.85%	0.15%	3,801	2,396	6	2,401	6	0.31%
2012	769,715	0.49%	3,792	99.35%	0.65%	3,768	4,134	25	4,158	25	0.54%
2013	781,394	0.49%	3,850	98.22%	1.78%	3,781	3,634	68	3,703	48	0.47%
2014	822,358	0.49%	4,051	96.77%	3.23%	3,921	4,953	131	5,083	(328)	0.62%
2015	877,262	0.49%	4,322	94.55%	5.45%	4,086	4,355	236	4,590	(97)	0.52%
2016	923,168	0.49%	4,548	91.31%	8.69%	4,153	4,237	395	4,632	(480)	0.50%
2017	977,104	0.49%	4,814	85.06%	14.94%	4,094	4,007	719	4,727	(714)	0.48%
2018	1,044,467	0.49%	5,146	73.71%	26.29%	3,793	4,434	1,353	5,787	(231)	0.55%
2019	1,099,731	0.49%	5,418	58.87%	41.13%	3,190	2,407	2,228	4,636	702	0.42%
2020	1,134,690	0.49%	5,590	40.25%	59.75%	2,250	947	3,340	4,287	1,306	0.38%
2021	1,159,166	0.49%	5,711	20.64%	79.36%	1,179	461	4,532	4,993	2,330	0.43%
2022	1,126,492	0.49%	5,550	2.43%	97.57%	135	75	5,415	5,489	2,308	0.49%
	15,669,653		77,197			58,750	57,840	18,447	76,288	4,774	0.49%

Notes:
(10) = (8) + (9)



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix B
Property Damage - Undiscounted Gross IBNR
Calculations

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	12,086,393	26,940,815	28,717,997	29,485,232	29,841,027	29,784,004	29,780,473	29,749,964	29,709,964	29,699,206	29,690,624	29,682,832	29,677,764	29,653,889	29,649,672	29,640,378	29,638,717	29,629,776	29,629,076	29,626,881	29,625,911	29,625,185
2005	13,715,133	27,474,350	29,783,836	30,313,604	30,577,010	30,694,884	30,573,250	30,570,244	30,528,024	30,523,327	30,505,357	30,432,458	30,408,559	30,405,756	30,403,219	30,400,105	30,397,687	30,394,532	30,392,172	30,391,672	30,387,938	
2006	14,198,615	30,835,641	32,125,589	33,012,529	33,615,563	33,753,334	33,721,763	33,683,864	33,676,442	33,653,121	33,648,386	33,645,976	33,641,325	33,636,525	33,629,891	33,623,564	33,618,178	33,606,308	33,603,314	33,602,979		
2007	14,656,586	31,044,976	33,241,207	33,897,840	34,635,070	34,674,166	34,574,355	34,406,655	34,347,844	34,343,422	34,341,729	34,337,815	34,332,329	34,330,461	34,320,272	34,396,526	34,391,416	34,388,697	34,384,258			
2008	14,730,948	31,849,308	34,686,637	35,790,847	36,267,641	36,487,568	36,261,483	36,171,277	36,197,945	36,282,398	36,133,314	36,130,287	36,162,232	36,118,819	36,160,739	36,157,683	36,154,820	36,154,112				
2009	15,950,757	31,739,730	33,379,295	34,155,886	34,306,530	34,688,754	34,668,194	34,669,092	34,657,886	34,428,218	34,425,603	34,423,361	34,413,512	34,404,474	34,407,125	34,404,028	34,390,455					
2010	15,750,312	33,284,613	36,261,711	37,701,440	38,362,086	38,510,778	38,586,070	38,608,846	38,598,720	38,641,018	38,637,375	38,627,237	38,613,733	38,404,411	38,391,760	38,388,197						
2011	15,859,864	32,537,772	35,521,740	36,271,050	36,986,427	37,131,920	37,200,026	37,188,759	37,293,017	37,264,774	37,255,313	37,192,057	37,188,723	37,181,105	37,176,652							
2012	17,900,052	35,613,391	39,511,095	40,773,438	41,327,215	41,798,168	42,016,762	42,267,777	42,325,319	42,413,056	42,328,856	42,365,009	42,278,413	42,272,531								
2013	15,617,757	36,399,058	41,468,442	43,255,265	44,251,811	44,522,232	45,011,846	45,200,538	45,205,413	45,209,293	45,221,587	45,220,034	45,211,829									
2014	15,537,810	34,513,227	39,167,930	39,670,308	40,299,837	40,610,408	40,715,014	40,752,985	40,771,334	40,743,607	40,736,628	40,729,466										
2015	16,594,326	34,967,708	38,880,853	40,157,159	40,925,164	41,143,831	41,201,441	41,141,050	41,148,017	41,152,059	41,151,332											
2016	17,853,971	35,901,142	41,311,225	42,400,122	43,213,699	43,316,660	43,647,435	43,677,279	43,697,444	43,697,546												
2017	18,290,942	39,095,838	44,261,127	45,012,949	46,055,938	46,434,305	46,633,972	46,570,425	46,527,312													
2018	16,821,736	35,270,051	39,957,785	41,576,768	42,778,316	43,008,440	42,976,616	42,997,535														
2019	15,794,739	32,795,176	36,494,888	37,894,667	38,494,345	38,522,652	39,039,948															
2020	12,159,515	24,587,060	26,027,806	27,021,691	27,679,885	27,924,378																
2021	14,344,595	34,984,261	40,168,645	43,044,652																		
2022	16,447,175	37,373,793																				

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Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	12,086	26,941	28,718	29,485	29,841	29,784	29,780	29,750	29,710	29,699
2005	13,715	27,474	29,784	30,314	30,577	30,695	30,573	30,570	30,528	30,523
2006	14,199	30,836	32,126	33,013	33,616	33,753	33,722	33,684	33,676	33,653
2007	14,657	31,045	33,241	33,898	34,635	34,674	34,574	34,407	34,348	34,343
2008	14,731	31,849	34,687	35,791	36,268	36,488	36,261	36,171	36,198	36,282
2009	15,951	31,740	33,379	34,156	34,307	34,689	34,668	34,669	34,658	34,428
2010	15,750	33,285	36,262	37,701	38,362	38,511	38,586	38,609	38,599	38,641
2011	15,860	32,538	35,522	36,271	36,986	37,132	37,200	37,189	37,293	37,265
2012	17,900	35,613	39,511	40,773	41,327	41,798	42,017	42,268	42,325	42,413
2013	15,618	36,399	41,468	43,255	44,252	44,522	45,012	45,201	45,205	45,209
2014	15,538	34,513	39,168	39,670	40,300	40,610	40,715	40,753	40,771	40,744
2015	16,594	34,968	38,881	40,157	40,925	41,144	41,201	41,141	41,148	41,152
2016	17,854	35,901	41,311	42,400	43,214	43,317	43,647	43,677	43,697	43,698
2017	18,291	39,096	44,261	45,013	46,056	46,434	46,634	46,570	46,527	
2018	16,822	35,270	39,958	41,577	42,778	43,008	42,977	42,998		
2019	15,795	32,795	36,495	37,895	38,494	38,523	39,040			
2020	12,160	24,587	26,028	27,022	27,680	27,924				
2021	14,345	34,984	40,169	43,045						
2022	16,447	37,374								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.2290	1.0660	1.0267	1.0121	0.9981	0.9999	0.9990	0.9987	0.9996	0.9997
2005	2.0032	1.0841	1.0178	1.0087	1.0039	0.9960	0.9999	0.9986	0.9998	0.9994
2006	2.1717	1.0418	1.0276	1.0183	1.0041	0.9991	0.9989	0.9998	0.9993	0.9999
2007	2.1182	1.0707	1.0198	1.0217	1.0011	0.9971	0.9951	0.9983	0.9999	1.0000
2008	2.1621	1.0891	1.0318	1.0133	1.0061	0.9938	0.9975	1.0007	1.0023	0.9959
2009	1.9899	1.0517	1.0233	1.0044	1.0111	0.9994	1.0000	0.9997	0.9934	0.9999
2010	2.1133	1.0894	1.0397	1.0175	1.0039	1.0020	1.0006	0.9997	1.0011	0.9999
2011	2.0516	1.0917	1.0211	1.0197	1.0039	1.0018	0.9997	1.0028	0.9992	0.9997
2012	1.9896	1.1094	1.0319	1.0136	1.0114	1.0052	1.0060	1.0014	1.0021	0.9980
2013	2.3306	1.1393	1.0431	1.0230	1.0061	1.0110	1.0042	1.0001	1.0001	1.0003
2014	2.2212	1.1349	1.0128	1.0159	1.0077	1.0026	1.0009	1.0005	0.9993	0.9998
2015	2.1072	1.1119	1.0328	1.0191	1.0053	1.0014	0.9985	1.0002	1.0001	1.0000
2016	2.0108	1.1507	1.0264	1.0192	1.0024	1.0076	1.0007	1.0005	1.0000	
2017	2.1374	1.1321	1.0170	1.0232	1.0082	1.0043	0.9986	0.9991		
2018	2.0967	1.1329	1.0405	1.0289	1.0054	0.9993	1.0005			
2019	2.0763	1.1128	1.0384	1.0158	1.0007	1.0134				
2020	2.0220	1.0586	1.0382	1.0244	1.0088					
2021	2.4388	1.1482	1.0716							
2022	2.2724									
Latest 9 Volume Weighted	2.1515	1.1271	1.0354	1.0203	1.0062	1.0052	1.0011	1.0004	0.9998	0.9993
Latest 6 Volume Weighted	2.1746	1.1263	1.0382	1.0217	1.0050	1.0047	1.0006	1.0002	1.0002	0.9996
Latest 3 Volume Weighted	2.2571	1.1118	1.0513	1.0231	1.0046	1.0054	0.9999	0.9999	0.9998	1.0000
Simple Average of Middle 4 of Last 6	2.1457	1.1315	1.0359	1.0215	1.0053	1.0040	1.0002	1.0003	0.9999	0.9999
Simple Average of Middle 3 of Last 5	2.1485	1.1259	1.0390	1.0222	1.0053	1.0044	0.9999	1.0002	1.0001	0.9999
Selected March 22	2.1000	1.1300	1.0300	1.0210	1.0060	1.0040	1.0020	1.0010	1.0000	0.9995
Selected Oct 22	2.1500	1.1300	1.0400	1.0220	1.0060	1.0040	1.0020	1.0010	1.0000	0.9995
Selected Factors	2.1836	1.1300	1.0400	1.0220	1.0060	1.0040	1.0020	1.0010	1.0000	0.9995
Selected Ultimate	2.6529	1.2149	1.0751	1.0338	1.0115	1.0055	1.0015	0.9995	0.9985	0.9985

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
29,691	29,683	29,678	29,654	29,650	29,640	29,639	29,630	29,629	29,627	29,626	29,625
30,505	30,432	30,409	30,406	30,403	30,400	30,398	30,395	30,392	30,392	30,388	
33,648	33,646	33,641	33,637	33,630	33,624	33,618	33,606	33,603	33,603		
34,342	34,338	34,332	34,330	34,320	34,397	34,391	34,389	34,384			
36,133	36,130	36,162	36,119	36,161	36,158	36,155	36,154				
34,426	34,423	34,414	34,404	34,407	34,404	34,390					
38,637	38,627	38,614	38,404	38,392	38,388						
37,255	37,192	37,189	37,181	37,177							
42,329	42,365	42,278	42,273								
45,222	45,220	45,212									
40,737	40,729										
41,151											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9997	0.9998	0.9992	0.9999	0.9997	0.9999	0.9997	1.0000	0.9999	1.0000	1.0000
0.9976	0.9992	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	0.9999	
0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9996	0.9999	1.0000		
0.9999	0.9998	0.9999	0.9997	1.0022	0.9999	0.9999	0.9999			
0.9999	1.0009	0.9988	1.0012	0.9999	0.9999	1.0000				
0.9999	0.9997	0.9997	1.0001	0.9999	0.9996					
0.9997	0.9997	0.9946	0.9997	0.9999						
0.9983	0.9999	0.9998	0.9999							
1.0009	0.9980	0.9999								
1.0000	0.9998									
0.9998										
0.9998	0.9996	0.9990	1.0000	1.0002	0.9998	0.9998	0.9999	1.0000	0.9999	1.0000
0.9998	0.9996	0.9988	1.0000	1.0003	0.9998	0.9998	0.9999	1.0000	0.9999	1.0000
1.0002	0.9992	0.9981	0.9999	0.9999	0.9998	0.9999	0.9999	1.0000	0.9999	1.0000
0.9999	0.9998	0.9995	0.9999	0.9999	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
0.9998	0.9997	0.9994	0.9999	0.9999	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
0.9995	0.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9995	0.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9995	0.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9995	0.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9990	0.9995	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	2.5879	2.6196	2.7162	2.5895	2.5904	2.5243	2.6121	2.6529
12	1.2028	1.2046	1.2034	1.2068	1.2057	1.2021	1.2149	1.2149
19	1.0671	1.0696	1.0824	1.0666	1.0708	1.0638	1.0751	1.0751
24	1.0307	1.0302	1.0296	1.0297	1.0306	1.0328	1.0338	1.0338
31	1.0102	1.0083	1.0063	1.0080	1.0082	1.0115	1.0115	1.0115
36	1.0040	1.0032	1.0017	1.0027	1.0029	1.0055	1.0055	1.0055
48	0.9988	0.9986	0.9964	0.9987	0.9984	1.0015	1.0015	1.0015
60	0.9977	0.9980	0.9965	0.9985	0.9985	0.9995	0.9995	0.9995
72	0.9973	0.9977	0.9966	0.9982	0.9982	0.9985	0.9985	0.9985
84	0.9975	0.9976	0.9968	0.9983	0.9982	0.9985	0.9985	0.9985
96	0.9982	0.9980	0.9967	0.9985	0.9983	0.9990	0.9990	0.9990
108	0.9983	0.9982	0.9965	0.9986	0.9985	0.9995	0.9995	0.9995
120	0.9987	0.9985	0.9973	0.9988	0.9987	1.0000	1.0000	1.0000
132	0.9997	0.9998	0.9992	0.9993	0.9993	1.0000	1.0000	1.0000
144	0.9997	0.9997	0.9993	0.9994	0.9994	1.0000	1.0000	1.0000
156	0.9995	0.9995	0.9994	0.9995	0.9995	1.0000	1.0000	1.0000
168	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
180	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
192	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
204	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Se'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
8	2.1500	2.6121	38.28%	8		2.6121	2.1500	2.1836	2.6529
12	1.1300	1.2149		12	82.31%	1.2149	1.1300	1.1300	1.2149
20	1.0400	1.0751	93.01%	20		1.0751	1.0400	1.0400	1.0751
24	1.0220	1.0338		24	96.73%	1.0338	1.0220	1.0220	1.0338
32	1.0060	1.0115	98.86%	32		1.0115	1.0060	1.0060	1.0115
36	1.0030	1.0055		36	99.45%	1.0055	1.0038	1.0040	1.0055
44	1.0020	1.0025	99.75%	48	99.83%	1.0017	1.0020	1.0020	1.0015
56	1.0020	1.0005	99.95%	60	100.03%	0.9997	1.0012	1.0010	0.9995
68	1.0000	0.9985	100.15%	72	100.15%	0.9985	0.9998	1.0000	0.9985
80	0.9995	0.9985	100.15%	84	100.13%	0.9987	0.9995	0.9995	0.9985
92	0.9995	0.9990	100.10%	96	100.08%	0.9992	0.9995	0.9995	0.9990
104	0.9995	0.9995	100.05%	108	100.03%	0.9997	0.9997	0.9995	0.9995
116	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
128	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
140	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
152	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
164	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
176	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
188	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
200	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	632,408	30,388	1.0000	30,388	-	-	4.81%
2006	656,746	33,603	1.0000	33,603	-	-	5.12%
2007	679,930	34,384	1.0000	34,384	-	3	5.06%
2008	709,787	36,154	1.0000	36,154	-	-	5.09%
2009	741,553	34,390	1.0000	34,390	-	-	4.64%
2010	761,034	38,388	1.0000	38,388	-	-	5.04%
2011	772,649	37,177	1.0000	37,177	-	-	4.81%
2012	769,715	42,273	1.0000	42,273	-	-	5.49%
2013	781,394	45,212	1.0000	45,212	-	-	5.79%
2014	822,358	40,729	0.9995	40,709	(20)	20	4.95%
2015	877,262	41,151	0.9990	41,110	(41)	-	4.69%
2016	923,168	43,698	0.9985	43,632	(66)	1	4.73%
2017	977,104	46,527	0.9985	46,458	(70)	6	4.75%
2018	1,044,467	42,998	0.9995	42,976	(22)	332	4.11%
2019	1,099,731	39,040	1.0015	39,098	58	444	3.56%
2020	1,134,690	27,924	1.0055	28,078	154	276	2.47%
2021	1,159,166	43,045	1.0338	44,499	1,455	2,260	3.84%
2022	1,126,492	37,374	1.2149	45,406	8,032	13,897	4.03%
	15,669,653	694,455		703,935	9,480	17,239	4.49%

Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	30,388			30,388	4.81%	4.81%	100.00%	4.81%	4.81%
2006	656,746	33,603	30,540		30,540	4.65%	5.12%	100.00%	5.12%	5.12%
2007	679,930	34,384	33,771	30,693	32,232	4.74%	5.06%	100.00%	5.06%	5.06%
2008	709,787	36,154	34,556	33,940	34,248	4.83%	5.09%	100.00%	5.09%	5.09%
2009	741,553	34,390	36,335	34,729	35,532	4.79%	4.64%	100.00%	4.64%	4.64%
2010	761,034	38,388	34,562	36,517	35,539	4.67%	5.04%	100.00%	5.04%	5.04%
2011	772,649	37,177	38,580	34,735	36,658	4.74%	4.81%	100.00%	4.81%	4.81%
2012	769,715	42,273	37,363	38,773	38,068	4.95%	5.49%	100.00%	5.49%	5.49%
2013	781,394	45,212	42,484	37,549	40,017	5.12%	5.79%	100.00%	5.79%	5.79%
2014	822,358	40,709	45,438	42,696	44,067	5.36%	4.95%	100.00%	4.95%	4.95%
2015	877,262	41,110	40,913	45,665	43,289	4.93%	4.69%	100.00%	4.69%	4.69%
2016	923,168	43,632	41,316	41,117	41,216	4.46%	4.73%	100.00%	4.73%	4.73%
2017	977,104	46,458	43,850	41,522	42,686	4.37%	4.75%	100.00%	4.75%	4.75%
2018	1,044,467	42,976	46,690	44,069	45,380	4.34%	4.11%	75.00%	4.17%	4.17%
2019	1,099,731	39,098	43,191	46,923	45,057	4.10%	3.56%	50.00%	3.83%	3.83%
2020	1,134,690	28,078	39,294	43,407	41,350	3.64%	2.47%	25.00%	3.35%	3.35%
2021	1,159,166	44,499	39,294	39,490	39,392	3.40%	3.84%	25.00%	3.51%	3.51%
2022	1,126,492	45,406	44,722	39,490	42,106	3.74%	4.03%	25.00%	3.81%	3.81%
	15,669,653	703,935	672,898	631,317	697,765					

Trend in Losses Based on Exponential Regression (2012 & After excluding 2020 due to COVID) (a):

0.32%

Selected Trend (b):

0.50%

Notes:

(3) Ultimate Losses from Page 7

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	4.81%	30,388	100.00%	0.00%	30,388	30,388	-	30,388	4.81%
2006	656,746	5.12%	33,603	100.00%	0.00%	33,603	33,603	-	33,603	5.12%
2007	679,930	5.06%	34,384	100.00%	0.00%	34,384	34,384	-	34,384	5.06%
2008	709,787	5.09%	36,154	100.00%	0.00%	36,154	36,154	-	36,154	5.09%
2009	741,553	4.64%	34,390	100.00%	0.00%	34,390	34,390	-	34,390	4.64%
2010	761,034	5.04%	38,388	100.00%	0.00%	38,388	38,388	-	38,388	5.04%
2011	772,649	4.81%	37,177	100.00%	0.00%	37,177	37,177	-	37,177	4.81%
2012	769,715	5.49%	42,273	100.00%	0.00%	42,273	42,273	-	42,273	5.49%
2013	781,394	5.79%	45,212	100.00%	0.00%	45,212	45,212	-	45,212	5.79%
2014	822,358	4.95%	40,709	100.05%	-0.05%	40,729	40,729	(20)	40,709	4.95%
2015	877,262	4.69%	41,110	100.10%	-0.10%	41,151	41,151	(41)	41,110	4.69%
2016	923,168	4.73%	43,632	100.15%	-0.15%	43,698	43,698	(66)	43,632	4.73%
2017	977,104	4.75%	46,458	100.15%	-0.15%	46,527	46,527	(70)	46,458	4.75%
2018	1,044,467	4.17%	43,577	100.05%	-0.05%	43,599	42,998	(22)	42,976	4.11%
2019	1,099,731	3.83%	42,078	99.85%	0.15%	42,015	39,040	63	39,103	3.56%
2020	1,134,690	3.35%	38,032	99.45%	0.55%	37,824	27,924	208	28,133	2.48%
2021	1,159,166	3.51%	40,669	96.73%	3.27%	39,340	43,045	1,329	44,374	3.83%
2022	1,126,492	3.81%	42,931	82.31%	17.69%	35,337	37,374	7,594	44,968	3.99%
	15,669,653		711,165			702,189	694,455	8,976	703,431	4.49%

Notes:

(10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	7,448,585	18,711,221	27,387,842	28,679,324	29,327,516	29,545,657	29,609,229	29,628,558	29,688,558	29,677,800	29,669,624	29,661,832	29,656,764	29,648,889	29,644,672	29,640,378	29,638,717	29,629,776	29,629,076	29,626,881	29,625,911	29,625,185
2005	7,631,782	19,502,247	27,667,343	28,641,744	29,451,429	29,673,746	30,447,400	30,466,794	30,440,774	30,436,277	30,418,307	30,411,608	30,408,559	30,405,756	30,403,219	30,400,105	30,397,687	30,394,532	30,392,172	30,391,672	30,387,938	
2006	7,957,727	20,221,774	30,098,103	31,863,303	32,973,290	33,486,356	33,662,496	33,665,138	33,660,892	33,649,670	33,646,986	33,645,076	33,640,425	33,635,625	33,629,491	33,623,164	33,617,778	33,605,908	33,603,314	33,602,979		
2007	7,587,491	19,476,695	30,858,027	32,309,421	33,415,587	33,675,374	33,817,505	34,079,155	34,095,344	34,090,922	34,289,229	34,285,315	34,279,829	34,277,961	34,267,772	34,394,026	34,388,916	34,386,197	34,381,758			
2008	8,430,093	21,185,262	32,488,457	33,938,653	35,173,152	35,453,710	35,896,079	35,975,584	35,982,695	35,989,898	35,998,314	35,995,287	36,027,232	36,068,819	36,160,739	36,157,683	36,154,820	36,154,112				
2009	9,180,454	22,656,250	31,201,613	32,713,377	33,628,854	33,966,979	34,431,569	34,453,494	34,445,488	34,416,343	34,414,228	34,412,486	34,403,137	34,394,099	34,396,750	34,393,653	34,390,455					
2010	8,842,174	23,088,994	34,322,347	36,546,534	37,647,671	38,160,701	38,280,274	38,320,200	38,342,891	38,428,518	38,429,875	38,419,737	38,406,233	38,404,411	38,391,760	38,388,197						
2011	8,780,242	23,264,164	33,620,608	34,829,256	36,169,619	36,671,941	37,100,813	37,110,109	37,187,317	37,209,074	37,199,813	37,191,557	37,188,723	37,181,105	37,176,652							
2012	9,969,519	23,670,643	36,909,944	38,878,012	40,447,352	41,278,409	41,471,423	41,909,018	42,139,319	42,146,694	42,228,856	42,273,509	42,278,413	42,272,531								
2013	8,939,708	23,381,456	38,966,198	41,987,449	44,015,576	44,447,039	45,001,497	45,030,506	45,039,792	45,209,293	45,221,587	45,220,034	45,211,829									
2014	8,726,341	24,183,864	35,928,356	37,827,243	39,557,176	40,159,991	40,424,239	40,519,485	40,551,834	40,724,107	40,717,128	40,709,966										
2015	9,733,161	25,595,379	37,180,591	39,189,602	40,424,582	40,899,460	41,108,392	41,140,244	41,144,367	41,152,059	41,151,332											
2016	10,285,002	25,859,484	39,304,270	41,216,855	42,786,975	43,101,747	43,615,104	43,676,374	43,696,550	43,696,652												
2017	10,861,996	28,123,857	41,410,857	43,440,529	44,817,661	45,709,264	46,447,372	46,509,425	46,521,812													
2018	10,004,313	24,775,258	37,718,395	40,168,239	41,600,083	42,053,953	42,643,424	42,665,095														
2019	9,591,803	24,708,173	34,167,978	36,067,869	37,352,626	37,848,471	38,596,098															
2020	7,073,182	18,055,726	24,442,358	25,886,771	26,964,567	27,648,573																
2021	8,364,971	22,820,029	37,216,612	40,785,123																		
2022	7,666,704	23,476,638																				

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	7,449	18,711	27,388	28,679	29,328	29,546	29,609	29,629	29,689	29,678
2005	7,632	19,502	27,667	28,642	29,451	29,674	30,447	30,467	30,441	30,436
2006	7,958	20,222	30,098	31,863	32,973	33,486	33,662	33,665	33,661	33,650
2007	7,587	19,477	30,858	32,309	33,416	33,675	33,818	34,079	34,095	34,091
2008	8,430	21,185	32,488	33,939	35,173	35,454	35,896	35,976	35,983	35,990
2009	9,180	22,656	31,202	32,713	33,629	33,967	34,432	34,453	34,445	34,416
2010	8,842	23,089	34,322	36,547	37,648	38,161	38,280	38,320	38,343	38,429
2011	8,780	23,264	33,621	34,829	36,170	36,672	37,101	37,110	37,187	37,209
2012	9,970	23,671	36,910	38,878	40,447	41,278	41,471	41,909	42,139	42,147
2013	8,940	23,381	38,966	41,987	44,016	44,447	45,001	45,031	45,040	45,209
2014	8,726	24,184	35,928	37,827	39,557	40,160	40,424	40,519	40,552	40,724
2015	9,733	25,595	37,181	39,190	40,425	40,899	41,108	41,140	41,144	41,152
2016	10,285	25,859	39,304	41,217	42,787	43,102	43,615	43,676	43,697	43,697
2017	10,862	28,124	41,411	43,441	44,818	45,709	46,447	46,509	46,522	
2018	10,004	24,775	37,718	40,168	41,600	42,054	42,643	42,665		
2019	9,592	24,708	34,168	36,068	37,353	37,848	38,596			
2020	7,073	18,056	24,442	25,887	26,965	27,649				
2021	8,365	22,820	37,217	40,785						
2022	7,667	23,477								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.5121	1.4637	1.0472	1.0226	1.0074	1.0022	1.0007	1.0020	0.9996	0.9997
2005	2.5554	1.4187	1.0352	1.0283	1.0075	1.0261	1.0006	0.9991	0.9999	0.9994
2006	2.5411	1.4884	1.0586	1.0348	1.0156	1.0053	1.0001	0.9999	0.9997	0.9999
2007	2.5669	1.5844	1.0470	1.0342	1.0078	1.0042	1.0077	1.0005	0.9999	1.0058
2008	2.5131	1.5335	1.0446	1.0364	1.0080	1.0125	1.0022	1.0002	1.0002	1.0002
2009	2.4679	1.3772	1.0485	1.0280	1.0101	1.0137	1.0006	0.9998	0.9992	0.9999
2010	2.6112	1.4865	1.0648	1.0301	1.0136	1.0031	1.0010	1.0006	1.0022	1.0000
2011	2.6496	1.4452	1.0359	1.0385	1.0139	1.0117	1.0003	1.0021	1.0006	0.9998
2012	2.3743	1.5593	1.0533	1.0404	1.0205	1.0047	1.0106	1.0055	1.0002	1.0019
2013	2.6155	1.6665	1.0775	1.0483	1.0098	1.0125	1.0006	1.0002	1.0038	1.0003
2014	2.7714	1.4856	1.0529	1.0457	1.0152	1.0066	1.0024	1.0008	1.0042	0.9998
2015	2.6297	1.4526	1.0540	1.0315	1.0117	1.0051	1.0008	1.0001	1.0002	1.0000
2016	2.5143	1.5199	1.0487	1.0381	1.0074	1.0119	1.0014	1.0005	1.0000	
2017	2.5892	1.4724	1.0490	1.0317	1.0199	1.0161	1.0013	1.0003		
2018	2.4765	1.5224	1.0650	1.0356	1.0109	1.0140	1.0005			
2019	2.5760	1.3829	1.0556	1.0356	1.0133	1.0198				
2020	2.5527	1.3537	1.0591	1.0416	1.0254					
2021	2.7280	1.6309	1.0959							
2022	3.0622									
Latest 9 Volume Weighted	2.6437	1.5004	1.0620	1.0386	1.0145	1.0114	1.0021	1.0011	1.0012	1.0008
Latest 6 Volume Weighted	2.6503	1.4844	1.0621	1.0353	1.0142	1.0123	1.0012	1.0012	1.0015	1.0003
Latest 3 Volume Weighted	2.7852	1.4611	1.0721	1.0372	1.0154	1.0165	1.0011	1.0003	1.0014	1.0000
Simple Average of Middle 4 of Last 6	2.6115	1.4744	1.0572	1.0353	1.0140	1.0122	1.0010	1.0004	1.0012	1.0000
Simple Average of Middle 3 of Last 5	2.6189	1.4592	1.0599	1.0365	1.0147	1.0140	1.0012	1.0003	1.0014	1.0000
Selected March 22	2.6000	1.5000	1.0550	1.0400	1.0140	1.0085	1.0025	1.0010	1.0010	1.0005
Selected Oct 22	2.6000	1.5000	1.0550	1.0400	1.0140	1.0095	1.0025	1.0010	1.0010	1.0005
Selected Factors	2.6659	1.5000	1.0649	1.0400	1.0140	1.0133	1.0025	1.0010	1.0010	1.0005
Selected Ultimate	4.5733	1.7155	1.1436	1.0739	1.0326	1.0184	1.0050	1.0025	1.0015	1.0005

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
29,670	29,662	29,657	29,649	29,645	29,640	29,639	29,630	29,629	29,627	29,626	29,625
30,418	30,412	30,409	30,406	30,403	30,400	30,398	30,395	30,392	30,392	30,388	
33,647	33,645	33,640	33,636	33,629	33,623	33,618	33,606	33,603	33,603		
34,289	34,285	34,280	34,278	34,268	34,394	34,389	34,386	34,382			
35,998	35,995	36,027	36,069	36,161	36,158	36,155	36,154				
34,414	34,412	34,403	34,394	34,397	34,394	34,390					
38,430	38,420	38,406	38,404	38,392	38,388						
37,200	37,192	37,189	37,181	37,177							
42,229	42,274	42,278	42,273								
45,222	45,220	45,212									
40,717	40,710										
41,151											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9997	0.9998	0.9997	0.9999	0.9999	0.9999	0.9997	1.0000	0.9999	1.0000	1.0000
0.9998	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	0.9999	
0.9999	0.9999	0.9999	0.9998	0.9998	0.9998	0.9996	0.9999	1.0000		
0.9999	0.9998	0.9999	0.9997	1.0037	0.9999	0.9999	0.9999			
0.9999	1.0009	1.0012	1.0025	0.9999	0.9999	1.0000				
0.9999	0.9997	0.9997	1.0001	0.9999	0.9999					
0.9997	0.9996	1.0000	0.9997	0.9999						
0.9998	0.9999	0.9998	0.9999							
1.0011	1.0001	0.9999								
1.0000	0.9998									
0.9998										

1.0000	1.0000	1.0000	1.0002	1.0004	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
1.0001	1.0000	1.0001	1.0003	1.0005	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
1.0003	1.0000	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	0.9999	1.0000
0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
0.9999	0.9998	0.9999	0.9999	0.9999	0.9999	0.9998	0.9999	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	4.5131	4.4617	4.6815	4.3320	4.3272	4.3978	4.4021	4.5733
12	1.7071	1.6835	1.6808	1.6588	1.6523	1.6915	1.6931	1.7155
19	1.1378	1.1341	1.1504	1.1251	1.1323	1.1276	1.1288	1.1436
24	1.0714	1.0678	1.0730	1.0643	1.0683	1.0689	1.0699	1.0739
31	1.0315	1.0314	1.0345	1.0280	1.0307	1.0277	1.0288	1.0326
36	1.0168	1.0170	1.0188	1.0138	1.0158	1.0136	1.0146	1.0184
48	1.0054	1.0047	1.0022	1.0017	1.0018	1.0050	1.0050	1.0050
60	1.0033	1.0035	1.0011	1.0006	1.0006	1.0025	1.0025	1.0025
72	1.0022	1.0023	1.0009	1.0002	1.0003	1.0015	1.0015	1.0015
84	1.0009	1.0008	0.9994	0.9990	0.9989	1.0005	1.0005	1.0005
96	1.0001	1.0005	0.9994	0.9990	0.9989	1.0000	1.0000	1.0000
108	1.0001	1.0004	0.9991	0.9991	0.9990	1.0000	1.0000	1.0000
120	1.0001	1.0004	0.9992	0.9992	0.9992	1.0000	1.0000	1.0000
132	1.0001	1.0003	0.9993	0.9993	0.9993	1.0000	1.0000	1.0000
144	0.9999	1.0000	0.9994	0.9994	0.9994	1.0000	1.0000	1.0000
156	0.9995	0.9995	0.9995	0.9995	0.9995	1.0000	1.0000	1.0000
168	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
180	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
192	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
204	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
8	2.6000	4.4044	22.70%	8		4.4044	2.6000	2.6659	4.5733
12	1.5000	1.6940		12	59.03%	1.6940	1.5000	1.5000	1.7155
20	1.0550	1.1293	88.55%	20		1.1293	1.0550	1.0649	1.1436
24	1.0400	1.0705		24	93.42%	1.0705	1.0400	1.0400	1.0739
32	1.0140	1.0293	97.16%	32		1.0293	1.0140	1.0140	1.0326
36	1.0080	1.0151		36	98.52%	1.0151	1.0097	1.0133	1.0184
44	1.0040	1.0070	99.30%	48	99.47%	1.0053	1.0027	1.0025	1.0050
56	1.0010	1.0030	99.70%	60	99.74%	1.0026	1.0010	1.0010	1.0025
68	1.0010	1.0020	99.80%	72	99.84%	1.0016	1.0010	1.0010	1.0015
80	1.0010	1.0010	99.90%	84	99.94%	1.0006	1.0006	1.0005	1.0005
92	1.0000	1.0000	100.00%	96	100.00%	1.0000	1.0000	1.0000	1.0000
104	1.0000	1.0000	100.00%	108	100.00%	1.0000	1.0000	1.0000	1.0000
116	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
128	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
140	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
152	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
164	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
176	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
188	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
200	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	30,388	1.0000	30,388	-	-	-	4.81%
2006	656,746	33,603	1.0000	33,603	-	-	-	5.12%
2007	679,930	34,382	1.0000	34,382	-	3	(3)	5.06%
2008	709,787	36,154	1.0000	36,154	-	-	-	5.09%
2009	741,553	34,390	1.0000	34,390	-	-	-	4.64%
2010	761,034	38,388	1.0000	38,388	-	-	-	5.04%
2011	772,649	37,177	1.0000	37,177	-	-	-	4.81%
2012	769,715	42,273	1.0000	42,273	-	-	-	5.49%
2013	781,394	45,212	1.0000	45,212	-	-	-	5.79%
2014	822,358	40,710	1.0000	40,710	-	20	(20)	4.95%
2015	877,262	41,151	1.0000	41,151	-	-	-	4.69%
2016	923,168	43,697	1.0005	43,719	22	1	21	4.74%
2017	977,104	46,522	1.0015	46,592	70	6	64	4.77%
2018	1,044,467	42,665	1.0025	42,772	107	332	(225)	4.10%
2019	1,099,731	38,596	1.0050	38,789	193	444	(251)	3.53%
2020	1,134,690	27,649	1.0184	28,158	509	276	233	2.48%
2021	1,159,166	40,785	1.0739	43,801	3,016	2,260	756	3.78%
2022	1,126,492	23,477	1.7155	40,274	16,797	13,897	2,900	3.58%
	15,669,653	677,218		697,931	20,714	17,239	3,475	4.45%

Manitoba Public Insurance
Automobile Insurance Division - Property Damage - Basic
Paid Loss & ALAE - Without Z-Files
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Appendix B
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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	30,388			30,388	4.81%	4.81%	100.00%	4.81%	4.81%
2006	656,746	33,603	30,540		30,540	4.65%	5.12%	100.00%	5.12%	5.12%
2007	679,930	34,382	33,771	30,693	32,232	4.74%	5.06%	100.00%	5.06%	5.06%
2008	709,787	36,154	34,554	33,940	34,247	4.82%	5.09%	100.00%	5.09%	5.09%
2009	741,553	34,390	36,335	34,726	35,531	4.79%	4.64%	100.00%	4.64%	4.64%
2010	761,034	38,388	34,562	36,517	35,539	4.67%	5.04%	100.00%	5.04%	5.04%
2011	772,649	37,177	38,580	34,735	36,658	4.74%	4.81%	100.00%	4.81%	4.81%
2012	769,715	42,273	37,363	38,773	38,068	4.95%	5.49%	100.00%	5.49%	5.49%
2013	781,394	45,212	42,484	37,549	40,017	5.12%	5.79%	100.00%	5.79%	5.79%
2014	822,358	40,710	45,438	42,696	44,067	5.36%	4.95%	100.00%	4.95%	4.95%
2015	877,262	41,151	40,914	45,665	43,289	4.93%	4.69%	100.00%	4.69%	4.69%
2016	923,168	43,719	41,357	41,118	41,238	4.47%	4.74%	100.00%	4.74%	4.73%
2017	977,104	46,592	43,937	41,564	42,750	4.38%	4.77%	100.00%	4.77%	4.75%
2018	1,044,467	42,772	46,825	44,157	45,491	4.36%	4.10%	75.00%	4.16%	4.17%
2019	1,099,731	38,789	42,986	47,059	45,022	4.09%	3.53%	50.00%	3.81%	3.83%
2020	1,134,690	28,158	38,983	43,201	41,092	3.62%	2.48%	25.00%	3.34%	3.35%
2021	1,159,166	43,801	28,299	39,178	33,738	2.91%	3.78%	25.00%	3.13%	3.51%
2022	1,126,492	40,274	44,020	28,440	36,230	3.22%	3.58%	25.00%	3.31%	3.81%
	15,669,653	697,931	660,946	620,011	686,136					

Trend in Losses Based on Exponential Regression (2013 & After) (a):

-1.72%

Selected Trend (b):

0.50%

Notes:

(3) Ultimate Losses from Page 15

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) Selected Initial Ult Loss Ratio from Page 8

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 8

Manitoba Public Insurance
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Paid Loss & ALAE - Without Z-Files
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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage: Paid Unpaid		Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	632,408	4.81%	30,388	100.00%	0.00%	30,388	30,388	-	30,388	-	4.81%
2006	656,746	5.12%	33,603	100.00%	0.00%	33,603	33,603	-	33,603	-	5.12%
2007	679,930	5.06%	34,384	100.00%	0.00%	34,384	34,382	-	34,382	(3)	5.06%
2008	709,787	5.09%	36,154	100.00%	0.00%	36,154	36,154	-	36,154	-	5.09%
2009	741,553	4.64%	34,390	100.00%	0.00%	34,390	34,390	-	34,390	-	4.64%
2010	761,034	5.04%	38,388	100.00%	0.00%	38,388	38,388	-	38,388	-	5.04%
2011	772,649	4.81%	37,177	100.00%	0.00%	37,177	37,177	-	37,177	-	4.81%
2012	769,715	5.49%	42,273	100.00%	0.00%	42,273	42,273	-	42,273	-	5.49%
2013	781,394	5.79%	45,212	100.00%	0.00%	45,212	45,212	-	45,212	-	5.79%
2014	822,358	4.95%	40,709	100.00%	0.00%	40,709	40,710	-	40,710	(20)	4.95%
2015	877,262	4.69%	41,110	100.00%	0.00%	41,110	41,151	-	41,151	-	4.69%
2016	923,168	4.73%	43,632	99.95%	0.05%	43,610	43,697	22	43,718	21	4.74%
2017	977,104	4.75%	46,458	99.85%	0.15%	46,388	46,522	70	46,591	64	4.77%
2018	1,044,467	4.17%	43,577	99.75%	0.25%	43,468	42,665	109	42,774	(223)	4.10%
2019	1,099,731	3.83%	42,078	99.50%	0.50%	41,868	38,596	210	38,806	(234)	3.53%
2020	1,134,690	3.35%	38,032	98.19%	1.81%	37,344	27,649	688	28,336	412	2.50%
2021	1,159,166	3.51%	40,669	93.12%	6.88%	37,869	40,785	2,800	43,585	540	3.76%
2022	1,126,492	3.81%	42,931	58.29%	41.71%	25,026	23,477	17,905	41,382	4,008	3.67%
	15,669,653		711,165			689,362	677,218	21,803	699,021	4,564	4.46%

Notes:
(10) = (8) + (9)

July 13, 2023



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix C
Collision - Undiscounted Gross IBNR Calculations

Manitoba Public Insurance
Automobile Insurance Division - Collision - Basic
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Page 1

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	94,465,133	197,025,591	201,939,636	202,753,669	203,302,883	203,471,777	203,371,798	203,181,888	203,058,010	202,944,743	202,889,887	202,861,592	202,829,540	202,808,594	202,751,417	202,737,340	202,738,573	202,729,430	202,726,503	202,721,014	202,715,200	202,713,900
2005	99,333,375	202,336,209	204,072,321	204,583,289	205,228,361	205,280,741	205,227,563	205,075,499	204,907,698	204,799,955	204,697,602	204,665,702	204,656,506	204,629,381	204,619,852	204,620,436	204,616,414	204,601,840	204,597,613	204,586,405	204,570,708	
2006	109,593,646	224,168,409	224,515,800	225,062,034	225,905,155	226,036,923	225,992,992	225,838,448	225,812,629	225,781,446	225,799,479	225,779,130	225,771,730	225,784,405	225,764,687	225,747,817	225,742,964	225,726,591	225,719,490	225,713,063		
2007	110,398,767	228,015,525	230,574,340	231,715,428	232,730,724	232,933,171	232,822,876	232,792,247	232,857,456	232,805,979	232,778,907	232,761,015	232,748,771	232,737,688	232,722,950	232,704,346	232,688,303	232,679,257	232,656,121			
2008	111,779,097	239,083,866	240,535,074	241,725,902	242,770,402	243,147,792	243,207,238	243,157,433	243,067,996	243,099,309	243,093,751	243,098,339	243,079,888	243,066,710	243,061,577	243,051,467	243,041,587	243,030,137				
2009	124,748,640	235,029,771	235,247,376	236,623,375	237,994,008	238,383,130	238,306,434	238,286,276	238,326,735	238,353,507	238,335,871	238,328,730	238,311,345	238,302,197	238,288,830	238,265,759	238,260,266					
2010	129,628,484	271,446,831	274,402,664	276,885,863	278,580,038	278,912,989	279,219,380	279,450,435	279,548,253	279,561,608	279,567,156	279,612,619	279,592,110	279,576,767	279,564,359	279,557,459						
2011	133,103,878	265,117,043	267,048,294	268,775,483	270,266,827	270,786,436	271,196,108	271,315,749	271,399,418	271,443,714	271,455,335	271,446,379	271,448,029	271,440,864	271,419,698							
2012	145,665,177	298,228,990	309,122,146	312,131,096	314,395,646	314,960,665	315,501,678	315,734,058	315,760,091	315,815,140	315,830,120	315,839,575	315,845,471	315,829,808								
2013	150,741,378	327,949,172	341,996,753	345,532,239	348,319,128	349,044,355	349,870,549	350,203,343	350,330,527	350,382,992	350,404,975	350,417,164	350,412,508									
2014	148,475,676	304,926,653	307,188,199	309,446,416	311,717,430	312,703,588	313,428,961	313,635,413	313,766,620	313,814,177	313,841,940	313,861,952										
2015	170,066,819	344,227,578	349,233,554	351,717,640	353,910,351	354,482,447	355,028,409	355,229,744	355,302,447	355,332,138	355,375,859											
2016	187,601,050	372,404,183	380,550,082	382,534,332	385,165,724	386,026,599	387,023,100	387,341,034	387,482,959	387,542,064												
2017	198,492,926	396,073,981	401,709,768	403,996,033	406,695,161	407,472,136	408,482,994	408,773,461	408,944,553													
2018	195,676,394	391,806,744	401,894,259	404,122,889	407,300,736	408,100,033	408,873,695	409,186,546														
2019	198,292,941	391,830,334	398,681,759	402,567,296	405,289,816	405,985,306	406,912,994															
2020	164,792,375	307,399,331	311,650,755	313,225,690	314,726,164	315,414,475																
2021	181,004,526	403,641,659	426,365,661	436,036,427																		
2022	189,308,870	420,512,016																				

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Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	94,465	197,026	201,940	202,754	203,303	203,472	203,372	203,182	203,058	202,945
2005	99,333	202,336	204,072	204,583	205,228	205,281	205,228	205,075	204,908	204,800
2006	109,594	224,168	224,516	225,062	225,905	226,037	225,993	225,838	225,813	225,781
2007	110,399	228,016	230,574	231,715	232,731	232,933	232,823	232,792	232,857	232,806
2008	111,779	239,084	240,535	241,726	242,770	243,148	243,207	243,157	243,068	243,099
2009	124,749	235,030	235,247	236,623	237,994	238,383	238,306	238,286	238,327	238,354
2010	129,628	271,447	274,403	276,886	278,580	278,913	279,219	279,450	279,548	279,562
2011	133,104	265,117	267,048	268,775	270,267	270,786	271,196	271,316	271,399	271,444
2012	145,665	298,229	309,122	312,131	314,396	314,961	315,502	315,734	315,760	315,815
2013	150,741	327,949	341,997	345,532	348,319	349,044	349,871	350,203	350,331	350,383
2014	148,476	304,927	307,188	309,446	311,717	312,704	313,429	313,635	313,767	313,814
2015	170,067	344,228	349,234	351,718	353,910	354,482	355,028	355,230	355,302	355,332
2016	187,601	372,404	380,550	382,534	385,166	386,027	387,023	387,341	387,483	387,542
2017	198,493	396,074	401,710	403,996	406,695	407,472	408,483	408,773	408,945	
2018	195,676	391,807	401,894	404,123	407,301	408,100	408,874	409,187		
2019	198,293	391,830	398,682	402,567	405,290	405,985	406,913			
2020	164,792	307,399	311,651	313,226	314,726	315,414				
2021	181,005	403,642	426,366	436,036						
2022	189,309	420,512								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.0857	1.0249	1.0040	1.0027	1.0008	0.9995	0.9991	0.9994	0.9994	0.9997
2005	2.0369	1.0086	1.0025	1.0032	1.0003	0.9997	0.9993	0.9992	0.9995	0.9995
2006	2.0455	1.0015	1.0024	1.0037	1.0006	0.9998	0.9993	0.9999	0.9999	1.0001
2007	2.0654	1.0112	1.0049	1.0044	1.0009	0.9995	0.9999	1.0003	0.9998	0.9999
2008	2.1389	1.0061	1.0050	1.0043	1.0016	1.0002	0.9998	0.9996	1.0001	1.0000
2009	1.8840	1.0009	1.0058	1.0058	1.0016	0.9997	0.9999	1.0002	1.0001	0.9999
2010	2.0940	1.0109	1.0090	1.0061	1.0012	1.0011	1.0008	1.0004	1.0000	1.0000
2011	1.9918	1.0073	1.0065	1.0055	1.0019	1.0015	1.0004	1.0003	1.0002	1.0000
2012	2.0474	1.0365	1.0097	1.0073	1.0018	1.0017	1.0007	1.0001	1.0002	1.0000
2013	2.1756	1.0428	1.0103	1.0081	1.0021	1.0024	1.0010	1.0004	1.0001	1.0001
2014	2.0537	1.0074	1.0074	1.0073	1.0032	1.0023	1.0007	1.0004	1.0002	1.0001
2015	2.0241	1.0145	1.0071	1.0062	1.0016	1.0015	1.0006	1.0002	1.0001	1.0001
2016	1.9851	1.0219	1.0052	1.0069	1.0022	1.0026	1.0008	1.0004	1.0002	
2017	1.9954	1.0142	1.0057	1.0067	1.0019	1.0025	1.0007	1.0004		
2018	2.0023	1.0257	1.0055	1.0079	1.0020	1.0019	1.0008			
2019	1.9760	1.0175	1.0097	1.0068	1.0017	1.0023				
2020	1.8654	1.0138	1.0051	1.0048	1.0022					
2021	2.2300	1.0563	1.0227							
2022	2.2213									
Latest 9 Volume Weighted	2.0400	1.0244	1.0090	1.0069	1.0021	1.0021	1.0007	1.0003	1.0001	1.0000
Latest 6 Volume Weighted	2.0498	1.0255	1.0093	1.0066	1.0019	1.0022	1.0007	1.0003	1.0001	1.0001
Latest 3 Volume Weighted	2.1146	1.0307	1.0133	1.0066	1.0019	1.0022	1.0008	1.0003	1.0001	1.0001
Simple Average of Middle 4 of Last 6	2.0488	1.0198	1.0065	1.0066	1.0019	1.0022	1.0007	1.0003	1.0002	1.0001
Simple Average of Middle 3 of Last 5	2.0665	1.0192	1.0070	1.0068	1.0020	1.0022	1.0007	1.0004	1.0002	1.0001
Selected March 22	2.0000	1.0200	1.0065	1.0075	1.0020	1.0025	1.0010	1.0005	1.0000	1.0000
Selected Oct 22	2.0152	1.0262	1.0063	1.0067	1.0020	1.0025	1.0010	1.0005	1.0000	1.0000
Selected Factors	2.2256	1.0262	1.0101	1.0067	1.0020	1.0025	1.0010	1.0005	1.0000	1.0000
Selected Ultimate	2.3364	1.0498	1.0230	1.0127	1.0060	1.0040	1.0015	1.0005	1.0000	1.0000

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
202,890	202,862	202,830	202,809	202,751	202,737	202,739	202,729	202,727	202,721	202,715	202,714
204,698	204,666	204,657	204,629	204,620	204,620	204,616	204,602	204,598	204,586	204,571	
225,799	225,779	225,772	225,784	225,765	225,748	225,743	225,727	225,719	225,713		
232,779	232,761	232,749	232,738	232,723	232,704	232,688	232,679	232,656			
243,094	243,098	243,080	243,067	243,062	243,051	243,042	243,030				
238,336	238,329	238,311	238,302	238,289	238,266	238,260					
279,567	279,613	279,592	279,577	279,564	279,557						
271,455	271,446	271,448	271,441	271,420							
315,830	315,840	315,845	315,830								
350,405	350,417	350,413									
313,842	313,862										
355,376											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9999	0.9998	0.9999	0.9997	0.9999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9998	1.0000	0.9999	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	
0.9999	1.0000	1.0001	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000		
0.9999	0.9999	1.0000	0.9999	0.9999	0.9999	1.0000	0.9999			
1.0000	0.9999	0.9999	1.0000	1.0000	1.0000	1.0000				
1.0000	0.9999	1.0000	0.9999	0.9999	1.0000					
1.0002	0.9999	0.9999	1.0000	1.0000						
1.0000	1.0000	1.0000	0.9999							
1.0000	1.0000	1.0000								
1.0000	1.0000									
1.0001										
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	2.1336	2.1464	2.2345	2.1279	2.1464	2.0811	2.1075	2.3364
12	1.0459	1.0471	1.0567	1.0386	1.0386	1.0405	1.0458	1.0498
19	1.0210	1.0211	1.0252	1.0184	1.0191	1.0201	1.0191	1.0230
24	1.0119	1.0117	1.0118	1.0118	1.0120	1.0136	1.0127	1.0127
31	1.0049	1.0050	1.0051	1.0051	1.0052	1.0060	1.0060	1.0060
36	1.0029	1.0031	1.0032	1.0032	1.0032	1.0040	1.0040	1.0040
48	1.0008	1.0009	1.0010	1.0009	1.0010	1.0015	1.0015	1.0015
60	1.0000	1.0002	1.0002	1.0002	1.0003	1.0005	1.0005	1.0005
72	0.9997	0.9998	0.9999	0.9998	0.9999	1.0000	1.0000	1.0000
84	0.9996	0.9997	0.9997	0.9997	0.9997	1.0000	1.0000	1.0000
96	0.9996	0.9996	0.9996	0.9996	0.9997	1.0000	1.0000	1.0000
108	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
120	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
132	0.9996	0.9997	0.9996	0.9997	0.9997	1.0000	1.0000	1.0000
144	0.9997	0.9997	0.9997	0.9998	0.9997	1.0000	1.0000	1.0000
156	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
168	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
180	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
192	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
204	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	2.0152	2.1065	47.47%	7		2.1065	2.0152	2.2256	2.3364
12	1.0262	1.0453		12	95.67%	1.0453	1.0262	1.0262	1.0498
19	1.0063	1.0186	98.17%	19		1.0186	1.0063	1.0101	1.0230
24	1.0067	1.0122		24	98.79%	1.0122	1.0067	1.0067	1.0127
31	1.0020	1.0055	99.45%	31		1.0055	1.0020	1.0020	1.0060
36	1.0020	1.0035		36	99.65%	1.0035	1.0024	1.0025	1.0040
43	1.0010	1.0015	99.85%	48	99.89%	1.0011	1.0008	1.0010	1.0015
55	1.0005	1.0005	99.95%	60	99.97%	1.0003	1.0003	1.0005	1.0005
67	1.0000	1.0000	100.00%	72	100.00%	1.0000	1.0000	1.0000	1.0000
79	1.0000	1.0000	100.00%	84	100.00%	1.0000	1.0000	1.0000	1.0000
91	1.0000	1.0000	100.00%	96	100.00%	1.0000	1.0000	1.0000	1.0000
103	1.0000	1.0000	100.00%	108	100.00%	1.0000	1.0000	1.0000	1.0000
115	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
127	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
139	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
151	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
163	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
175	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
187	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	632,408	204,571	1.0000	204,571	-	-	32.35%
2006	656,746	225,713	1.0000	225,713	-	-	34.37%
2007	679,930	232,656	1.0000	232,656	-	-	34.22%
2008	709,787	243,030	1.0000	243,030	-	-	34.24%
2009	741,553	238,260	1.0000	238,260	-	-	32.13%
2010	761,034	279,557	1.0000	279,557	-	-	36.73%
2011	772,649	271,420	1.0000	271,420	-	-	35.13%
2012	769,715	315,830	1.0000	315,830	-	2	41.03%
2013	781,394	350,413	1.0000	350,413	-	-	44.84%
2014	822,358	313,862	1.0000	313,862	-	-	38.17%
2015	877,262	355,376	1.0000	355,376	-	3	40.51%
2016	923,168	387,542	1.0000	387,542	-	6	41.98%
2017	977,104	408,945	1.0000	408,945	-	22	41.85%
2018	1,044,467	409,187	1.0005	409,391	205	59	39.20%
2019	1,099,731	406,913	1.0015	407,524	611	91	37.06%
2020	1,134,690	315,414	1.0040	316,677	1,263	258	27.91%
2021	1,159,166	436,036	1.0127	441,587	5,551	2,151	38.10%
2022	1,126,492	420,512	1.0498	441,451	20,939	100,652	39.19%
	15,669,653	5,815,237		5,843,805	28,568	103,244	37.29%

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	204,571			204,571	32.35%	32.35%	100.00%	32.35%	32.35%
2006	656,746	225,713	212,754		212,754	32.40%	34.37%	100.00%	34.37%	34.37%
2007	679,930	232,656	234,742	221,264	228,003	33.53%	34.22%	100.00%	34.22%	34.22%
2008	709,787	243,030	241,962	244,131	243,047	34.24%	34.24%	100.00%	34.24%	34.24%
2009	741,553	238,260	252,751	251,641	252,196	34.01%	32.13%	100.00%	32.13%	32.13%
2010	761,034	279,557	247,791	262,861	255,326	33.55%	36.73%	100.00%	36.73%	36.73%
2011	772,649	271,420	290,740	257,702	274,221	35.49%	35.13%	100.00%	35.13%	35.13%
2012	769,715	315,830	282,276	302,369	292,323	37.98%	41.03%	100.00%	41.03%	41.03%
2013	781,394	350,413	328,463	293,568	311,015	39.80%	44.84%	100.00%	44.84%	44.84%
2014	822,358	313,862	364,429	341,602	353,015	42.93%	38.17%	100.00%	38.17%	38.17%
2015	877,262	355,376	326,416	379,006	352,711	40.21%	40.51%	100.00%	40.51%	40.51%
2016	923,168	387,542	369,591	339,473	354,532	38.40%	41.98%	100.00%	41.98%	41.98%
2017	977,104	408,945	403,044	384,375	393,709	40.29%	41.85%	100.00%	41.85%	41.85%
2018	1,044,467	409,391	425,302	419,165	422,234	40.43%	39.20%	75.00%	39.50%	39.50%
2019	1,099,731	407,524	425,767	442,314	434,041	39.47%	37.06%	50.00%	38.26%	38.26%
2020	1,134,690	316,677	423,825	442,797	433,311	38.19%	27.91%	25.00%	35.62%	35.62%
2021	1,159,166	441,587	423,825	440,777	432,301	37.29%	38.10%	25.00%	37.49%	37.49%
2022	1,126,492	441,451	459,251	440,777	450,014	39.95%	39.19%	25.00%	39.76%	39.76%
	15,669,653	5,843,805	5,712,928	5,463,824	5,899,323					

Trend in Losses Based on Exponential Regression (2012 & After excluding 2020 due to COVID) (a):

3.97%

Selected Trend (b):

4.00%

Notes:

(3) Ultimate Losses from Page 7

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Selected	Initial	Expected Percentage:		Expected	Actual	Expected	Estimated	Estimated
		Initial Ult Loss Ratio	Expected Ult Losses	Reported	Unreported	Reported Loss	Reported Loss	Unreported Loss	Ultimate Losses	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	32.35%	204,571	100.00%	0.00%	204,571	204,571	-	204,571	32.35%
2006	656,746	34.37%	225,713	100.00%	0.00%	225,713	225,713	-	225,713	34.37%
2007	679,930	34.22%	232,656	100.00%	0.00%	232,656	232,656	-	232,656	34.22%
2008	709,787	34.24%	243,030	100.00%	0.00%	243,030	243,030	-	243,030	34.24%
2009	741,553	32.13%	238,260	100.00%	0.00%	238,260	238,260	-	238,260	32.13%
2010	761,034	36.73%	279,557	100.00%	0.00%	279,557	279,557	-	279,557	36.73%
2011	772,649	35.13%	271,420	100.00%	0.00%	271,420	271,420	-	271,420	35.13%
2012	769,715	41.03%	315,830	100.00%	0.00%	315,830	315,830	-	315,830	41.03%
2013	781,394	44.84%	350,413	100.00%	0.00%	350,413	350,413	-	350,413	44.84%
2014	822,358	38.17%	313,862	100.00%	0.00%	313,862	313,862	-	313,862	38.17%
2015	877,262	40.51%	355,376	100.00%	0.00%	355,376	355,376	-	355,376	40.51%
2016	923,168	41.98%	387,542	100.00%	0.00%	387,542	387,542	-	387,542	41.98%
2017	977,104	41.85%	408,945	100.00%	0.00%	408,945	408,945	-	408,945	41.85%
2018	1,044,467	39.50%	412,602	99.95%	0.05%	412,396	409,187	206	409,393	39.20%
2019	1,099,731	38.26%	420,782	99.85%	0.15%	420,152	406,913	630	407,543	37.06%
2020	1,134,690	35.62%	404,153	99.60%	0.40%	402,541	315,414	1,612	317,026	27.94%
2021	1,159,166	37.49%	434,623	98.74%	1.26%	429,159	436,036	5,463	441,500	38.09%
2022	1,126,492	39.76%	447,873	95.26%	4.74%	426,630	420,512	21,243	441,755	39.22%
	15,669,653		5,947,207			5,918,051	5,815,237	29,155	5,844,392	37.30%

Notes:
(10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	69,469,087	161,260,967	200,701,848	202,277,118	203,067,925	203,319,673	203,281,558	203,110,573	202,988,020	202,894,318	202,839,662	202,810,567	202,779,315	202,758,369	202,750,692	202,736,615	202,738,573	202,729,305	202,726,503	202,721,014	202,715,200	202,713,900
2005	71,104,373	167,869,419	202,576,696	204,082,940	205,033,132	205,205,587	205,212,862	205,060,873	204,899,222	204,791,479	204,691,626	204,663,501	204,654,306	204,627,181	204,617,652	204,619,736	204,616,414	204,601,840	204,597,613	204,586,405	204,570,708	
2006	74,450,286	173,611,110	222,429,297	224,327,149	225,714,807	225,941,727	225,965,932	225,820,900	225,810,155	225,779,147	225,798,220	225,778,171	225,770,771	225,784,405	225,764,687	225,747,817	225,742,964	225,726,591	225,719,490	225,713,063		
2007	72,445,499	171,952,171	228,803,628	231,038,178	232,478,520	232,821,160	232,800,198	232,788,248	232,851,588	232,802,866	232,775,644	232,760,772	232,748,453	232,737,445	232,722,357	232,704,346	232,688,303	232,679,257	232,656,121			
2008	78,052,354	185,658,561	238,630,041	241,005,810	242,489,201	243,007,924	243,129,550	243,119,853	243,058,845	243,096,179	243,092,499	243,097,563	243,079,112	243,065,933	243,061,577	243,051,467	243,041,587	243,030,137				
2009	86,006,954	195,105,593	233,633,552	235,937,096	237,615,938	238,138,506	238,271,591	238,271,761	238,316,352	238,342,064	238,330,408	238,327,882	238,311,345	238,302,197	238,288,830	238,265,759	238,260,266					
2010	88,686,752	214,929,259	272,178,176	276,113,920	278,335,753	278,798,088	279,177,732	279,426,404	279,542,232	279,555,474	279,566,716	279,601,969	279,583,385	279,576,767	279,564,359	279,557,459						
2011	89,466,875	215,765,775	265,351,744	268,042,742	270,019,721	270,648,804	271,166,510	271,300,962	271,394,472	271,439,973	271,453,400	271,444,069	271,446,094	271,438,929	271,419,308							
2012	98,882,190	227,111,655	306,208,979	310,907,452	313,831,380	314,666,973	315,405,018	315,662,493	315,758,341	315,805,202	315,827,345	315,837,475	315,842,346	315,827,708								
2013	101,245,368	247,626,043	338,402,775	344,169,358	347,613,782	348,805,605	349,802,532	350,166,172	350,301,692	350,361,879	350,402,975	350,417,164	350,412,508									
2014	101,422,460	253,795,226	304,199,747	308,317,683	311,332,860	312,485,298	313,397,848	313,619,547	313,763,812	313,813,827	313,840,715	313,861,502										
2015	122,022,462	285,312,183	346,248,989	350,647,785	353,500,648	354,328,605	354,977,378	355,221,920	355,292,582	355,323,288	355,373,059											
2016	135,678,946	305,689,682	377,180,400	381,413,223	384,762,099	385,880,621	386,947,249	387,323,971	387,464,117	387,536,239												
2017	142,616,377	327,459,078	398,842,597	403,038,603	406,232,288	407,364,138	408,446,944	408,757,622	408,922,555													
2018	139,618,695	319,009,463	398,581,637	403,145,235	406,888,827	407,936,571	408,810,372	409,127,454														
2019	137,575,808	334,240,901	396,093,503	401,719,318	404,924,370	405,796,870	406,821,987															
2020	115,101,363	266,633,485	309,643,472	312,501,923	314,294,020	315,156,845																
2021	126,192,339	304,930,671	420,404,790	433,885,005																		
2022	116,985,860	319,859,982																				

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Evaluation in Months

Insurance Year	7	12	19	24	31	36	48	60	72	84
2004	69,469	161,261	200,702	202,277	203,068	203,320	203,282	203,111	202,988	202,894
2005	71,104	167,869	202,577	204,083	205,033	205,206	205,213	205,061	204,899	204,791
2006	74,450	173,611	222,429	224,327	225,715	225,942	225,966	225,821	225,810	225,779
2007	72,445	171,952	228,804	231,038	232,479	232,821	232,800	232,788	232,852	232,803
2008	78,052	185,659	238,630	241,006	242,489	243,008	243,130	243,120	243,059	243,096
2009	86,007	195,106	233,634	235,937	237,616	238,139	238,272	238,272	238,316	238,342
2010	88,687	214,929	272,178	276,114	278,336	278,798	279,178	279,426	279,542	279,555
2011	89,467	215,766	265,352	268,043	270,020	270,649	271,167	271,301	271,394	271,440
2012	98,882	227,112	306,209	310,907	313,831	314,667	315,405	315,662	315,758	315,805
2013	101,245	247,626	338,403	344,169	347,614	348,806	349,803	350,166	350,302	350,362
2014	101,422	253,795	304,200	308,318	311,333	312,485	313,398	313,620	313,764	313,814
2015	122,022	285,312	346,249	350,648	353,501	354,329	354,977	355,222	355,293	355,323
2016	135,679	305,690	377,180	381,413	384,762	385,881	386,947	387,324	387,464	387,536
2017	142,616	327,459	398,843	403,039	406,232	407,364	408,447	408,758	408,923	
2018	139,619	319,009	398,582	403,145	406,889	407,937	408,810	409,127		
2019	137,576	334,241	396,094	401,719	404,924	405,797	406,822			
2020	115,101	266,633	309,643	312,502	314,294	315,157				
2021	126,192	304,931	420,405	433,885						
2022	116,986	319,860								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.3213	1.2446	1.0078	1.0039	1.0012	0.9998	0.9992	0.9994	0.9995	0.9997
2005	2.3609	1.2068	1.0074	1.0047	1.0008	1.0000	0.9993	0.9992	0.9995	0.9995
2006	2.3319	1.2812	1.0085	1.0062	1.0010	1.0001	0.9994	1.0000	0.9999	1.0001
2007	2.3735	1.3306	1.0098	1.0062	1.0015	0.9999	0.9999	1.0003	0.9998	0.9999
2008	2.3786	1.2853	1.0100	1.0062	1.0021	1.0005	1.0000	0.9997	1.0002	1.0000
2009	2.2685	1.1975	1.0099	1.0071	1.0022	1.0006	1.0000	1.0002	1.0001	1.0000
2010	2.4235	1.2664	1.0145	1.0080	1.0017	1.0014	1.0009	1.0004	1.0000	1.0000
2011	2.4117	1.2298	1.0101	1.0074	1.0023	1.0019	1.0005	1.0003	1.0002	1.0000
2012	2.2968	1.3483	1.0153	1.0094	1.0027	1.0023	1.0008	1.0003	1.0001	1.0001
2013	2.4458	1.3666	1.0170	1.0100	1.0034	1.0029	1.0010	1.0004	1.0002	1.0001
2014	2.5024	1.1986	1.0135	1.0098	1.0037	1.0029	1.0007	1.0005	1.0002	1.0001
2015	2.3382	1.2136	1.0127	1.0081	1.0023	1.0018	1.0007	1.0002	1.0001	1.0001
2016	2.2530	1.2339	1.0112	1.0088	1.0029	1.0028	1.0010	1.0004	1.0002	
2017	2.2961	1.2180	1.0105	1.0079	1.0028	1.0027	1.0008	1.0004		
2018	2.2849	1.2494	1.0114	1.0093	1.0026	1.0021	1.0008			
2019	2.4295	1.1851	1.0142	1.0080	1.0022	1.0025				
2020	2.3165	1.1613	1.0092	1.0057	1.0027					
2021	2.4164	1.3787	1.0321							
2022	2.7342									
Latest 9 Volume Weighted	2.3891	1.2438	1.0150	1.0086	1.0028	1.0025	1.0008	1.0003	1.0001	1.0000
Latest 6 Volume Weighted	2.4061	1.2383	1.0152	1.0081	1.0026	1.0025	1.0008	1.0004	1.0002	1.0001
Latest 3 Volume Weighted	2.4881	1.2432	1.0195	1.0078	1.0025	1.0024	1.0008	1.0003	1.0001	1.0001
Simple Average of Middle 4 of Last 6	2.3285	1.2216	1.0118	1.0082	1.0026	1.0025	1.0008	1.0004	1.0002	1.0001
Simple Average of Middle 3 of Last 5	2.3430	1.2175	1.0121	1.0082	1.0027	1.0024	1.0007	1.0004	1.0002	1.0001
Selected March 22	2.3500	1.2200	1.0120	1.0100	1.0030	1.0025	1.0010	1.0005	1.0005	1.0000
Selected Oct 22	2.3480	1.2392	1.0114	1.0100	1.0030	1.0025	1.0010	1.0005	1.0005	1.0000
Selected Factors	2.4307	1.2392	1.0160	1.0100	1.0030	1.0025	1.0010	1.0005	1.0005	1.0000
Selected Ultimate	3.1141	1.2811	1.0338	1.0176	1.0075	1.0045	1.0020	1.0010	1.0005	1.0000

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
202,840	202,811	202,779	202,758	202,751	202,737	202,739	202,729	202,727	202,721	202,715	202,714
204,692	204,664	204,654	204,627	204,618	204,620	204,616	204,602	204,598	204,586	204,571	
225,798	225,778	225,771	225,784	225,765	225,748	225,743	225,727	225,719	225,713		
232,776	232,761	232,748	232,737	232,722	232,704	232,688	232,679	232,656			
243,092	243,098	243,079	243,066	243,062	243,051	243,042	243,030				
238,330	238,328	238,311	238,302	238,289	238,266	238,260					
279,567	279,602	279,583	279,577	279,564	279,557						
271,453	271,444	271,446	271,439	271,419							
315,827	315,837	315,842	315,828								
350,403	350,417	350,413									
313,841	313,862										
355,373											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9999	0.9998	0.9999	1.0000	0.9999	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.9999	1.0000	0.9999	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	
0.9999	1.0000	1.0001	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000		
0.9999	0.9999	1.0000	0.9999	0.9999	0.9999	1.0000	0.9999			
1.0000	0.9999	0.9999	1.0000	1.0000	1.0000	1.0000				
1.0000	0.9999	1.0000	0.9999	0.9999	1.0000					
1.0001	0.9999	1.0000	1.0000	1.0000						
1.0000	1.0000	1.0000	0.9999							
1.0000	1.0000	1.0000								
1.0000	1.0000									
1.0001										
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	0.9999	1.0000	1.0000	0.9999	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	3.0608	3.0677	3.1974	2.9197	2.9288	2.9525	2.9946	3.1141
12	1.2812	1.2750	1.2851	1.2539	1.2500	1.2564	1.2754	1.2811
19	1.0300	1.0296	1.0337	1.0265	1.0267	1.0298	1.0292	1.0338
24	1.0148	1.0142	1.0139	1.0145	1.0145	1.0176	1.0176	1.0176
31	1.0062	1.0061	1.0060	1.0062	1.0062	1.0075	1.0075	1.0075
36	1.0034	1.0035	1.0035	1.0036	1.0035	1.0045	1.0045	1.0045
48	1.0009	1.0011	1.0011	1.0011	1.0011	1.0020	1.0020	1.0020
60	1.0001	1.0002	1.0002	1.0003	1.0003	1.0010	1.0010	1.0010
72	0.9998	0.9999	0.9999	0.9999	0.9999	1.0005	1.0005	1.0005
84	0.9997	0.9997	0.9998	0.9997	0.9998	1.0000	1.0000	1.0000
96	0.9996	0.9996	0.9997	0.9996	0.9997	1.0000	1.0000	1.0000
108	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
120	0.9996	0.9996	0.9996	0.9997	0.9996	1.0000	1.0000	1.0000
132	0.9997	0.9997	0.9996	0.9997	0.9997	1.0000	1.0000	1.0000
144	0.9997	0.9997	0.9997	0.9998	0.9997	1.0000	1.0000	1.0000
156	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
168	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000
180	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
192	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
204	0.9999	0.9999	0.9999	0.9999	0.9999	1.0000	1.0000	1.0000
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
8	2.3480	2.9946	33.39%	8		2.9946	2.3480	2.4307	3.1141
12	1.2392	1.2754		12	78.41%	1.2754	1.2392	1.2392	1.2811
20	1.0114	1.0292	97.16%	20		1.0292	1.0114	1.0160	1.0338
24	1.0100	1.0176		24	98.27%	1.0176	1.0100	1.0100	1.0176
32	1.0030	1.0075	99.25%	32		1.0075	1.0030	1.0030	1.0075
36	1.0020	1.0045		36	99.55%	1.0045	1.0026	1.0025	1.0045
44	1.0015	1.0025	99.75%	48	99.81%	1.0019	1.0011	1.0010	1.0020
56	1.0005	1.0010	99.90%	60	99.92%	1.0008	1.0005	1.0005	1.0010
68	1.0005	1.0005	99.95%	72	99.97%	1.0003	1.0003	1.0005	1.0005
80	1.0000	1.0000	100.00%	84	100.00%	1.0000	1.0000	1.0000	1.0000
92	1.0000	1.0000	100.00%	96	100.00%	1.0000	1.0000	1.0000	1.0000
104	1.0000	1.0000	100.00%	108	100.00%	1.0000	1.0000	1.0000	1.0000
116	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
128	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
140	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
152	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
164	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
176	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
188	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
200	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	204,571	1.0000	204,571	-	-	-	32.35%
2006	656,746	225,713	1.0000	225,713	-	-	-	34.37%
2007	679,930	232,656	1.0000	232,656	-	-	-	34.22%
2008	709,787	243,030	1.0000	243,030	-	-	-	34.24%
2009	741,553	238,260	1.0000	238,260	-	-	-	32.13%
2010	761,034	279,557	1.0000	279,557	-	-	-	36.73%
2011	772,649	271,419	1.0000	271,419	-	-	-	35.13%
2012	769,715	315,828	1.0000	315,828	-	2	(2)	41.03%
2013	781,394	350,413	1.0000	350,413	-	-	-	44.84%
2014	822,358	313,862	1.0000	313,862	-	-	-	38.17%
2015	877,262	355,373	1.0000	355,373	-	3	(3)	40.51%
2016	923,168	387,536	1.0000	387,536	-	6	(6)	41.98%
2017	977,104	408,923	1.0005	409,127	204	22	182	41.87%
2018	1,044,467	409,127	1.0010	409,537	409	59	350	39.21%
2019	1,099,731	406,822	1.0020	407,636	814	91	723	37.07%
2020	1,134,690	315,157	1.0045	316,577	1,420	258	1,162	27.90%
2021	1,159,166	433,885	1.0176	441,519	7,634	2,151	5,483	38.09%
2022	1,126,492	319,860	1.2811	409,785	89,925	100,652	(10,727)	36.38%
	15,669,653	5,711,992		5,812,399	100,407	103,244	(2,837)	37.09%

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Paid Loss & ALAE - Without Z-Files
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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	204,571			204,571	32.35%	32.35%	100.00%	32.35%	32.35%
2006	656,746	225,713	212,754		212,754	32.40%	34.37%	100.00%	34.37%	34.37%
2007	679,930	232,656	234,742	221,264	228,003	33.53%	34.22%	100.00%	34.22%	34.22%
2008	709,787	243,030	241,962	244,131	243,047	34.24%	34.24%	100.00%	34.24%	34.24%
2009	741,553	238,260	252,751	251,641	252,196	34.01%	32.13%	100.00%	32.13%	32.13%
2010	761,034	279,557	247,791	262,861	255,326	33.55%	36.73%	100.00%	36.73%	36.73%
2011	772,649	271,419	290,740	257,702	274,221	35.49%	35.13%	100.00%	35.13%	35.13%
2012	769,715	315,828	282,276	302,369	292,323	37.98%	41.03%	100.00%	41.03%	41.03%
2013	781,394	350,413	328,461	293,567	311,014	39.80%	44.84%	100.00%	44.84%	44.84%
2014	822,358	313,862	364,429	341,599	353,014	42.93%	38.17%	100.00%	38.17%	38.17%
2015	877,262	355,373	326,416	379,006	352,711	40.21%	40.51%	100.00%	40.51%	40.51%
2016	923,168	387,536	369,588	339,473	354,530	38.40%	41.98%	100.00%	41.98%	41.98%
2017	977,104	409,127	403,038	384,372	393,705	40.29%	41.87%	100.00%	41.87%	41.85%
2018	1,044,467	409,537	425,492	419,159	422,326	40.43%	39.21%	75.00%	39.52%	39.50%
2019	1,099,731	407,636	425,918	442,512	434,215	39.48%	37.07%	50.00%	38.28%	38.26%
2020	1,134,690	316,577	423,942	442,955	433,448	38.20%	27.90%	25.00%	35.62%	35.62%
2021	1,159,166	441,519	329,240	440,899	385,070	33.22%	38.09%	25.00%	34.44%	37.49%
2022	1,126,492	409,785	459,180	342,410	400,795	35.58%	36.38%	25.00%	35.78%	39.76%
	15,669,653	5,812,399	5,618,719	5,365,920	5,803,267					

Trend in Losses Based on Exponential Regression (2013 & After) (a):

2.06%

Selected Trend (b):

4.00%

Notes:

(3) Ultimate Losses from Page 15

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) Selected Initial Ult Loss Ratio from Page 8

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 8

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage: Paid	Expected Percentage: Unpaid	Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	632,408	32.35%	204,571	100.00%	0.00%	204,571	204,571	-	204,571	-	32.35%
2006	656,746	34.37%	225,713	100.00%	0.00%	225,713	225,713	-	225,713	-	34.37%
2007	679,930	34.22%	232,656	100.00%	0.00%	232,656	232,656	-	232,656	-	34.22%
2008	709,787	34.24%	243,030	100.00%	0.00%	243,030	243,030	-	243,030	-	34.24%
2009	741,553	32.13%	238,260	100.00%	0.00%	238,260	238,260	-	238,260	-	32.13%
2010	761,034	36.73%	279,557	100.00%	0.00%	279,557	279,557	-	279,557	-	36.73%
2011	772,649	35.13%	271,420	100.00%	0.00%	271,420	271,419	-	271,419	-	35.13%
2012	769,715	41.03%	315,830	100.00%	0.00%	315,830	315,828	-	315,828	(2)	41.03%
2013	781,394	44.84%	350,413	100.00%	0.00%	350,413	350,413	-	350,413	-	44.84%
2014	822,358	38.17%	313,862	100.00%	0.00%	313,862	313,862	-	313,862	-	38.17%
2015	877,262	40.51%	355,376	100.00%	0.00%	355,376	355,373	-	355,373	(3)	40.51%
2016	923,168	41.98%	387,542	100.00%	0.00%	387,542	387,536	-	387,536	(6)	41.98%
2017	977,104	41.85%	408,945	99.95%	0.05%	408,740	408,923	204	409,127	182	41.87%
2018	1,044,467	39.50%	412,602	99.90%	0.10%	412,190	409,127	412	409,540	353	39.21%
2019	1,099,731	38.26%	420,782	99.80%	0.20%	419,942	406,822	840	407,662	749	37.07%
2020	1,134,690	35.62%	404,153	99.55%	0.45%	402,340	315,157	1,813	316,970	1,555	27.93%
2021	1,159,166	37.49%	434,623	98.27%	1.73%	427,108	433,885	7,515	441,400	5,364	38.08%
2022	1,126,492	39.76%	447,873	78.06%	21.94%	349,590	319,860	98,283	418,143	(2,369)	37.12%
	15,669,653		5,947,207			5,838,139	5,711,992	109,068	5,821,060	5,824	37.15%

Notes:
(10) = (8) + (9)

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Appendix D
Comprehensive - Undiscounted Gross IBNR
Calculations

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Reported Loss & ALAE - With Z-Files & Hailstorm
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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	33,937,904	58,171,539	61,368,966	61,688,973	62,041,115	62,091,728	62,131,221	62,154,856	62,128,966	62,111,605	62,060,990	62,038,863	62,032,032	62,036,130	62,025,724	62,028,807	62,023,648	62,017,375	62,015,760	62,009,139	62,000,658	61,991,228
2005	45,949,663	66,990,222	71,109,820	71,605,358	72,650,030	72,796,562	72,904,548	72,919,931	72,919,400	72,920,082	72,925,607	72,906,828	72,850,745	72,838,869	72,834,412	72,833,850	72,831,018	72,829,156	72,821,011	72,817,499	72,812,163	
2006	46,275,130	67,433,856	71,110,414	71,995,918	73,088,298	73,283,490	73,515,577	73,548,976	73,590,363	73,618,897	73,605,217	73,613,737	73,605,003	73,572,850	73,571,031	73,565,380	73,565,969	73,556,372	73,545,135	73,541,138		
2007	87,411,107	103,142,576	108,702,320	110,079,108	112,992,254	113,193,356	112,808,817	112,744,492	111,638,786	111,644,253	111,665,910	111,681,911	111,679,438	111,677,363	111,678,173	111,678,636	111,678,920	111,675,725	111,675,725			
2008	32,464,188	45,936,238	48,687,796	49,003,875	49,644,371	49,947,441	50,035,972	50,039,495	50,030,305	50,012,668	49,979,707	49,869,821	49,874,179	49,876,916	49,874,245	49,850,646	49,843,425	49,838,054				
2009	58,872,121	74,545,976	78,142,656	78,879,059	79,877,487	80,048,013	78,581,503	78,639,272	78,694,282	78,802,704	78,838,597	78,846,379	78,866,233	78,866,142	78,865,537	78,861,196	78,861,751					
2010	55,163,698	69,219,718	71,693,839	72,849,561	74,447,489	74,589,673	74,616,992	74,711,126	74,814,675	74,841,723	74,877,968	74,885,457	74,856,175	74,846,676	74,840,745	74,833,850						
2011	54,606,269	69,794,020	74,705,997	75,173,779	75,720,890	76,009,347	76,045,005	75,635,762	75,730,900	75,745,750	75,706,369	75,360,338	75,365,309	75,370,840	75,371,844							
2012	52,440,954	66,127,279	71,401,904	72,280,825	73,163,300	73,259,015	72,829,626	72,947,423	72,868,567	72,881,752	72,131,902	72,128,293	72,130,116	72,143,932								
2013	52,569,122	68,849,210	74,111,076	75,156,280	76,132,731	76,255,712	76,179,832	75,101,604	75,157,335	75,142,011	75,159,176	75,171,605	75,173,432									
2014	47,033,573	65,921,793	70,686,151	71,226,110	71,693,275	71,867,650	71,434,313	71,557,058	71,638,601	71,652,465	71,685,893	71,692,160										
2015	87,844,216	113,139,753	121,216,991	122,137,000	122,885,787	122,872,168	120,974,825	121,175,377	121,342,039	121,371,019	121,439,940											
2016	85,375,875	112,794,020	118,468,686	118,584,606	119,582,080	119,906,419	119,931,410	118,655,817	118,629,918	118,666,008												
2017	45,279,379	66,458,960	71,693,417	72,231,278	72,798,710	73,028,975	72,760,764	72,827,603	72,861,155													
2018	82,404,158	106,416,207	113,681,448	113,940,935	114,799,185	115,059,138	115,228,946	115,290,462														
2019	51,150,105	78,524,194	84,510,671	85,654,687	86,729,291	86,954,125	87,234,221															
2020	51,625,363	77,708,759	83,225,853	84,158,047	84,696,762	84,920,450																
2021	46,349,183	76,971,406	84,789,300	86,131,905																		
2022	65,498,064	102,076,483																				

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Manitoba Public Insurance
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March 31, 2023

Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	33,938	58,172	61,369	61,689	62,041	62,092	62,131	62,155	62,129	62,112
2005	45,950	66,990	71,110	71,605	72,650	72,797	72,905	72,920	72,919	72,920
2006	46,275	67,434	71,110	71,996	73,088	73,283	73,516	73,549	73,590	73,619
2007	46,067	60,955	63,864	64,808	66,143	66,362	66,528	66,559	66,493	66,529
2008	32,464	45,936	48,688	49,004	49,644	49,947	50,036	50,039	50,030	50,013
2009	31,024	45,190	47,433	47,940	48,408	48,491	48,461	48,456	48,427	48,536
2010	55,164	69,220	71,694	72,850	74,447	74,590	74,617	74,711	74,815	74,842
2011	54,606	69,794	74,706	75,174	75,721	76,009	76,045	75,636	75,731	75,746
2012	52,441	66,127	71,402	72,281	73,163	73,259	72,830	72,947	72,869	72,882
2013	52,569	68,849	74,111	75,156	76,133	76,256	76,180	75,102	75,157	75,142
2014	47,034	65,922	70,686	71,226	71,693	71,868	71,434	71,557	71,639	71,652
2015	87,844	113,140	121,217	122,137	122,886	122,872	120,975	121,175	121,342	121,371
2016	85,376	112,794	118,469	118,585	119,582	119,906	119,931	118,656	118,630	118,666
2017	45,279	66,459	71,693	72,231	72,799	73,029	72,761	72,828	72,861	
2018	54,578	78,915	85,195	85,180	85,918	86,144	86,240	86,319		
2019	51,150	78,524	84,511	85,655	86,729	86,954	87,234			
2020	51,625	77,709	83,226	84,158	84,697	84,920				
2021	46,349	76,971	84,789	86,132						
2022	65,498	102,076								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	1.7141	1.0550	1.0052	1.0057	1.0008	1.0006	1.0004	0.9996	0.9997	0.9992
2005	1.4579	1.0615	1.0070	1.0146	1.0020	1.0015	1.0002	1.0000	1.0000	1.0001
2006	1.4572	1.0545	1.0125	1.0152	1.0027	1.0032	1.0005	1.0006	1.0004	0.9998
2007	1.3232	1.0477	1.0148	1.0206	1.0033	1.0025	1.0005	0.9990	1.0005	0.9999
2008	1.4150	1.0599	1.0065	1.0131	1.0061	1.0018	1.0001	0.9998	0.9996	0.9993
2009	1.4566	1.0496	1.0107	1.0098	1.0017	0.9994	0.9999	0.9994	1.0022	1.0007
2010	1.2548	1.0357	1.0161	1.0219	1.0019	1.0004	1.0013	1.0014	1.0004	1.0005
2011	1.2781	1.0704	1.0063	1.0073	1.0038	1.0005	0.9946	1.0013	1.0002	0.9995
2012	1.2610	1.0798	1.0123	1.0122	1.0013	0.9941	1.0016	0.9989	1.0002	0.9897
2013	1.3097	1.0764	1.0141	1.0130	1.0016	0.9990	0.9858	1.0007	0.9998	1.0002
2014	1.4016	1.0723	1.0076	1.0066	1.0024	0.9940	1.0017	1.0011	1.0002	1.0005
2015	1.2880	1.0714	1.0076	1.0061	0.9999	0.9846	1.0017	1.0014	1.0002	1.0006
2016	1.3211	1.0503	1.0010	1.0084	1.0027	1.0002	0.9894	0.9998	1.0003	
2017	1.4678	1.0788	1.0075	1.0079	1.0032	0.9963	1.0009	1.0005		
2018	1.4459	1.0796	0.9998	1.0087	1.0026	1.0011	1.0009			
2019	1.5352	1.0762	1.0135	1.0125	1.0026	1.0032				
2020	1.5052	1.0710	1.0112	1.0064	1.0026					
2021	1.6607	1.1016	1.0158							
2022	1.5585									
Latest 9 Volume Weighted	1.4447	1.0739	1.0083	1.0089	1.0020	0.9966	0.9973	1.0006	1.0003	0.9990
Latest 6 Volume Weighted	1.5284	1.0743	1.0077	1.0082	1.0021	0.9961	0.9966	1.0004	1.0002	0.9987
Latest 3 Volume Weighted	1.5706	1.0829	1.0135	1.0092	1.0026	1.0004	0.9960	1.0006	1.0003	1.0004
Simple Average of Middle 4 of Last 6	1.4885	1.0764	1.0083	1.0078	1.0026	0.9979	0.9982	1.0005	1.0002	1.0002
Simple Average of Middle 3 of Last 5	1.5027	1.0782	1.0107	1.0083	1.0027	0.9992	1.0012	1.0008	1.0002	1.0001
Selected March 22	1.4500	1.0700	1.0060	1.0100	1.0020	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Oct 22	1.5205	1.0815	1.0061	1.0088	1.0020	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Factors	1.6008	1.0815	1.0096	1.0088	1.0020	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Ultimate	1.7668	1.1037	1.0206	1.0108	1.0020	1.0000	1.0000	1.0000	1.0000	1.0000

Manitoba Public Insurance
Automobile Insurance Division - Comprehensive - Basic
Reported Loss & ALAE - Without Z-Files & Hailstorm Losses
March 31, 2023

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
62,061	62,039	62,032	62,036	62,026	62,029	62,024	62,017	62,016	62,009	62,001	61,991
72,926	72,907	72,851	72,839	72,834	72,834	72,831	72,829	72,821	72,817	72,812	
73,605	73,614	73,605	73,573	73,571	73,565	73,566	73,556	73,545	73,541		
66,522	66,538	66,535	66,533	66,534	66,535	66,535	66,532	66,532			
49,980	49,870	49,874	49,877	49,874	49,851	49,843	49,838				
48,572	48,579	48,599	48,599	48,599	48,594	48,595					
74,878	74,885	74,856	74,847	74,841	74,834						
75,706	75,360	75,365	75,371	75,372							
72,132	72,128	72,130	72,144								
75,159	75,172	75,173									
71,686	71,692										
121,440											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9996	0.9999	1.0001	0.9998	1.0000	0.9999	0.9999	1.0000	0.9999	0.9999	0.9998
0.9997	0.9992	0.9998	0.9999	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	
1.0001	0.9999	0.9996	1.0000	0.9999	1.0000	0.9999	0.9998	0.9999		
1.0002	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000			
0.9978	1.0001	1.0001	0.9999	0.9995	0.9999	0.9999				
1.0002	1.0004	1.0000	1.0000	0.9999	1.0000					
1.0001	0.9996	0.9999	0.9999	0.9999						
0.9954	1.0001	1.0001	1.0000							
0.9999	1.0000	1.0002								
1.0002	1.0000									
1.0001										
0.9993	0.9999	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
0.9992	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0001	1.0000	1.0000	1.0000	0.9998	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0001	1.0001	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0000	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Manitoba Public Insurance
 Automobile Insurance Division - Comprehensive - Basic
 Reported Loss & ALAE - Without Z-Files & Hailstorm Losses
 March 31, 2023

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	1.5692	1.6561	1.7391	1.6269	1.6573	1.5796	1.6724	1.7668
12	1.0862	1.0835	1.1072	1.0930	1.1028	1.0894	1.0999	1.1037
19	1.0115	1.0086	1.0225	1.0154	1.0229	1.0181	1.0170	1.0206
24	1.0032	1.0009	1.0088	1.0071	1.0120	1.0120	1.0108	1.0108
31	0.9944	0.9927	0.9996	0.9992	1.0036	1.0020	1.0020	1.0020
36	0.9923	0.9906	0.9970	0.9966	1.0010	1.0000	1.0000	1.0000
48	0.9957	0.9945	0.9966	0.9987	1.0018	1.0000	1.0000	1.0000
60	0.9984	0.9980	1.0006	1.0005	1.0006	1.0000	1.0000	1.0000
72	0.9979	0.9975	1.0001	0.9999	0.9998	1.0000	1.0000	1.0000
84	0.9976	0.9973	0.9998	0.9997	0.9996	1.0000	1.0000	1.0000
96	0.9985	0.9986	0.9994	0.9996	0.9995	1.0000	1.0000	1.0000
108	0.9992	0.9994	0.9993	0.9995	0.9995	1.0000	1.0000	1.0000
120	0.9993	0.9994	0.9993	0.9994	0.9995	1.0000	1.0000	1.0000
132	0.9994	0.9994	0.9992	0.9994	0.9994	1.0000	1.0000	1.0000
144	0.9994	0.9994	0.9993	0.9994	0.9994	1.0000	1.0000	1.0000
156	0.9995	0.9995	0.9995	0.9995	0.9995	1.0000	1.0000	1.0000
168	0.9995	0.9995	0.9995	0.9995	0.9995	1.0000	1.0000	1.0000
180	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
192	0.9997	0.9997	0.9997	0.9997	0.9997	1.0000	1.0000	1.0000
204	0.9997	0.9997	0.9997	0.9997	0.9997	1.0000	1.0000	1.0000
216	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Se'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	1.5205	1.6724	59.80%	7		1.6724	1.5205	1.6008	1.7668
12	1.0815	1.0999		12	90.92%	1.0999	1.0815	1.0815	1.1037
19	1.0061	1.0170	98.33%	19		1.0170	1.0061	1.0096	1.0206
24	1.0088	1.0108		24	98.93%	1.0108	1.0088	1.0088	1.0108
31	1.0020	1.0020	99.80%	31		1.0020	1.0020	1.0020	1.0020
36	1.0000	1.0000		36	100.00%	1.0000	1.0000	1.0000	1.0000
43	1.0000	1.0000	100.00%	48	100.00%	1.0000	1.0000	1.0000	1.0000
55	1.0000	1.0000	100.00%	60	100.00%	1.0000	1.0000	1.0000	1.0000
67	1.0000	1.0000	100.00%	72	100.00%	1.0000	1.0000	1.0000	1.0000
79	1.0000	1.0000	100.00%	84	100.00%	1.0000	1.0000	1.0000	1.0000
91	1.0000	1.0000	100.00%	96	100.00%	1.0000	1.0000	1.0000	1.0000
103	1.0000	1.0000	100.00%	108	100.00%	1.0000	1.0000	1.0000	1.0000
115	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
127	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
139	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
151	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
163	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
175	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
187	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

Manitoba Public Insurance
 Automobile Insurance Division - Comprehensive - Basic
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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	632,408	72,812	1.0000	72,812	-	-	11.51%
2006	656,746	73,541	1.0000	73,541	-	-	11.20%
2007	679,930	66,532	1.0000	66,532	-	-	9.79%
2008	709,787	49,838	1.0000	49,838	-	-	7.02%
2009	741,553	48,595	1.0000	48,595	-	-	6.55%
2010	761,034	74,834	1.0000	74,834	-	-	9.83%
2011	772,649	75,372	1.0000	75,372	-	-	9.75%
2012	769,715	72,144	1.0000	72,144	-	4	9.37%
2013	781,394	75,173	1.0000	75,173	-	-	9.62%
2014	822,358	71,692	1.0000	71,692	-	-	8.72%
2015	877,262	121,440	1.0000	121,440	-	3	13.84%
2016	923,168	118,666	1.0000	118,666	-	13	12.85%
2017	977,104	72,861	1.0000	72,861	-	2	7.46%
2018	1,044,467	86,319	1.0000	86,319	-	77	8.26%
2019	1,099,731	87,234	1.0000	87,234	-	718	7.93%
2020	1,134,690	84,920	1.0000	84,920	-	523	7.48%
2021	1,159,166	86,132	1.0108	87,065	933	1,134	7.51%
2022	1,126,492	102,076	1.1037	112,661	10,585	19,005	10.00%
	15,669,653	1,440,183		1,451,701	11,518	21,479	9.26%

Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	72,812			72,812	11.51%	11.51%	100.00%	11.51%	11.51%
2006	656,746	73,541	74,997		74,997	11.42%	11.20%	100.00%	11.20%	11.20%
2007	679,930	66,532	75,747	77,246	76,497	11.25%	9.79%	100.00%	9.79%	9.79%
2008	709,787	49,838	68,528	78,020	73,274	10.32%	7.02%	100.00%	7.02%	7.02%
2009	741,553	48,595	51,333	70,584	60,958	8.22%	6.55%	100.00%	6.55%	6.55%
2010	761,034	74,834	50,053	52,873	51,463	6.76%	9.83%	100.00%	9.83%	9.83%
2011	772,649	75,372	77,079	51,554	64,317	8.32%	9.75%	100.00%	9.75%	9.75%
2012	769,715	72,144	77,633	79,391	78,512	10.20%	9.37%	100.00%	9.37%	9.37%
2013	781,394	75,173	74,308	79,962	77,135	9.87%	9.62%	100.00%	9.62%	9.62%
2014	822,358	71,692	77,429	76,537	76,983	9.36%	8.72%	100.00%	8.72%	8.72%
2015	877,262	121,440	73,843	79,751	76,797	8.75%	13.84%	100.00%	13.84%	13.84%
2016	923,168	118,666	125,083	76,058	100,571	10.89%	12.85%	100.00%	12.85%	12.85%
2017	977,104	72,861	122,226	128,836	125,531	12.85%	7.46%	100.00%	7.46%	7.46%
2018	1,044,467	86,319	75,047	125,893	100,470	9.62%	8.26%	75.00%	8.60%	8.60%
2019	1,099,731	87,234	88,909	77,298	83,104	7.56%	7.93%	50.00%	7.74%	7.74%
2020	1,134,690	84,920	89,851	91,576	90,714	7.99%	7.48%	25.00%	7.87%	7.87%
2021	1,159,166	87,065	87,468	92,547	90,007	7.76%	7.51%	25.00%	7.70%	7.70%
2022	1,126,492	112,661	89,677	90,092	89,885	7.98%	10.00%	75.00%	9.50%	9.50%
	15,669,653	1,451,701	1,379,211	1,328,220	1,464,026					

Trend in Losses Based on Exponential Regression (a):

2.94%

Selected Trend (b):

3.00%

Notes:

(3) Ultimate Losses from Page 7

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	11.51%	72,812	100.00%	0.00%	72,812	72,812	-	72,812	11.51%
2006	656,746	11.20%	73,541	100.00%	0.00%	73,541	73,541	-	73,541	11.20%
2007	679,930	9.79%	66,532	100.00%	0.00%	66,532	66,532	-	66,532	9.79%
2008	709,787	7.02%	49,838	100.00%	0.00%	49,838	49,838	-	49,838	7.02%
2009	741,553	6.55%	48,595	100.00%	0.00%	48,595	48,595	-	48,595	6.55%
2010	761,034	9.83%	74,834	100.00%	0.00%	74,834	74,834	-	74,834	9.83%
2011	772,649	9.75%	75,372	100.00%	0.00%	75,372	75,372	-	75,372	9.75%
2012	769,715	9.37%	72,144	100.00%	0.00%	72,144	72,144	-	72,144	9.37%
2013	781,394	9.62%	75,173	100.00%	0.00%	75,173	75,173	-	75,173	9.62%
2014	822,358	8.72%	71,692	100.00%	0.00%	71,692	71,692	-	71,692	8.72%
2015	877,262	13.84%	121,440	100.00%	0.00%	121,440	121,440	-	121,440	13.84%
2016	923,168	12.85%	118,666	100.00%	0.00%	118,666	118,666	-	118,666	12.85%
2017	977,104	7.46%	72,861	100.00%	0.00%	72,861	72,861	-	72,861	7.46%
2018	1,044,467	8.60%	89,857	100.00%	0.00%	89,857	86,319	-	86,319	8.26%
2019	1,099,731	7.74%	85,169	100.00%	0.00%	85,169	87,234	-	87,234	7.93%
2020	1,134,690	7.87%	89,265	100.00%	0.00%	89,265	84,920	-	84,920	7.48%
2021	1,159,166	7.70%	89,272	98.93%	1.07%	88,315	86,132	957	87,089	7.51%
2022	1,126,492	9.50%	106,967	90.60%	9.40%	96,917	102,076	10,050	112,126	9.95%
	15,669,653		1,454,031			1,443,024	1,440,183	11,007	1,451,189	9.26%

Notes:
(10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	25,828,732	52,125,600	60,812,062	61,487,091	61,951,010	62,047,073	62,118,591	62,125,976	62,121,231	62,109,980	62,059,915	62,037,788	62,030,957	62,035,555	62,025,149	62,028,807	62,023,648	62,017,375	62,015,760	62,009,139	62,000,658	61,991,228
2005	30,752,164	58,038,438	70,246,141	71,268,943	72,431,394	72,640,412	72,832,776	72,851,413	72,852,152	72,855,645	72,860,850	72,842,803	72,835,595	72,838,869	72,834,412	72,833,850	72,831,018	72,829,156	72,821,011	72,817,499	72,812,163	
2006	30,981,502	57,525,104	70,368,778	71,679,667	72,921,003	73,177,347	73,489,795	73,532,074	73,572,410	73,618,849	73,605,217	73,613,737	73,605,003	73,572,850	73,571,031	73,565,380	73,565,969	73,556,372	73,545,135	73,541,138		
2007	46,002,782	80,811,474	101,102,447	104,779,770	109,455,172	110,500,251	111,306,409	111,500,854	111,635,356	111,642,076	111,665,685	111,677,432	111,676,063	111,677,363	111,678,173	111,673,061	111,678,920	111,675,725	111,675,725			
2008	22,286,875	39,245,466	47,792,352	48,677,494	49,483,370	49,824,326	49,949,370	49,971,570	49,964,630	49,955,968	49,924,007	49,818,121	49,824,479	49,827,216	49,874,245	49,850,646	49,843,425	49,838,054				
2009	29,369,987	58,492,076	72,022,010	74,660,960	77,229,595	77,975,361	78,480,498	78,617,285	78,682,868	78,765,771	78,838,574	78,846,379	78,866,233	78,863,842	78,865,537	78,861,196	78,861,196					
2010	31,047,559	57,110,863	69,622,731	71,832,774	73,802,666	74,117,828	74,481,607	74,637,758	74,742,524	74,788,997	74,824,413	74,841,852	74,856,171	74,846,676	74,840,745	74,833,850						
2011	31,216,693	56,631,237	70,279,098	72,171,071	74,021,164	74,607,841	75,048,055	75,204,293	75,299,512	75,348,776	75,346,344	75,360,338	75,365,309	75,370,840	75,371,844							
2012	32,505,976	54,270,650	66,986,040	68,999,173	70,954,459	71,413,845	71,806,395	71,956,106	72,055,889	72,101,104	72,122,311	72,124,518	72,129,966	72,140,307								
2013	30,200,593	55,195,175	69,778,381	72,198,824	74,059,875	74,460,289	74,939,931	75,096,617	75,155,771	75,139,151	75,158,994	75,171,605	75,173,432									
2014	30,669,817	57,147,456	68,139,697	69,548,801	70,787,835	71,084,302	71,398,665	71,539,540	71,629,102	71,652,465	71,684,643	71,692,160										
2015	49,643,154	92,742,524	113,606,525	116,660,462	119,458,725	120,154,738	120,807,312	121,119,115	121,336,454	121,367,428	121,437,365											
2016	51,303,911	91,292,774	111,168,008	114,004,187	116,592,904	117,371,025	118,277,403	118,512,108	118,600,483	118,653,133												
2017	31,557,960	57,910,603	70,130,522	71,256,520	72,247,773	72,542,033	72,746,327	72,821,440	72,859,280													
2018	54,351,451	89,993,897	108,605,270	111,230,495	112,971,771	113,436,518	113,807,211	113,943,917														
2019	33,917,966	68,242,641	82,597,683	84,531,772	85,870,338	86,160,176	86,515,802															
2020	37,552,888	69,657,595	81,877,026	83,401,921	84,081,983	84,397,943																
2021	33,326,262	63,636,824	82,514,669	84,997,961																		
2022	40,809,709	83,071,701																				

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	7	12	19	24	31	36	48	60	72	84
2004	25,829	52,126	60,812	61,487	61,951	62,047	62,119	62,126	62,121	62,110
2005	30,752	58,038	70,246	71,269	72,431	72,640	72,833	72,851	72,852	72,856
2006	30,982	57,525	70,369	71,680	72,921	73,177	73,490	73,532	73,572	73,619
2007	29,245	54,196	62,902	64,686	65,804	66,346	66,483	66,507	66,539	66,527
2008	22,287	39,245	47,792	48,677	49,483	49,824	49,949	49,972	49,965	49,956
2009	20,643	40,100	46,415	47,611	48,094	48,363	48,433	48,449	48,416	48,499
2010	31,048	57,111	69,623	71,833	73,803	74,118	74,482	74,638	74,743	74,789
2011	31,217	56,631	70,279	72,171	74,021	74,608	75,048	75,204	75,300	75,349
2012	32,506	54,271	66,986	68,999	70,954	71,414	71,806	71,956	72,056	72,101
2013	30,201	55,195	69,778	72,199	74,060	74,460	74,940	75,097	75,156	75,139
2014	30,670	57,147	68,140	69,549	70,788	71,084	71,399	71,540	71,629	71,652
2015	49,643	92,743	113,607	116,660	119,459	120,155	120,807	121,119	121,336	121,367
2016	51,304	91,293	111,168	114,004	116,593	117,371	118,277	118,512	118,600	118,653
2017	31,558	57,911	70,131	71,257	72,248	72,542	72,746	72,821	72,859	
2018	36,533	68,193	82,827	84,744	85,650	85,943	86,126	86,243		
2019	33,918	68,243	82,598	84,532	85,870	86,160	86,516			
2020	37,553	69,658	81,877	83,402	84,082	84,398				
2021	33,326	63,637	82,515	84,998						
2022	40,810	83,072								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.0181	1.1666	1.0111	1.0075	1.0016	1.0012	1.0001	0.9999	0.9998	0.9992
2005	1.8873	1.2103	1.0146	1.0163	1.0029	1.0026	1.0003	1.0000	1.0000	1.0001
2006	1.8568	1.2233	1.0186	1.0173	1.0035	1.0043	1.0006	1.0005	1.0006	0.9998
2007	1.8532	1.1606	1.0284	1.0173	1.0082	1.0021	1.0004	1.0005	0.9998	0.9999
2008	1.7609	1.2178	1.0185	1.0166	1.0069	1.0025	1.0004	0.9999	0.9998	0.9994
2009	1.9426	1.1575	1.0258	1.0101	1.0056	1.0015	1.0003	0.9993	1.0017	1.0015
2010	1.8395	1.2191	1.0317	1.0274	1.0043	1.0049	1.0021	1.0014	1.0006	1.0005
2011	1.8141	1.2410	1.0269	1.0256	1.0079	1.0059	1.0021	1.0013	1.0007	1.0000
2012	1.6696	1.2343	1.0301	1.0283	1.0065	1.0055	1.0021	1.0014	1.0006	1.0003
2013	1.8276	1.2642	1.0347	1.0258	1.0054	1.0064	1.0021	1.0008	0.9998	1.0003
2014	1.8633	1.1923	1.0207	1.0178	1.0042	1.0044	1.0020	1.0013	1.0003	1.0004
2015	1.8682	1.2250	1.0269	1.0240	1.0058	1.0054	1.0026	1.0018	1.0003	1.0006
2016	1.7795	1.2177	1.0255	1.0227	1.0067	1.0077	1.0020	1.0007	1.0004	
2017	1.8351	1.2110	1.0161	1.0139	1.0041	1.0028	1.0010	1.0005		
2018	1.8666	1.2146	1.0231	1.0107	1.0034	1.0021	1.0014			
2019	2.0120	1.2104	1.0234	1.0158	1.0034	1.0041				
2020	1.8549	1.1754	1.0186	1.0082	1.0038					
2021	1.9095	1.2966	1.0301							
2022	2.0356									
Latest 9 Volume Weighted	1.8878	1.2221	1.0245	1.0188	1.0049	1.0051	1.0020	1.0010	1.0004	1.0003
Latest 6 Volume Weighted	1.9219	1.2200	1.0231	1.0168	1.0047	1.0047	1.0019	1.0011	1.0003	1.0004
Latest 3 Volume Weighted	1.9372	1.2255	1.0241	1.0116	1.0035	1.0030	1.0015	1.0011	1.0003	1.0005
Simple Average of Middle 4 of Last 6	1.8665	1.2134	1.0227	1.0158	1.0043	1.0042	1.0019	1.0010	1.0004	1.0004
Simple Average of Middle 3 of Last 5	1.8770	1.2120	1.0217	1.0135	1.0037	1.0041	1.0018	1.0009	1.0003	1.0003
Selected March 22	1.8500	1.2150	1.0250	1.0200	1.0055	1.0055	1.0025	1.0015	1.0005	1.0000
Selected Oct 22	1.8951	1.2207	1.0218	1.0149	1.0049	1.0045	1.0020	1.0010	1.0005	1.0000
Selected Factors	1.9370	1.2207	1.0225	1.0149	1.0049	1.0045	1.0020	1.0010	1.0005	1.0000
Selected Ultimate	2.4853	1.2831	1.0511	1.0280	1.0130	1.0080	1.0035	1.0015	1.0005	1.0000

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
62,060	62,038	62,031	62,036	62,025	62,029	62,024	62,017	62,016	62,009	62,001	61,991
72,861	72,843	72,836	72,839	72,834	72,834	72,831	72,829	72,821	72,817	72,812	
73,605	73,614	73,605	73,573	73,571	73,565	73,566	73,556	73,545	73,541		
66,522	66,533	66,532	66,533	66,534	66,529	66,535	66,532	66,532			
49,924	49,818	49,824	49,827	49,874	49,851	49,843	49,838				
48,572	48,579	48,599	48,597	48,599	48,594	48,595					
74,824	74,842	74,856	74,847	74,841	74,834						
75,346	75,360	75,365	75,371	75,372							
72,122	72,125	72,130	72,140								
75,159	75,172	75,173									
71,685	71,692										
121,437											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9996	0.9999	1.0001	0.9998	1.0001	0.9999	0.9999	1.0000	0.9999	0.9999	0.9998
0.9998	0.9999	1.0000	0.9999	1.0000	1.0000	1.0000	0.9999	1.0000	0.9999	
1.0001	0.9999	0.9996	1.0000	0.9999	1.0000	0.9999	0.9998	0.9999		
1.0002	1.0000	1.0000	1.0000	0.9999	1.0001	1.0000	1.0000			
0.9979	1.0001	1.0001	1.0009	0.9995	0.9999	0.9999				
1.0002	1.0004	1.0000	1.0000	0.9999	1.0000					
1.0002	1.0002	0.9999	0.9999	0.9999						
1.0002	1.0001	1.0001	1.0000							
1.0000	1.0001	1.0001								
1.0002	1.0000									
1.0001										
1.0000	1.0001	1.0000	1.0001	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0001	1.0001	1.0000	1.0001	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0001	1.0001	1.0000	1.0000	0.9998	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0002	1.0001	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0002	1.0001	1.0000	1.0000	0.9999	1.0000	0.9999	0.9999	0.9999	0.9999	0.9998
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	2.4400	2.4711	2.4827	2.3808	2.3817	2.3866	2.4299	2.4853
12	1.2925	1.2857	1.2816	1.2756	1.2689	1.2901	1.2822	1.2831
19	1.0576	1.0538	1.0457	1.0512	1.0469	1.0618	1.0504	1.0511
24	1.0322	1.0300	1.0212	1.0279	1.0247	1.0359	1.0280	1.0280
31	1.0132	1.0130	1.0095	1.0119	1.0110	1.0156	1.0130	1.0130
36	1.0083	1.0083	1.0059	1.0076	1.0073	1.0100	1.0080	1.0080
48	1.0032	1.0035	1.0029	1.0034	1.0031	1.0045	1.0035	1.0035
60	1.0012	1.0016	1.0014	1.0016	1.0014	1.0020	1.0015	1.0015
72	1.0002	1.0005	1.0003	1.0005	1.0004	1.0005	1.0005	1.0005
84	0.9998	1.0001	0.9999	1.0001	1.0001	1.0000	1.0000	1.0000
96	0.9994	0.9998	0.9995	0.9997	0.9998	1.0000	1.0000	1.0000
108	0.9995	0.9996	0.9994	0.9996	0.9996	1.0000	1.0000	1.0000
120	0.9994	0.9995	0.9993	0.9995	0.9995	1.0000	1.0000	1.0000
132	0.9995	0.9995	0.9993	0.9994	0.9995	1.0000	1.0000	1.0000
144	0.9994	0.9994	0.9993	0.9994	0.9994	1.0000	1.0000	1.0000
156	0.9995	0.9995	0.9995	0.9995	0.9995	1.0000	1.0000	1.0000
168	0.9995	0.9995	0.9995	0.9995	0.9995	1.0000	1.0000	1.0000
180	0.9996	0.9996	0.9996	0.9996	0.9996	1.0000	1.0000	1.0000
192	0.9997	0.9997	0.9997	0.9997	0.9997	1.0000	1.0000	1.0000
204	0.9997	0.9997	0.9997	0.9997	0.9997	1.0000	1.0000	1.0000
216	0.9998	0.9998	0.9998	0.9998	0.9998	1.0000	1.0000	1.0000

Manitoba Public Insurance
Automobile Insurance Division - Comprehensive - Basic
Paid Loss & ALAE - Without Z-Files & Hailstorm Losses
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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	1.8951	2.4303	41.15%	7		2.4303	1.8951	1.9370	2.4853
12	1.2207	1.2824		12	77.98%	1.2824	1.2207	1.2207	1.2831
19	1.0218	1.0505	95.19%	19		1.0505	1.0218	1.0225	1.0511
24	1.0149	1.0281		24	97.26%	1.0281	1.0149	1.0149	1.0280
31	1.0049	1.0131	98.71%	31		1.0131	1.0049	1.0049	1.0130
36	1.0036	1.0082		36	99.19%	1.0082	1.0047	1.0045	1.0080
43	1.0025	1.0045	99.55%	48	99.65%	1.0035	1.0021	1.0020	1.0035
55	1.0014	1.0020	99.80%	60	99.86%	1.0014	1.0011	1.0010	1.0015
67	1.0006	1.0006	99.94%	72	99.97%	1.0003	1.0003	1.0005	1.0005
79	1.0000	1.0000	100.00%	84	100.00%	1.0000	1.0000	1.0000	1.0000
91	1.0000	1.0000	100.00%	96	100.00%	1.0000	1.0000	1.0000	1.0000
103	1.0000	1.0000	100.00%	108	100.00%	1.0000	1.0000	1.0000	1.0000
115	1.0000	1.0000	100.00%	120	100.00%	1.0000	1.0000	1.0000	1.0000
127	1.0000	1.0000	100.00%	132	100.00%	1.0000	1.0000	1.0000	1.0000
139	1.0000	1.0000	100.00%	144	100.00%	1.0000	1.0000	1.0000	1.0000
151	1.0000	1.0000	100.00%	156	100.00%	1.0000	1.0000	1.0000	1.0000
163	1.0000	1.0000	100.00%	168	100.00%	1.0000	1.0000	1.0000	1.0000
175	1.0000	1.0000	100.00%	180	100.00%	1.0000	1.0000	1.0000	1.0000
187	1.0000	1.0000	100.00%	192	100.00%	1.0000	1.0000	1.0000	1.0000
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

Manitoba Public Insurance
 Automobile Insurance Division - Comprehensive - Basic
 Paid Loss & ALAE - Without Z-Files & Hailstorm Losses
 March 31, 2023

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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	72,812	1.0000	72,812	-	-	-	11.51%
2006	656,746	73,541	1.0000	73,541	-	-	-	11.20%
2007	679,930	66,532	1.0000	66,532	-	-	-	9.79%
2008	709,787	49,838	1.0000	49,838	-	-	-	7.02%
2009	741,553	48,595	1.0000	48,595	-	-	-	6.55%
2010	761,034	74,834	1.0000	74,834	-	-	-	9.83%
2011	772,649	75,372	1.0000	75,372	-	-	-	9.75%
2012	769,715	72,140	1.0000	72,140	-	4	(4)	9.37%
2013	781,394	75,173	1.0000	75,173	-	-	-	9.62%
2014	822,358	71,692	1.0000	71,692	-	-	-	8.72%
2015	877,262	121,437	1.0000	121,437	-	3	(3)	13.84%
2016	923,168	118,653	1.0000	118,653	-	13	(13)	12.85%
2017	977,104	72,859	1.0005	72,896	36	2	34	7.46%
2018	1,044,467	86,243	1.0015	86,372	129	77	52	8.27%
2019	1,099,731	86,516	1.0035	86,819	303	718	(415)	7.89%
2020	1,134,690	84,398	1.0080	85,075	677	523	154	7.50%
2021	1,159,166	84,998	1.0280	87,378	2,380	1,134	1,246	7.54%
2022	1,126,492	83,072	1.2831	106,586	23,515	19,005	4,510	9.46%
	15,669,653	1,418,706		1,445,746	27,040	21,479	5,561	9.23%

Manitoba Public Insurance
Automobile Insurance Division - Comprehensive - Basic
Paid Loss & ALAE - Without Z-Files & Hailstorm Losses
March 31, 2023

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	72,812			72,812	11.51%	11.51%	100.00%	11.51%	11.51%
2006	656,746	73,541	74,997		74,997	11.42%	11.20%	100.00%	11.20%	11.20%
2007	679,930	66,532	75,747	77,246	76,497	11.25%	9.79%	100.00%	9.79%	9.79%
2008	709,787	49,838	68,528	78,020	73,274	10.32%	7.02%	100.00%	7.02%	7.02%
2009	741,553	48,595	51,333	70,584	60,958	8.22%	6.55%	100.00%	6.55%	6.55%
2010	761,034	74,834	50,053	52,873	51,463	6.76%	9.83%	100.00%	9.83%	9.83%
2011	772,649	75,372	77,079	51,554	64,317	8.32%	9.75%	100.00%	9.75%	9.75%
2012	769,715	72,140	77,633	79,391	78,512	10.20%	9.37%	100.00%	9.37%	9.37%
2013	781,394	75,173	74,305	79,962	77,133	9.87%	9.62%	100.00%	9.62%	9.62%
2014	822,358	71,692	77,429	76,534	76,981	9.36%	8.72%	100.00%	8.72%	8.72%
2015	877,262	121,437	73,843	79,751	76,797	8.75%	13.84%	100.00%	13.84%	13.84%
2016	923,168	118,653	125,080	76,058	100,569	10.89%	12.85%	100.00%	12.85%	12.85%
2017	977,104	72,896	122,213	128,833	125,523	12.85%	7.46%	100.00%	7.46%	7.46%
2018	1,044,467	86,372	75,083	125,879	100,481	9.62%	8.27%	75.00%	8.61%	8.60%
2019	1,099,731	86,819	88,963	77,335	83,149	7.56%	7.89%	50.00%	7.73%	7.74%
2020	1,134,690	85,075	89,423	91,632	90,528	7.98%	7.50%	25.00%	7.86%	7.87%
2021	1,159,166	87,378	87,627	92,106	89,867	7.75%	7.54%	25.00%	7.70%	7.70%
2022	1,126,492	106,586	89,999	90,256	90,128	8.00%	9.46%	75.00%	9.10%	9.50%
	15,669,653	1,445,746	1,379,334	1,328,015	1,463,985					

Trend in Losses Based on Exponential Regression (a):

2.84%

Selected Trend (b):

3.00%

Notes:

(3) Ultimate Losses from Page 15

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) Selected Initial Ult Loss Ratio from Page 9

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 9

Manitoba Public Insurance
Automobile Insurance Division - Comprehensive - Basic
Paid Loss & ALAE - Without Z-Files & Hailstorm Losses
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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
				Paid	Unpaid						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	632,408	11.51%	72,812	100.00%	0.00%	72,812	72,812	-	72,812	-	11.51%
2006	656,746	11.20%	73,541	100.00%	0.00%	73,541	73,541	-	73,541	-	11.20%
2007	679,930	9.79%	66,532	100.00%	0.00%	66,532	66,532	-	66,532	-	9.79%
2008	709,787	7.02%	49,838	100.00%	0.00%	49,838	49,838	-	49,838	-	7.02%
2009	741,553	6.55%	48,595	100.00%	0.00%	48,595	48,595	-	48,595	-	6.55%
2010	761,034	9.83%	74,834	100.00%	0.00%	74,834	74,834	-	74,834	-	9.83%
2011	772,649	9.75%	75,372	100.00%	0.00%	75,372	75,372	-	75,372	-	9.75%
2012	769,715	9.37%	72,144	100.00%	0.00%	72,144	72,140	-	72,140	(4)	9.37%
2013	781,394	9.62%	75,173	100.00%	0.00%	75,173	75,173	-	75,173	-	9.62%
2014	822,358	8.72%	71,692	100.00%	0.00%	71,692	71,692	-	71,692	-	8.72%
2015	877,262	13.84%	121,440	100.00%	0.00%	121,440	121,437	-	121,437	(3)	13.84%
2016	923,168	12.85%	118,666	100.00%	0.00%	118,666	118,653	-	118,653	(13)	12.85%
2017	977,104	7.46%	72,861	99.95%	0.05%	72,825	72,859	36	72,896	34	7.46%
2018	1,044,467	8.60%	89,857	99.85%	0.15%	89,722	86,243	135	86,378	58	8.27%
2019	1,099,731	7.74%	85,169	99.65%	0.35%	84,872	86,516	297	86,813	(421)	7.89%
2020	1,134,690	7.87%	89,265	99.20%	0.80%	88,555	84,398	710	85,108	187	7.50%
2021	1,159,166	7.70%	89,272	97.28%	2.72%	86,840	84,998	2,432	87,430	1,298	7.54%
2022	1,126,492	9.50%	106,967	77.94%	22.06%	83,369	83,072	23,599	106,670	4,594	9.47%
	15,669,653		1,454,031			1,426,822	1,418,706	27,209	1,445,914	5,730	9.23%

Notes:
(10) = (8) + (9)

Manitoba Public Insurance
Automobile Insurance Division - Comprehensive - Basic
Development of 2018 Hailstorm Losses
March 31, 2023

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Interpolated Percentage of Ultimate Factors

Months of Devt	Reported Loss & ALAE		Factor to Ultimate	Selected Factor to Ultimate	Percentage Reported		
	2007 Hail	2009 Hail			Beginning of Year	End of 7 Months	End of 12 Months
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8	41,344,000	27,848,000	1.0899	1.0800	0.00%	92.59%	95.24%
12	42,188,000	29,356,000	1.0541	1.0500	95.24%	98.61%	101.01%
24	45,271,000	30,939,000	0.9895	0.9900	101.01%	101.01%	101.01%
36	46,831,000	31,557,000	0.9620	0.9900	101.01%	101.01%	101.01%
48	46,281,000	30,121,000	0.9870	0.9900	101.01%	101.01%	101.01%
60	46,185,000	30,183,000	0.9875	0.9900	101.01%	100.42%	100.00%
Tail	45,144,000	30,267,000	1.0000	1.0000	100.00%	100.00%	100.00%

Hail Loss

	<u>2018 Hail</u>
Reported Loss and ALAE	28,971,000
Development Factor to Ultimate	0.9900
Projected Ultimate Losses	28,681,290
Indicated IBNR	(289,710)

Months of Devt	Paid Loss & ALAE		Factor to Ultimate	Selected Factor to Ultimate	Percentage Paid		
	2007 Hail	2009 Hail			Beginning of Year	End of 7 Months	End of 12 Months
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
8	16,758,000	8,727,000	2.9590	2.9000	0.00%	34.48%	59.88%
12	26,615,000	18,392,000	1.6755	1.6700	59.88%	76.89%	89.05%
24	40,094,000	27,050,000	1.1231	1.1230	89.05%	94.15%	97.80%
36	44,154,000	29,612,000	1.0223	1.0225	97.80%	98.68%	99.30%
48	44,823,000	30,047,000	1.0072	1.0070	99.30%	99.51%	99.65%
60	44,994,000	30,168,000	1.0033	1.0035	99.65%	99.85%	100.00%
Tail	45,144,000	30,267,000	1.0000	1.0000	100.00%	100.00%	100.00%

Hail Loss

	<u>2018 Hail</u>
Paid Loss and ALAE	27,701,000
Development Factor to Ultimate	1.0035
Projected Ultimate Losses	27,797,954
Unpaid Loss	96,954
Case Reserves	1,270,000
Indicated IBNR	(1,173,047)



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix E
Accident Benefits Weekly Indemnity - Undiscounted
Gross IBNR Calculations

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Weekly Indemnity
Reported Loss & ALAE - With Z-Files
March 31, 2023

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	11,491,699	21,941,748	29,039,490	33,110,325	37,650,095	42,411,181	43,408,793	45,537,192	45,357,502	46,249,721	44,972,535	46,089,592	44,687,992	45,786,405	46,254,198	46,175,512	47,784,208	47,167,019	47,715,812	48,326,106	47,903,555	48,643,074
2005	17,064,683	33,942,762	42,589,257	45,957,895	52,543,344	56,417,128	51,479,406	53,770,560	53,314,000	52,298,726	53,891,025	52,781,490	54,221,881	54,556,309	55,855,854	56,392,623	56,788,615	56,269,915	56,182,494	55,719,231	56,123,076	
2006	19,195,334	38,464,274	53,039,228	56,627,733	57,977,827	58,453,884	57,920,458	59,253,043	58,648,129	64,852,637	67,895,843	68,460,635	68,220,078	69,352,394	71,071,227	72,067,576	70,907,942	70,785,304	71,475,184	72,426,524		
2007	13,739,955	24,123,942	33,290,876	36,384,393	44,818,917	48,210,181	51,005,251	55,408,083	64,549,609	61,495,080	65,367,867	67,747,529	69,005,971	69,954,073	71,722,905	72,779,855	73,460,103	72,572,357	73,630,073			
2008	11,732,887	22,321,213	28,498,827	31,596,587	37,456,593	41,081,096	46,091,810	58,565,812	59,722,048	63,872,532	62,730,103	63,768,937	65,518,771	66,698,293	69,954,360	71,708,098	73,204,791	73,583,016				
2009	13,434,057	22,529,899	29,478,107	34,149,352	36,165,529	38,621,560	50,552,788	52,465,812	57,539,988	60,119,741	61,795,493	65,806,512	66,671,553	68,244,911	69,146,496	69,762,488	70,355,470					
2010	11,737,393	28,361,233	30,618,626	33,702,371	39,219,108	55,050,689	58,648,137	70,545,395	74,093,606	80,026,930	86,608,542	88,067,481	89,244,227	90,444,363	90,314,918	90,435,721						
2011	11,962,886	23,865,379	29,293,332	38,881,325	44,816,562	49,369,759	55,004,844	61,274,577	71,413,923	80,546,650	82,464,904	83,698,469	84,426,128	85,051,603	86,399,164							
2012	12,680,327	24,879,529	31,797,701	36,689,995	40,774,415	45,276,456	49,787,944	61,667,567	86,053,713	81,833,693	78,756,057	80,300,301	78,955,475	79,118,640								
2013	12,532,301	22,583,021	32,108,902	35,167,293	39,832,742	43,090,872	48,811,020	70,552,684	71,205,566	67,008,377	67,573,871	69,324,555	70,548,819									
2014	7,034,738	16,538,309	25,503,604	29,076,255	35,574,262	38,370,838	63,621,961	71,008,439	73,223,513	71,092,172	71,154,748	73,124,920										
2015	9,241,872	18,247,834	29,774,581	34,606,382	60,472,151	71,485,367	77,523,420	82,577,147	84,371,388	82,109,457	84,901,767											
2016	9,127,243	20,110,374	27,148,016	31,034,346	60,016,266	75,431,117	86,137,347	88,555,719	89,874,397	90,088,895												
2017	9,734,088	19,288,609	28,391,228	31,974,032	64,951,511	80,728,064	85,589,951	87,268,424	90,768,479													
2018	8,551,949	16,253,842	25,135,728	29,055,731	59,194,942	70,852,707	75,281,324	76,910,732														
2019	7,694,118	17,227,797	26,584,134	31,998,846	56,236,425	72,549,314	76,299,869															
2020	7,197,382	13,208,731	22,390,130	26,024,666	51,501,186	66,549,519																
2021	7,201,821	17,965,070	26,970,742	30,620,795																		
2022	7,123,608	15,133,465																				

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Automobile Insurance Division - Accident Benefits - Weekly Indemnity
Paid Loss & ALAE - With Z-Files
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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	2,149,645	5,949,307	9,744,965	11,326,146	12,971,026	13,981,363	16,039,516	17,876,524	19,398,086	20,761,874	22,044,312	23,195,121	24,414,814	25,701,964	26,843,934	27,928,978	28,991,237	30,030,441	31,017,183	32,097,187	33,066,974	33,991,421
2005	2,421,716	6,712,035	11,137,092	13,050,812	15,202,734	16,549,179	19,119,946	21,170,780	22,958,987	24,354,440	26,118,183	27,808,557	29,715,066	31,264,361	32,762,635	34,312,036	35,279,077	36,698,417	38,461,580	39,607,263	40,758,223	
2006	2,475,031	7,096,339	12,300,249	14,355,680	16,643,687	18,015,417	21,092,510	23,795,176	26,178,616	29,119,706	31,785,031	34,134,078	36,379,358	38,644,319	40,591,875	42,427,502	44,141,489	45,798,886	47,272,725	48,712,912		
2007	2,640,677	7,555,553	13,109,106	15,194,783	18,007,477	19,619,312	22,658,982	25,907,961	29,062,947	31,582,189	34,439,643	36,399,710	38,407,467	40,252,378	42,138,098	43,909,962	46,148,354	47,808,388	49,416,212			
2008	3,067,864	8,054,076	13,901,047	16,215,515	18,762,001	20,407,347	24,029,387	27,592,404	30,285,190	32,588,548	34,720,976	36,614,605	38,627,913	40,236,890	42,105,193	44,148,114	46,257,095	48,162,333				
2009	3,212,033	8,333,876	13,803,649	16,171,208	18,742,522	20,272,758	23,678,990	26,673,910	29,260,810	31,642,351	33,934,876	36,028,271	37,979,546	39,996,353	42,181,317	44,138,431	45,851,225					
2010	3,577,749	9,550,590	16,316,707	19,502,377	22,873,478	24,936,578	29,143,832	33,198,267	36,658,009	40,143,122	43,074,682	46,129,318	48,731,786	51,523,014	53,885,197	56,168,301						
2011	3,050,064	8,686,262	15,508,483	18,327,535	21,785,433	23,735,909	28,410,404	31,974,609	34,971,561	37,970,941	40,550,563	43,133,991	45,593,922	47,951,103	50,634,689							
2012	3,820,815	9,717,787	16,751,188	19,589,858	23,070,139	25,268,743	29,736,952	33,775,063	37,444,358	40,314,350	42,682,087	44,910,893	47,061,621	48,974,674								
2013	3,484,285	9,123,177	15,369,565	17,906,303	20,981,578	22,862,408	26,840,898	30,327,378	33,094,434	35,165,861	37,475,849	39,552,672	41,397,545									
2014	2,612,249	7,989,429	13,823,178	16,132,826	18,989,072	20,825,635	24,547,986	27,711,373	30,495,524	32,922,540	35,275,402	37,664,466										
2015	3,148,342	9,057,123	15,746,387	18,768,480	22,206,608	24,265,630	28,696,649	32,562,814	36,074,154	39,040,996	41,925,689											
2016	3,636,628	9,953,923	16,694,743	19,743,539	23,470,381	25,654,843	30,607,911	35,055,883	38,852,372	42,276,339												
2017	4,009,426	10,853,966	18,051,525	21,216,180	24,896,225	27,393,512	32,594,319	37,066,491	40,727,711													
2018	4,083,223	10,675,354	17,513,950	20,292,709	23,563,524	25,584,453	29,842,361	33,098,242														
2019	3,296,340	9,442,483	15,841,214	18,151,532	21,022,643	22,921,601	27,063,528															
2020	2,987,900	7,867,051	13,060,055	15,696,324	18,547,213	20,437,706																
2021	3,326,271	10,132,403	17,197,323	20,389,685																		
2022	3,214,995	9,633,064																				

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	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	16,023,012	30,593,640	39,858,834	45,423,554	50,683,266	57,020,435	57,617,958	59,642,612	58,621,276	59,537,690	57,709,329	58,223,744	56,138,244	56,891,278	56,988,907	56,640,123	58,155,526	57,157,308	57,285,030	57,537,225	57,016,907	57,266,819
2005	23,326,952	46,398,822	56,928,989	61,412,762	69,198,093	74,258,092	66,913,723	68,850,135	68,038,624	66,485,519	67,389,163	65,556,119	66,584,537	66,435,922	67,577,649	67,839,029	67,885,469	66,764,582	66,226,820	65,656,740	65,528,890	
2006	25,549,652	51,197,278	69,456,828	74,144,193	74,790,453	75,400,095	73,568,053	74,951,290	73,854,368	80,123,109	83,038,568	82,773,499	81,762,246	82,601,971	84,060,068	84,613,271	82,596,688	81,858,034	82,441,625	82,594,284		
2007	17,947,355	31,511,089	42,825,953	46,787,525	56,735,885	60,981,111	64,245,685	69,400,912	79,296,480	75,023,448	78,734,012	80,763,886	81,751,404	82,359,470	83,766,304	84,102,993	84,149,824	83,091,718	83,332,223			
2008	15,025,186	28,584,642	35,907,082	39,784,898	46,961,940	51,472,077	57,453,489	71,610,507	72,389,850	76,433,033	74,465,687	75,252,243	76,795,639	77,610,492	80,363,302	81,547,906	82,951,643	82,440,594				
2009	16,816,923	28,203,213	36,743,203	42,555,851	44,867,214	47,899,113	61,539,133	63,288,591	68,490,502	70,804,037	72,297,201	76,328,905	76,751,507	77,659,789	77,950,596	78,447,640	78,195,028					
2010	14,605,384	35,291,203	37,892,119	41,698,913	47,800,239	66,774,632	70,449,947	83,433,114	86,648,486	92,786,805	99,486,132	100,315,262	100,451,381	100,772,030	100,437,285	99,355,907						
2011	14,767,833	29,461,113	35,420,826	46,912,183	53,525,695	58,896,833	64,750,185	71,279,714	82,235,082	91,802,647	93,147,967	93,345,003	93,173,956	93,619,503	93,742,747							
2012	15,197,567	29,818,497	37,693,291	43,464,442	47,744,642	52,941,112	57,620,789	70,648,268	97,192,608	91,757,384	87,390,693	88,169,957	86,597,966	85,708,633								
2013	14,783,617	26,639,859	37,293,293	40,823,434	45,736,621	49,427,189	55,558,019	79,265,460	79,275,549	73,811,410	73,671,215	75,324,215	75,566,006									
2014	8,119,830	19,089,304	29,060,538	33,107,373	40,206,704	43,336,897	70,985,604	78,338,713	79,540,457	76,351,882	76,219,377	77,005,530										
2015	10,468,507	20,669,794	33,448,171	38,856,377	67,208,751	79,377,585	85,122,502	89,189,394	89,909,804	87,323,773	88,694,824											
2016	10,216,071	22,509,428	30,139,643	34,433,766	65,756,001	82,520,110	92,559,148	93,801,545	94,887,413	93,418,184												
2017	10,755,488	21,312,567	31,065,169	34,961,575	69,665,480	86,404,475	90,233,775	91,693,916	93,537,306													
2018	9,300,499	17,676,537	26,952,289	31,111,430	62,200,759	74,303,443	78,644,394	78,774,317														
2019	8,163,495	18,278,772	27,814,381	33,435,744	58,401,643	75,252,857	77,365,697															
2020	7,472,070	13,712,842	23,169,637	26,924,113	52,059,798	67,108,131																
2021	7,439,481	18,557,918	27,305,112	30,955,164																		
2022	7,123,608	15,133,465																				

*Prior years' figures indexed to current benefit level

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	7	12	19	24	31	36	48	60	72	84
2004	16,023	30,594	39,859	45,424	50,683	57,020	57,618	59,643	58,621	59,538
2005	23,327	46,399	56,929	61,413	69,198	74,258	66,914	68,850	68,039	66,486
2006	25,550	51,197	69,457	74,144	74,790	75,400	73,568	74,951	73,854	80,123
2007	17,947	31,511	42,826	46,788	56,736	60,981	64,246	69,401	79,296	75,023
2008	15,025	28,585	35,907	39,785	46,962	51,472	57,453	71,611	72,390	76,433
2009	16,817	28,203	36,743	42,556	44,867	47,899	61,539	63,289	68,491	70,804
2010	14,605	35,291	37,892	41,699	47,800	66,775	70,450	83,433	86,648	92,787
2011	14,768	29,461	35,421	46,912	53,526	58,897	64,750	71,280	82,235	91,803
2012	15,198	29,818	37,693	43,464	47,745	52,941	57,621	70,648	97,193	91,757
2013	14,784	26,640	37,293	40,823	45,737	49,427	55,558	79,265	79,276	73,811
2014	8,120	19,089	29,061	33,107	40,207	43,337	70,986	78,339	79,540	76,352
2015	10,469	20,670	33,448	38,856	67,209	79,378	85,123	89,189	89,910	87,324
2016	10,216	22,509	30,140	34,434	65,756	82,520	92,559	93,802	94,887	93,418
2017	10,755	21,313	31,065	34,962	69,665	86,404	90,234	91,694	93,537	
2018	9,300	17,677	26,952	31,111	62,201	74,303	78,644	78,774		
2019	8,163	18,279	27,814	33,436	58,402	75,253	77,366			
2020	7,472	13,713	23,170	26,924	52,060	67,108				
2021	7,439	18,558	27,305	30,955						
2022	7,124	15,133								

Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	1.9094	1.3028	1.1396	1.1158	1.1250	1.0105	1.0351	0.9829	1.0156	0.9693
2005	1.9891	1.2269	1.0788	1.1268	1.0731	0.9011	1.0289	0.9882	0.9772	1.0136
2006	2.0038	1.3567	1.0675	1.0087	1.0082	0.9757	1.0188	0.9854	1.0849	1.0364
2007	1.7558	1.3591	1.0925	1.2126	1.0748	1.0535	1.0802	1.1426	0.9461	1.0495
2008	1.9024	1.2562	1.1080	1.1804	1.0960	1.1162	1.2464	1.0109	1.0559	0.9743
2009	1.6771	1.3028	1.1582	1.0543	1.0676	1.2848	1.0284	1.0822	1.0338	1.0211
2010	2.4163	1.0737	1.1005	1.1463	1.3970	1.0550	1.1843	1.0385	1.0708	1.0722
2011	1.9950	1.2023	1.3244	1.1410	1.1003	1.0994	1.1008	1.1537	1.1163	1.0147
2012	1.9621	1.2641	1.1531	1.0985	1.1088	1.0884	1.2261	1.3757	0.9441	0.9524
2013	1.8020	1.3999	1.0947	1.1204	1.0807	1.1240	1.4267	1.0001	0.9311	0.9981
2014	2.3509	1.5223	1.1393	1.2144	1.0779	1.6380	1.1036	1.0153	0.9599	0.9983
2015	1.9745	1.6182	1.1617	1.7297	1.1811	1.0724	1.0478	1.0081	0.9712	1.0157
2016	2.2033	1.3390	1.1425	1.9096	1.2549	1.1217	1.0134	1.0116	0.9845	
2017	1.9816	1.4576	1.1254	1.9926	1.2403	1.0443	1.0162	1.0201		
2018	1.9006	1.5247	1.1543	1.9993	1.1946	1.0584	1.0017			
2019	2.2391	1.5217	1.2021	1.7467	1.2885	1.0281				
2020	1.8352	1.6896	1.1620	1.9336	1.2891					
2021	2.4945	1.4713	1.1337							
2022	2.1244									

Latest 9 Volume Weighted	2.1116	1.4920	1.1441	1.6050	1.1998	1.1168	1.1059	1.0704	1.0052	1.0109
Latest 6 Volume Weighted	2.0828	1.4855	1.1525	1.8791	1.2389	1.1218	1.0802	1.0624	0.9836	1.0093
Latest 3 Volume Weighted	2.1513	1.5488	1.1664	1.8876	1.2548	1.0436	1.0108	1.0133	0.9726	1.0046
Simple Average of Middle 4 of Last 6	2.0811	1.4938	1.1481	1.8956	1.2446	1.0742	1.0452	1.0138	0.9649	1.0067
Simple Average of Middle 3 of Last 5	2.0404	1.5059	1.1500	1.9453	1.2613	1.0584	1.0258	1.0117	0.9584	1.0037
Selected March 22	2.1000	1.5000	1.1500	2.0000	1.2000	1.0655	1.0285	1.0115	1.0000	1.0000
Selected Oct 22	2.1000	1.5000	1.1500	2.0000	1.2300	1.0655	1.0285	1.0115	1.0000	1.0000
Selected Factors*	2.1000	1.5000	1.1500	2.0000	1.2300	1.0655	1.0285	1.0115	1.0000	1.0000
Selected Ultimate	10.4200	4.9619	3.3079	2.8765	1.4382	1.1693	1.0974	1.0670	1.0549	1.0549

*216-Ult Factor = [Tab Rsv 120-Ult] / Product [120-132 Factor to 204-216 Factor]

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
57,709	58,224	56,138	56,891	56,989	56,640	58,156	57,157	57,285	57,537	57,017	57,267
67,389	65,556	66,585	66,436	67,578	67,839	67,885	66,765	66,227	65,657	65,529	
83,039	82,773	81,762	82,602	84,060	84,613	82,597	81,858	82,442	82,594		
78,734	80,764	81,751	82,359	83,766	84,103	84,150	83,092	83,332			
74,466	75,252	76,796	77,610	80,363	81,548	82,952	82,441				
72,297	76,329	76,752	77,660	77,951	78,448	78,195					
99,486	100,315	100,451	100,772	100,437	99,356						
93,148	93,345	93,174	93,620	93,743							
87,391	88,170	86,598	85,709								
73,671	75,324	75,566									
76,219	77,006										
88,695											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult	
1.0089	0.9642	1.0134	1.0017	0.9939	1.0268	0.9828	1.0022	1.0044	0.9910	1.0044	
0.9728	1.0157	0.9978	1.0172	1.0039	1.0007	0.9835	0.9919	0.9914	0.9981		
0.9968	0.9878	1.0103	1.0177	1.0066	0.9762	0.9911	1.0071	1.0019			
1.0258	1.0122	1.0074	1.0171	1.0040	1.0006	0.9874	1.0029				
1.0106	1.0205	1.0106	1.0355	1.0147	1.0172	0.9938					
1.0558	1.0055	1.0118	1.0037	1.0064	0.9968						
1.0083	1.0014	1.0032	0.9967	0.9892							
1.0021	0.9982	1.0048	1.0013								
1.0089	0.9822	0.9897									
1.0224	1.0032										
1.0103											
1.0147	1.0022	1.0051	1.0109	1.0025	1.0016	0.9882	1.0014	0.9992	0.9947	1.0044	1.0450
1.0165	1.0012	1.0043	1.0111	1.0035	1.0016	0.9882	1.0014	0.9992	0.9947	1.0044	1.0501
1.0136	0.9942	0.9996	1.0003	1.0023	1.0049	0.9908	1.0012	0.9992	0.9947	1.0044	1.0360
1.0125	1.0021	1.0065	1.0099	1.0052	1.0038	0.9873	1.0026	1.0019	0.9945	1.0044	1.0441
1.0092	1.0009	1.0062	1.0074	1.0057	0.9993	0.9873	1.0026	1.0019	0.9945	1.0044	1.0438
1.0000	1.0000	1.0005	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0470	1.0550
1.0000	1.0000	1.0005	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0470	1.0550
1.0000	1.0000	1.0005	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0010	1.0470	1.0549
1.0549	1.0549	1.0549	1.0544	1.0533	1.0522	1.0512	1.0501	1.0491	1.0480	1.0470	

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	9.5576	10.8876	9.6614	9.5985	9.3363	10.1659	10.4200	10.4200
12	4.5263	5.2273	4.4910	4.6121	4.5757	4.8409	4.9619	4.9619
19	3.0336	3.5189	2.8997	3.0874	3.0385	3.2273	3.3079	3.3079
24	2.6516	3.0534	2.4861	2.6891	2.6421	2.8063	2.8765	2.8765
31	1.6521	1.6250	1.3170	1.4186	1.3582	1.4032	1.4382	1.4382
36	1.3770	1.3116	1.0496	1.1398	1.0769	1.1693	1.1693	1.1693
48	1.2329	1.1692	1.0057	1.0611	1.0175	1.0974	1.0974	1.0974
60	1.1149	1.0824	0.9950	1.0151	0.9919	1.0670	1.0670	1.0670
72	1.0415	1.0188	0.9819	1.0014	0.9805	1.0549	1.0549	1.0549
84	1.0361	1.0357	1.0096	1.0377	1.0230	1.0549	1.0549	1.0549
96	1.0250	1.0262	1.0049	1.0309	1.0193	1.0549	1.0549	1.0549
108	1.0102	1.0096	0.9915	1.0181	1.0100	1.0549	1.0549	1.0549
120	1.0080	1.0084	0.9973	1.0160	1.0091	1.0549	1.0549	1.0549
132	1.0029	1.0041	0.9978	1.0095	1.0029	1.0544	1.0544	1.0544
144	0.9921	0.9931	0.9975	0.9995	0.9955	1.0533	1.0533	1.0533
156	0.9896	0.9896	0.9952	0.9943	0.9899	1.0522	1.0522	1.0522
168	0.9879	0.9879	0.9903	0.9906	0.9906	1.0512	1.0512	1.0512
180	0.9997	0.9997	0.9995	1.0033	1.0033	1.0501	1.0501	1.0501
192	0.9983	0.9983	0.9983	1.0007	1.0007	1.0491	1.0491	1.0491
204	0.9991	0.9991	0.9991	0.9989	0.9989	1.0480	1.0480	1.0480
216	1.0044	1.0044	1.0044	1.0044	1.0044	1.0470	1.0470	1.0470

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	2.1000	10.4210	9.60%	7		10.4210	2.1000	2.1000	10.4200
12	1.5000	4.9624		12	20.15%	4.9624	1.5000	1.5000	4.9619
19	1.1500	3.3082	30.23%	19		3.3082	1.1500	1.1500	3.3079
24	2.0000	2.8767		24	34.76%	2.8767	2.0000	2.0000	2.8765
31	1.2300	1.4384	69.52%	31		1.4384	1.2300	1.2300	1.4382
36	1.0500	1.1694		36	85.51%	1.1694	1.0653	1.0655	1.1693
43	1.0350	1.1137	89.79%	48	91.10%	1.0977	1.0286	1.0285	1.0974
55	1.0200	1.0761	92.93%	60	93.71%	1.0672	1.0116	1.0115	1.0670
67	1.0000	1.0550	94.79%	72	94.79%	1.0550	1.0000	1.0000	1.0549
79	1.0000	1.0550	94.79%	84	94.79%	1.0550	1.0000	1.0000	1.0549
91	1.0000	1.0550	94.79%	96	94.79%	1.0550	1.0000	1.0000	1.0549
103	1.0000	1.0550	94.79%	108	94.79%	1.0550	1.0000	1.0000	1.0549
115	1.0000	1.0550	94.79%	120	94.79%	1.0550	1.0004	1.0005	1.0549
127	1.0010	1.0550	94.79%	132	94.83%	1.0545	1.0010	1.0010	1.0544
139	1.0010	1.0539	94.89%	144	94.93%	1.0535	1.0010	1.0010	1.0533
151	1.0010	1.0528	94.98%	156	95.02%	1.0524	1.0010	1.0010	1.0522
163	1.0010	1.0518	95.08%	168	95.12%	1.0514	1.0010	1.0010	1.0512
175	1.0010	1.0507	95.17%	180	95.21%	1.0503	1.0010	1.0010	1.0501
187	1.0010	1.0497	95.27%	192	95.31%	1.0493	1.0010	1.0010	1.0491
199	1.0010	1.0486	95.36%	204	95.40%	1.0482	1.0010	1.0010	1.0480
Tail	1.0476	1.0476	95.46%	Tail	95.50%	1.0472	1.0472	1.0470	1.0470

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Restated Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	864,485	65,529	1.0470	68,609	3,080	15,365	7.94%
2006	656,746	874,152	82,594	1.0480	86,563	3,968	23,714	9.90%
2007	679,930	888,135	83,332	1.0491	87,423	4,091	24,214	9.84%
2008	709,787	908,956	82,441	1.0501	86,575	4,134	25,421	9.52%
2009	741,553	928,286	78,195	1.0512	82,198	4,003	24,504	8.85%
2010	761,034	946,991	99,356	1.0522	104,547	5,191	34,267	11.04%
2011	772,649	953,813	93,743	1.0533	98,739	4,996	35,764	10.35%
2012	769,715	922,515	85,709	1.0544	90,367	4,658	30,144	9.80%
2013	781,394	921,764	75,566	1.0549	79,713	4,147	29,151	8.65%
2014	822,358	949,205	77,006	1.0549	81,231	4,226	35,460	8.56%
2015	877,262	993,698	88,695	1.0549	93,562	4,867	42,976	9.42%
2016	923,168	1,033,297	93,418	1.0549	98,545	5,127	47,813	9.54%
2017	977,104	1,079,631	93,537	1.0549	98,670	5,133	50,041	9.14%
2018	1,044,467	1,135,889	78,774	1.0670	84,053	5,279	43,812	7.40%
2019	1,099,731	1,166,819	77,366	1.0974	84,903	7,537	49,236	7.28%
2020	1,134,690	1,177,995	67,108	1.1693	78,470	11,361	46,112	6.66%
2021	1,159,166	1,197,418	30,955	2.8765	89,042	58,087	10,231	7.44%
2022	1,126,492	1,126,492	15,133	4.9619	75,091	59,958	5,500	6.67%
	15,669,653	18,069,540	1,368,457		1,568,300	199,843	573,725	8.68%

Notes:

(3) Indexed to match the indexing done on losses

(9) = (6) / (3)

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Restated Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Based on 3rd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	68,609				68,609	7.94%	7.94%	100.00%	7.94%	7.94%
2006	874,152	86,563	69,295			69,295	7.93%	9.90%	100.00%	9.90%	9.90%
2007	888,135	87,423	87,428	69,988		78,708	8.86%	9.84%	100.00%	9.84%	9.84%
2008	908,956	86,575	88,298	88,303	70,688	82,429	9.07%	9.52%	100.00%	9.52%	9.52%
2009	928,286	82,198	87,440	89,181	89,186	88,602	9.54%	8.85%	100.00%	8.85%	8.85%
2010	946,991	104,547	83,020	88,315	90,072	87,136	9.20%	11.04%	100.00%	11.04%	11.04%
2011	953,813	98,739	105,592	83,850	89,198	92,880	9.74%	10.35%	100.00%	10.35%	10.35%
2012	922,515	90,367	99,726	106,648	84,689	97,021	10.52%	9.80%	100.00%	9.80%	9.80%
2013	921,764	79,713	91,271	100,724	107,715	99,903	10.84%	8.65%	100.00%	8.65%	8.65%
2014	949,205	81,231	80,510	92,183	101,731	91,475	9.64%	8.56%	100.00%	8.56%	8.56%
2015	993,698	93,562	82,044	81,315	93,105	85,488	8.60%	9.42%	100.00%	9.42%	9.42%
2016	1,033,297	98,545	94,498	82,864	82,128	86,497	8.37%	9.54%	100.00%	9.54%	9.54%
2017	1,079,631	98,670	99,530	95,443	83,693	92,889	8.60%	9.14%	100.00%	9.14%	9.14%
2018	1,135,889	84,053	99,657	100,526	96,397	98,860	8.70%	7.40%	75.00%	7.73%	7.73%
2019	1,166,819	84,903	84,893	100,654	101,531	95,693	8.20%	7.28%	50.00%	7.74%	7.74%
2020	1,177,995	78,470	85,752	85,742	101,660	91,051	7.73%	6.66%	75.00%	6.93%	6.93%
2021	1,197,418	89,042	79,254	86,609	86,600	84,154	7.03%	7.44%	75.00%	7.33%	7.33%
2022	1,126,492	75,091	89,932	80,047	87,475	85,818	7.62%	6.67%	25.00%	7.38%	7.38%
	18,069,540	1,568,300	1,508,141	1,432,391	1,365,868	1,576,508					

Trend in Losses Based on Exponential Regression (a):

0.76%

Selected Trend (b):

1.00%

Notes:

(3) Ultimate Losses from Page 9

(7) = Average [(4), (5), (6)]

(11) = (9) * (10) + (8) * [1 - (10)]

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 18

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Restated Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	864,485	7.94%	68,609	95.51%	4.49%	65,529	65,529	3,080	68,609	7.94%
2006	874,152	9.90%	86,563	95.42%	4.58%	82,594	82,594	3,968	86,563	9.90%
2007	888,135	9.84%	87,423	95.32%	4.68%	83,332	83,332	4,091	87,423	9.84%
2008	908,956	9.52%	86,575	95.23%	4.77%	82,441	82,441	4,134	86,575	9.52%
2009	928,286	8.85%	82,198	95.13%	4.87%	78,195	78,195	4,003	82,198	8.85%
2010	946,991	11.04%	104,547	95.03%	4.97%	99,356	99,356	5,191	104,547	11.04%
2011	953,813	10.35%	98,739	94.94%	5.06%	93,743	93,743	4,996	98,739	10.35%
2012	922,515	9.80%	90,367	94.85%	5.15%	85,709	85,709	4,658	90,367	9.80%
2013	921,764	8.65%	79,713	94.80%	5.20%	75,566	75,566	4,147	79,713	8.65%
2014	949,205	8.56%	81,231	94.80%	5.20%	77,006	77,006	4,226	81,231	8.56%
2015	993,698	9.42%	93,562	94.80%	5.20%	88,695	88,695	4,867	93,562	9.42%
2016	1,033,297	9.54%	98,545	94.80%	5.20%	93,418	93,418	5,127	98,545	9.54%
2017	1,079,631	9.14%	98,670	94.80%	5.20%	93,537	93,537	5,133	98,670	9.14%
2018	1,135,889	7.73%	87,755	93.72%	6.28%	82,244	78,774	5,511	84,285	7.42%
2019	1,166,819	7.74%	90,298	91.12%	8.88%	82,282	77,366	8,016	85,382	7.32%
2020	1,177,995	6.93%	81,615	85.52%	14.48%	69,798	67,108	11,817	78,925	6.70%
2021	1,197,418	7.33%	87,820	34.76%	65.24%	30,530	30,955	57,290	88,245	7.37%
2022	1,126,492	7.38%	83,136	20.15%	79.85%	16,755	15,133	66,381	81,515	7.24%
	18,069,540		1,587,366			1,380,729	1,368,457	206,637	1,575,094	8.72%

Notes:
(10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	2,997,276	8,295,190	13,483,750	15,645,180	17,834,572	19,179,366	21,867,759	24,220,240	26,124,951	27,821,976	29,405,107	30,784,370	32,223,169	33,708,859	35,002,399	36,216,882	37,390,604	38,520,769	39,567,708	40,688,930	41,690,719	42,615,166
2005	3,310,419	9,175,167	15,065,070	17,612,298	20,423,174	22,181,922	25,474,058	28,041,318	30,266,468	31,989,113	34,102,987	36,097,021	38,297,605	40,052,530	41,729,540	43,441,521	44,493,207	45,999,132	47,829,587	49,013,077	50,164,037	
2006	3,294,352	9,445,472	16,242,905	18,927,742	21,857,775	23,614,418	27,466,362	30,829,415	33,771,702	37,296,643	40,440,771	43,152,152	45,695,439	48,230,597	50,382,511	52,378,809	54,197,357	55,918,009	57,440,485	58,880,672		
2007	3,449,295	9,869,187	16,981,092	19,652,019	23,172,985	25,190,700	28,973,103	32,983,872	36,765,172	39,736,973	43,035,182	45,255,401	47,502,672	49,541,170	51,591,946	53,471,903	55,795,723	57,510,538	59,118,362			
2008	3,928,720	10,314,085	17,633,397	20,530,677	23,699,388	25,746,769	30,218,072	34,488,403	37,664,923	40,323,568	42,739,025	44,858,553	47,083,118	48,832,928	50,815,207	52,936,095	55,114,672	57,019,911				
2009	4,020,864	10,432,452	17,238,744	20,184,808	23,359,021	25,248,053	29,330,474	32,863,404	35,849,328	38,546,960	41,112,971	43,426,026	45,548,096	47,687,937	49,956,291	51,977,990	53,690,784					
2010	4,451,960	11,884,244	20,236,818	24,169,434	28,209,751	30,682,408	35,645,457	40,325,280	44,244,218	48,145,086	51,384,255	54,706,262	57,467,493	60,365,248	62,805,383	65,088,488						
2011	3,765,215	10,722,937	18,899,473	22,278,150	26,357,229	28,658,091	34,053,616	38,090,883	41,445,354	44,759,459	47,564,876	50,305,904	52,859,719	55,294,687	57,978,273							
2012	4,579,305	11,646,917	19,943,805	23,292,417	27,309,524	29,847,257	34,908,512	39,428,348	43,482,662	46,603,864	49,116,044	51,429,912	53,651,615	55,564,667								
2013	4,110,206	10,762,074	17,971,953	20,899,977	24,383,420	26,513,885	30,966,986	34,819,304	37,828,559	40,026,352	42,424,501	44,569,859	46,414,732									
2014	3,015,183	9,221,779	15,829,818	18,446,016	21,642,996	23,698,650	27,811,588	31,251,865	34,205,863	36,725,506	39,156,012	41,545,077										
2015	3,566,208	10,259,237	17,746,493	21,129,104	24,927,995	27,203,072	32,021,936	36,123,955	39,769,305	42,834,053	45,718,746											
2016	4,070,456	11,141,369	18,589,505	21,958,212	26,011,263	28,386,931	33,642,159	38,259,888	42,181,661	45,605,628												
2017	4,430,136	11,992,875	19,820,434	23,262,091	27,166,636	29,816,269	35,215,564	39,835,319	43,496,539													
2018	4,440,627	11,609,764	18,865,547	21,813,823	25,209,469	27,307,527	31,705,946	34,961,827														
2019	3,497,432	10,018,518	16,661,456	19,059,948	22,025,806	23,987,430																
2020	3,101,933	8,167,297	13,531,670	16,254,936	19,105,825	20,996,318																
2021	3,436,038	10,466,772	17,531,693	20,724,054																		
2022	3,214,995	9,633,064																				

*Prior years' figures indexed to current benefit level

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	2,997	8,295	13,484	15,645	17,835	19,179	21,868	24,220	26,125	27,822
2005	3,310	9,175	15,065	17,612	20,423	22,182	25,474	28,041	30,266	31,989
2006	3,294	9,445	16,243	18,928	21,858	23,614	27,466	30,829	33,772	37,297
2007	3,449	9,869	16,981	19,652	23,173	25,191	28,973	32,984	36,765	39,737
2008	3,929	10,314	17,633	20,531	23,699	25,747	30,218	34,488	37,665	40,324
2009	4,021	10,432	17,239	20,185	23,359	25,248	29,330	32,863	35,849	38,547
2010	4,452	11,884	20,237	24,169	28,210	30,682	35,645	40,325	44,244	48,145
2011	3,765	10,723	18,899	22,278	26,357	28,658	34,054	38,091	41,445	44,759
2012	4,579	11,647	19,944	23,292	27,310	29,847	34,909	39,428	43,483	46,604
2013	4,110	10,762	17,972	20,900	24,383	26,514	30,967	34,819	37,829	40,026
2014	3,015	9,222	15,830	18,446	21,643	23,699	27,812	31,252	34,206	36,726
2015	3,566	10,259	17,746	21,129	24,928	27,203	32,022	36,124	39,769	42,834
2016	4,070	11,141	18,590	21,958	26,011	28,387	33,642	38,260	42,182	45,606
2017	4,430	11,993	19,820	23,262	27,167	29,816	35,216	39,835	43,497	
2018	4,441	11,610	18,866	21,814	25,209	27,308	31,706	34,962		
2019	3,497	10,019	16,661	19,060	22,026	23,987	28,129			
2020	3,102	8,167	13,532	16,255	19,106	20,996				
2021	3,436	10,467	17,532	20,724						
2022	3,215	9,633								

Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.7676	1.6255	1.1603	1.1399	1.0754	1.1402	1.1076	1.0786	1.0650	1.0569
2005	2.7716	1.6419	1.1691	1.1596	1.0861	1.1484	1.1008	1.0794	1.0569	1.0661
2006	2.8672	1.7196	1.1653	1.1548	1.0804	1.1631	1.1224	1.0954	1.1044	1.0843
2007	2.8612	1.7206	1.1573	1.1792	1.0871	1.1502	1.1384	1.1146	1.0808	1.0830
2008	2.6253	1.7096	1.1643	1.1543	1.0864	1.1737	1.1413	1.0921	1.0706	1.0599
2009	2.5946	1.6524	1.1709	1.1573	1.0809	1.1617	1.1205	1.0909	1.0752	1.0666
2010	2.6694	1.7028	1.1943	1.1672	1.0877	1.1618	1.1313	1.0972	1.0882	1.0673
2011	2.8479	1.7625	1.1788	1.1831	1.0873	1.1883	1.1186	1.0881	1.0800	1.0627
2012	2.5434	1.7124	1.1679	1.1725	1.0929	1.1696	1.1295	1.1028	1.0718	1.0539
2013	2.6184	1.6699	1.1629	1.1667	1.0874	1.1680	1.1244	1.0864	1.0581	1.0599
2014	3.0584	1.7166	1.1653	1.1733	1.0950	1.1736	1.1237	1.0945	1.0737	1.0662
2015	2.8768	1.7298	1.1906	1.1798	1.0913	1.1771	1.1281	1.1009	1.0771	1.0673
2016	2.7371	1.6685	1.1812	1.1846	1.0913	1.1851	1.1373	1.1025	1.0812	
2017	2.7071	1.6527	1.1736	1.1679	1.0975	1.1811	1.1312	1.0919		
2018	2.6144	1.6250	1.1563	1.1557	1.0832	1.1611	1.1027			
2019	2.8645	1.6631	1.1440	1.1556	1.0891	1.1727				
2020	2.6330	1.6568	1.2013	1.1754	1.0989					
2021	3.0462	1.6750	1.1821							
2022	2.9963									
Latest 9 Volume Weighted	2.8228	1.6718	1.1725	1.1701	1.0917	1.1754	1.1254	1.0952	1.0754	1.0650
Latest 6 Volume Weighted	2.7977	1.6562	1.1721	1.1698	1.0917	1.1754	1.1248	1.0967	1.0738	1.0628
Latest 3 Volume Weighted	2.8983	1.6656	1.1742	1.1613	1.0897	1.1719	1.1242	1.0983	1.0776	1.0645
Simple Average of Middle 4 of Last 6	2.7354	1.6603	1.1733	1.1697	1.0923	1.1761	1.1268	1.0975	1.0756	1.0640
Simple Average of Middle 3 of Last 5	2.7349	1.6575	1.1707	1.1663	1.0926	1.1770	1.1277	1.0958	1.0742	1.0629
Selected March 22	2.7500	1.6800	1.1700	1.1700	1.0930	1.1770	1.1285	1.0975	1.0755	1.0635
Selected Oct 22	2.7500	1.6800	1.1700	1.1700	1.0930	1.1770	1.1285	1.0975	1.0755	1.0630
Selected Factors*	2.7500	1.6800	1.1700	1.1700	1.0930	1.1770	1.1285	1.0975	1.0755	1.0630
Selected Ultimate	23.0347	8.3762	4.9859	4.2614	3.6422	3.3323	2.8312	2.5088	2.2859	2.1255

*216-Ult Factor = [Tab Rsv 120-Ult] / Product [120-132 Factor to 204-216 Factor]

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
29,405	30,784	32,223	33,709	35,002	36,217	37,391	38,521	39,568	40,689	41,691	42,615
34,103	36,097	38,298	40,053	41,730	43,442	44,493	45,999	47,830	49,013	50,164	
40,441	43,152	45,695	48,231	50,383	52,379	54,197	55,918	57,440	58,881		
43,035	45,255	47,503	49,541	51,592	53,472	55,796	57,511	59,118			
42,739	44,859	47,083	48,833	50,815	52,936	55,115	57,020				
41,113	43,426	45,548	47,688	49,956	51,978	53,691					
51,384	54,706	57,467	60,365	62,805	65,088						
47,565	50,306	52,860	55,295	57,978							
49,116	51,430	53,652	55,565								
42,425	44,570	46,415									
39,156	41,545										
45,719											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0469	1.0467	1.0461	1.0384	1.0347	1.0324	1.0302	1.0272	1.0283	1.0246	1.0222
1.0585	1.0610	1.0458	1.0419	1.0410	1.0242	1.0338	1.0398	1.0247	1.0235	
1.0670	1.0589	1.0555	1.0446	1.0396	1.0347	1.0317	1.0272	1.0251		
1.0516	1.0497	1.0429	1.0414	1.0364	1.0435	1.0307	1.0280			
1.0496	1.0496	1.0372	1.0406	1.0417	1.0412	1.0346				
1.0563	1.0489	1.0470	1.0476	1.0405	1.0330					
1.0647	1.0505	1.0504	1.0404	1.0364						
1.0576	1.0508	1.0461	1.0485							
1.0471	1.0432	1.0357								
1.0506	1.0414									
1.0610										

1.0561	1.0501	1.0451	1.0431	1.0386	1.0353	1.0323	1.0303	1.0259	1.0240	1.0222	1.7901
1.0562	1.0475	1.0433	1.0438	1.0391	1.0353	1.0323	1.0303	1.0259	1.0240	1.0222	1.7801
1.0524	1.0453	1.0442	1.0453	1.0393	1.0392	1.0323	1.0311	1.0259	1.0240	1.0222	1.7704
1.0564	1.0480	1.0433	1.0435	1.0394	1.0353	1.0321	1.0276	1.0251	1.0241	1.0222	1.7945
1.0564	1.0475	1.0434	1.0432	1.0388	1.0363	1.0321	1.0276	1.0251	1.0241	1.0222	1.7933
1.0585	1.0525	1.0470	1.0420	1.0405	1.0370	1.0330	1.0305	1.0275	1.0265	1.3635	1.8021
1.0560	1.0505	1.0480	1.0435	1.0405	1.0370	1.0330	1.0305	1.0275	1.0265	1.3605	1.8024
1.0560	1.0505	1.0480	1.0435	1.0405	1.0370	1.0330	1.0305	1.0275	1.0265	1.3605	1.8024
1.9995	1.8935	1.8024	1.7199	1.6482	1.5840	1.5275	1.4787	1.4350	1.3966	1.3605	

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	17.4132	16.9912	17.6456	16.7273	16.5705	23.1396	23.0347	23.0347
12	6.1688	6.0733	6.0882	6.1151	6.0590	8.4144	8.3762	8.3762
19	3.6899	3.6669	3.6552	3.6832	3.6554	5.0086	4.9859	4.9859
24	3.1471	3.1284	3.1129	3.1391	3.1225	4.2808	4.2614	4.2614
31	2.6895	2.6743	2.6806	2.6838	2.6773	3.6588	3.6422	3.6422
36	2.4636	2.4496	2.4600	2.4570	2.4503	3.3475	3.3323	3.3323
48	2.0960	2.0841	2.0992	2.0891	2.0819	2.8441	2.8312	2.8312
60	1.8624	1.8528	1.8672	1.8539	1.8462	2.5203	2.5088	2.5088
72	1.7005	1.6895	1.7001	1.6893	1.6848	2.2964	2.2859	2.2859
84	1.5813	1.5733	1.5778	1.5705	1.5685	2.1352	2.1255	2.1255
96	1.4848	1.4803	1.4822	1.4760	1.4756	2.0077	1.9995	1.9995
108	1.4059	1.4015	1.4084	1.3973	1.3968	1.8967	1.8935	1.8935
120	1.3388	1.3380	1.3474	1.3332	1.3335	1.8021	1.8024	1.8024
132	1.2811	1.2825	1.2904	1.2779	1.2780	1.7212	1.7199	1.7199
144	1.2281	1.2287	1.2345	1.2246	1.2251	1.6518	1.6482	1.6482
156	1.1824	1.1824	1.1878	1.1782	1.1793	1.5875	1.5840	1.5840
168	1.1421	1.1421	1.1430	1.1380	1.1380	1.5309	1.5275	1.5275
180	1.1064	1.1064	1.1072	1.1026	1.1026	1.4820	1.4787	1.4787
192	1.0738	1.0738	1.0738	1.0730	1.0730	1.4381	1.4350	1.4350
204	1.0467	1.0467	1.0467	1.0468	1.0468	1.3996	1.3966	1.3966
216	1.0222	1.0222	1.0222	1.0222	1.0222	1.3635	1.3605	1.3605

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Self'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	2.7500	23.0352	4.34%	7		23.0352	2.7500	2.7500	23.0347
12	1.6800	8.3765		12	11.94%	8.3765	1.6800	1.6800	8.3762
19	1.1700	4.9860	20.06%	19		4.9860	1.1700	1.1700	4.9859
24	1.1700	4.2615		24	23.47%	4.2615	1.1700	1.1700	4.2614
31	1.0930	3.6423	27.45%	31		3.6423	1.0930	1.0930	3.6422
36	1.1100	3.3324		36	30.01%	3.3324	1.1771	1.1770	3.3323
43	1.1450	3.0022	33.31%	48	35.32%	2.8311	1.1284	1.1285	2.8312
55	1.1080	2.6220	38.14%	60	39.86%	2.5091	1.0974	1.0975	2.5088
67	1.0840	2.3664	42.26%	72	43.74%	2.2864	1.0757	1.0755	2.2859
79	1.0650	2.1830	45.81%	84	47.05%	2.1255	1.0628	1.0630	2.1255
91	1.0600	2.0498	48.79%	96	50.00%	1.9998	1.0561	1.0560	1.9995
103	1.0510	1.9338	51.71%	108	52.81%	1.8935	1.0506	1.0505	1.8935
115	1.0500	1.8399	54.35%	120	55.48%	1.8024	1.0479	1.0480	1.8024
127	1.0450	1.7523	57.07%	132	58.14%	1.7201	1.0433	1.0435	1.7199
139	1.0410	1.6769	59.64%	144	60.65%	1.6487	1.0406	1.0405	1.6482
151	1.0400	1.6108	62.08%	156	63.11%	1.5844	1.0370	1.0370	1.5840
163	1.0330	1.5489	64.56%	168	65.45%	1.5279	1.0330	1.0330	1.5275
175	1.0330	1.4994	66.69%	180	67.61%	1.4790	1.0307	1.0305	1.4787
187	1.0275	1.4515	68.89%	192	69.68%	1.4350	1.0273	1.0275	1.4350
199	1.0270	1.4126	70.79%	204	71.59%	1.3969	1.0267	1.0265	1.3966
Tail	1.3755	1.3755	72.70%	Tail	73.50%	1.3606	1.3606	1.3605	1.3605

Selected Development in 4th and Subsequent Years:

41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Restated Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2005	632,408	864,485	50,164	1.3605	68,248	18,084	15,365	2,719	7.89%
2006	656,746	874,152	58,881	1.3966	82,230	23,349	23,714	(365)	9.41%
2007	679,930	888,135	59,118	1.4350	84,832	25,714	24,214	1,500	9.55%
2008	709,787	908,956	57,020	1.4787	84,317	27,297	25,421	1,876	9.28%
2009	741,553	928,286	53,691	1.5275	82,014	28,323	24,504	3,819	8.83%
2010	761,034	946,991	65,088	1.5840	103,103	38,014	34,267	3,747	10.89%
2011	772,649	953,813	57,978	1.6482	95,559	37,581	35,764	1,817	10.02%
2012	769,715	922,515	55,565	1.7199	95,565	40,001	30,144	9,857	10.36%
2013	781,394	921,764	46,415	1.8024	83,660	37,245	29,151	8,094	9.08%
2014	822,358	949,205	41,545	1.8935	78,664	37,119	35,460	1,659	8.29%
2015	877,262	993,698	45,719	1.9995	91,415	45,696	42,976	2,720	9.20%
2016	923,168	1,033,297	45,606	2.1255	96,934	51,328	47,813	3,515	9.38%
2017	977,104	1,079,631	43,497	2.2859	99,431	55,934	50,041	5,893	9.21%
2018	1,044,467	1,135,889	34,962	2.5088	87,713	52,751	43,812	8,939	7.72%
2019	1,099,731	1,166,819	28,129	2.8312	79,640	51,511	49,236	2,275	6.83%
2020	1,134,690	1,177,995	20,996	3.3323	69,967	48,970	46,112	2,858	5.94%
2021	1,159,166	1,197,418	20,724	4.2614	88,314	67,590	10,231	57,359	7.38%
2022	1,126,492	1,126,492	9,633	8.3762	80,689	71,056	5,500	65,556	7.16%
	15,669,653	18,069,540	794,731		1,552,295	757,564	573,725	183,839	8.59%

Notes:
(3) Indexed to match the indexing done on losses
(10) = (6) / (3)

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Restated Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Based on 3rd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	68,248				68,248	7.89%	7.89%	100.00%	7.89%	7.94%
2006	874,152	82,230	68,931			68,931	7.89%	9.41%	100.00%	9.41%	9.90%
2007	888,135	84,832	83,052	69,620		76,336	8.60%	9.55%	100.00%	9.55%	9.84%
2008	908,956	84,317	85,681	83,883	70,316	79,960	8.80%	9.28%	100.00%	9.28%	9.52%
2009	928,286	82,014	85,160	86,538	84,722	85,473	9.21%	8.83%	100.00%	8.83%	8.85%
2010	946,991	103,103	82,834	86,012	87,403	85,416	9.02%	10.89%	100.00%	10.89%	11.04%
2011	953,813	95,559	104,134	83,662	86,872	91,556	9.60%	10.02%	100.00%	10.02%	10.35%
2012	922,515	95,565	96,515	105,175	84,499	95,396	10.34%	10.36%	100.00%	10.36%	9.80%
2013	921,764	83,660	96,521	97,480	106,227	100,076	10.86%	9.08%	100.00%	9.08%	8.65%
2014	949,205	78,664	84,497	97,486	98,455	93,479	9.85%	8.29%	100.00%	8.29%	8.56%
2015	993,698	91,415	79,451	85,342	98,461	87,751	8.83%	9.20%	100.00%	9.20%	9.42%
2016	1,033,297	96,934	92,329	80,245	86,195	86,256	8.35%	9.38%	100.00%	9.38%	9.54%
2017	1,079,631	99,431	97,903	93,252	81,048	90,734	8.40%	9.21%	100.00%	9.21%	9.14%
2018	1,135,889	87,713	100,425	98,882	94,185	97,831	8.61%	7.72%	75.00%	7.94%	7.73%
2019	1,166,819	79,640	88,590	101,429	99,871	96,630	8.28%	6.83%	50.00%	7.55%	7.74%
2020	1,177,995	69,967	80,436	89,476	102,444	90,785	7.71%	5.94%	75.00%	6.38%	6.93%
2021	1,197,418	88,314	70,666	81,241	90,371	80,759	6.74%	7.38%	75.00%	7.22%	7.33%
2022	1,126,492	80,689	89,197	71,373	82,053	80,874	7.18%	7.16%	25.00%	7.18%	7.38%
	18,069,540	1,552,295	1,486,322	1,411,096	1,353,120	1,556,493					

Trend in Losses Based on Exponential Regression (a):

0.89%

Selected Trend (b):

1.00%

Notes:

(3) Ultimate Losses from Page 17

(7) = Average [(4), (5), (6)]

(11) = (9) * (10) + (8) * [1 - (10)]

(12) Selected Initial Ult Loss Ratio from Page 10

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Restated Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
				Paid	Unpaid						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	7.94%	68,609	73.50%	26.50%	50,429	50,164	18,180	68,344	2,815	7.91%
2006	874,152	9.90%	86,563	71.60%	28.40%	61,983	58,881	24,580	83,460	866	9.55%
2007	888,135	9.84%	87,423	69.69%	30.31%	60,924	59,118	26,499	85,618	2,285	9.64%
2008	908,956	9.52%	86,575	67.63%	32.37%	58,547	57,020	28,028	85,048	2,607	9.36%
2009	928,286	8.85%	82,198	65.47%	34.53%	53,811	53,691	28,387	82,078	3,883	8.84%
2010	946,991	11.04%	104,547	63.13%	36.87%	66,000	65,088	38,547	103,635	4,280	10.94%
2011	953,813	10.35%	98,739	60.67%	39.33%	59,907	57,978	38,832	96,810	3,068	10.15%
2012	922,515	9.80%	90,367	58.14%	41.86%	52,542	55,565	37,825	93,389	7,681	10.12%
2013	921,764	8.65%	79,713	55.48%	44.52%	44,225	46,415	35,488	81,903	6,337	8.89%
2014	949,205	8.56%	81,231	52.81%	47.19%	42,901	41,545	38,331	79,876	2,871	8.42%
2015	993,698	9.42%	93,562	50.01%	49.99%	46,793	45,719	46,770	92,488	3,794	9.31%
2016	1,033,297	9.54%	98,545	47.05%	52.95%	46,364	45,606	52,181	97,787	4,368	9.46%
2017	1,079,631	9.14%	98,670	43.75%	56.25%	43,164	43,497	55,507	99,003	5,466	9.17%
2018	1,135,889	7.73%	87,755	39.86%	60.14%	34,978	34,962	52,776	87,738	8,964	7.72%
2019	1,166,819	7.74%	90,298	35.32%	64.68%	31,894	28,129	58,404	86,533	9,168	7.42%
2020	1,177,995	6.93%	81,615	30.01%	69.99%	24,492	20,996	57,123	78,119	11,011	6.63%
2021	1,197,418	7.33%	87,820	23.47%	76.53%	20,608	20,724	67,212	87,936	56,981	7.34%
2022	1,126,492	7.38%	83,136	11.94%	88.06%	9,925	9,633	73,211	82,844	67,711	7.35%
	18,069,540		1,587,366			809,487	794,731	777,878	1,572,609	204,153	8.70%

Notes:
 (10) = (8) + (9)

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Weekly Indemnity
Tabular Reserving
March 31, 2023

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Insurance Year	(1) Paid-to-Date Disc to 120 Months			(2) Tabular Reserves at Valuation			Ultimate Adjustment [a]	
	Undisc 0.00%	With Margin 1.65%	No Margin 2.05%	Undisc 0.00%	With Margin 1.65%	No Margin 2.05%	Incremental	Accumulated
2002	51,950,930	50,631,484	50,336,952	18,231,622	15,285,849	14,699,310	1.0010	1.0090
2003	51,438,206	50,422,894	50,194,292	14,549,802	12,230,886	11,772,543	1.0010	1.0100
2004	42,615,166	41,938,398	41,785,197	15,372,530	12,739,384	12,220,278	1.0010	1.0111
2005	50,164,037	49,465,043	49,305,780	16,806,224	14,062,262	13,519,492	1.0010	1.0121
2006	58,880,672	58,228,020	58,078,216	24,695,150	20,227,082	19,355,358	1.0010	1.0131
2007	59,118,362	58,587,146	58,464,530	25,114,520	20,701,676	19,842,726	1.0010	1.0141
2008	57,019,911	56,616,013	56,522,265	26,758,149	22,346,690	21,474,365	1.0010	1.0151
2009	53,690,784	53,441,945	53,383,739	25,623,205	21,372,490	20,532,937	1.0010	1.0161
2010	65,088,488	64,914,177	64,873,141	36,847,184	30,370,992	29,105,656	1.0010	1.0171
2011	57,978,273	57,893,355	57,873,237	38,041,293	31,267,966	29,955,366	1.0010	1.0182
2012	55,564,667	55,549,077	55,545,355	31,627,286	25,583,473	24,427,603	1.0010	1.0192
2013				-	-	-		

Insurance Year	(3) Tab Rsv at Valuation Adjusted [b]			(4) Ultimate Disc to 120 Months [c]			Disc Factor for Tab Rsv [d]	
	Undisc 0.00%	With Margin 1.65%	No Margin 2.05%	Undisc 0.00%	With Margin 1.65%	No Margin 2.05%	With Margin 1.65%	No Margin 2.05%
2002	18,865,797	15,817,557	15,210,617	70,816,727	63,843,169	62,504,518	83.53%	79.99%
2003	15,212,659	12,788,098	12,308,874	66,650,865	61,280,451	60,242,491	84.90%	81.63%
2004	16,013,594	13,270,640	12,729,887	58,628,760	53,391,561	52,390,119	86.30%	83.31%
2005	17,614,302	14,738,404	14,169,537	67,778,339	62,394,831	61,352,022	87.73%	85.02%
2006	25,788,178	21,122,350	20,212,043	84,668,850	77,064,102	75,613,756	89.18%	86.76%
2007	26,301,476	21,680,073	20,780,528	85,419,838	78,239,584	76,862,865	90.65%	88.54%
2008	28,023,655	23,403,560	22,489,978	85,043,565	78,180,792	76,842,279	92.14%	90.35%
2009	26,901,791	22,438,967	21,557,521	80,592,574	74,459,071	73,260,553	93.66%	92.20%
2010	38,594,023	31,810,810	30,485,487	103,682,511	95,200,920	93,558,092	95.21%	94.09%
2011	39,784,415	32,700,721	31,327,976	97,762,688	89,541,085	87,955,210	96.78%	96.02%
2012	33,298,928	26,935,673	25,718,709	88,863,594	82,047,525	80,747,421	98.38%	97.99%
							100.00%	100.00%

Insurance Year	(5) 120-Ult Paid Development Factor [e]			Paid to 120 Months
	Undisc 0.00%	With Margin 1.65%	No Margin 2.05%	
2002	1.9866	1.7910	1.7534	35,647,505
2003	1.8073	1.6617	1.6336	36,877,867
2004	1.8195	1.6569	1.6259	32,223,169
2005	1.7698	1.6292	1.6020	38,297,605
2006	1.8529	1.6865	1.6547	45,695,439
2007	1.7982	1.6471	1.6181	47,502,672
2008	1.8062	1.6605	1.6321	47,083,118
2009	1.7694	1.6347	1.6084	45,548,096
2010	1.8042	1.6566	1.6280	57,467,493
2011	1.8495	1.6939	1.6639	52,859,719
2012	1.6563	1.5293	1.5050	53,651,615

Simple Average of Middle 4 of Last 6 [f]	1.7945	1.6497	1.6216
Simple Average of Middle 3 of Last 5 [f]	1.7933	1.6506	1.6228
Latest 10 Volume Weighted [f]	1.7915	1.6443	1.6160
Selected	1.7915	1.6443	1.6160
Commuted Rsv Factor [g]		0.8141	0.7782

Notes:

- [a] Incremental Factors per the Selected Incurred Loss Development Factors for 120 months and thereafter
- [b] Undiscounted = [(1) Undiscounted + (2) Undiscounted] * Ultimate Adjustment Accumulated - (1) Undiscounted;
Discounted = (3) Undiscounted / (2) Undiscounted * (2) Discounted
- [c] (1) + (3) * Discount Factor for Tab Rsv
- [d] Discount from Valuation Date to 120 Months
- [e] (4) / Paid to 120 Months
- [f] (Selected 120-Ult Paid Development Factor - 1) / (Selected 120-Ult Paid Development Factor @ 0.00% - 1)

Manitoba Public Insurance
 Automobile Insurance Division - Accident Benefits - Weekly Indemnity
 Tabular Reserving
 March 31, 2023

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Insurance Year	Tabular Reserve [a]	Case Reserves	IBNR
2004 & Prior	171,116	156,950	14,166
2005	17,614	15,365	2,249
2006	25,788	23,714	2,074
2007	26,301	24,214	2,087
2008	28,024	25,421	2,603
2009	26,902	24,504	2,398
2010	38,594	34,267	4,327
2011	39,784	35,764	4,020
2012	33,299	30,144	3,155
	407,423	370,343	37,080

Notes:

[a] Tabular Reserves at Valuation Adjusted at 0.00% from Page 20

Manitoba Public Insurance
 Automobile Insurance Division - Accident Benefits - Weekly Indemnity
 Tabular Reserving - Pre-PIPP
 March 31, 2023

Appendix E
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Insurance Year	Tabular Reserves at Valuation		
	0.00%	With Margin Variable	No Margin Variable
1972	102,619	100,427	98,650
1973	137,308	131,905	128,966
1974	138,202	132,653	129,672
1975	140,038	134,333	131,294
1976	170,158	160,534	156,282
1977	420,035	401,639	392,291
1978	221,903	210,456	205,136
1979	173,469	163,607	159,261
1980	929,500	836,863	806,527
1981	809,677	765,556	745,678
1982	732,574	689,484	670,851
1983	1,548,829	1,445,092	1,403,709
1984	785,317	744,030	725,115
1985	339,416	306,977	295,966
1986	682,660	622,671	601,565
1987	1,653,359	1,529,833	1,482,923
1988	1,296,837	1,188,862	1,150,386
1989	1,074,127	980,031	947,240
1990	2,155,051	2,011,353	1,953,499
1991	1,635,120	1,498,691	1,449,617
1992	976,152	896,625	868,367
1993	1,486,650	1,369,048	1,326,129
Total Tabular Reserves	17,609,001	16,320,670	15,829,124
Total Case Reserves	8,090,000		
Total IBNR	9,519,001		

July 13, 2023



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix F
Accident Benefits Other Indexed - Undiscounted Gross
IBNR Calculations

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Reported Loss & ALAE - With Z-Files
March 31, 2023

Appendix F
Page 1

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	17,388,416	35,932,196	49,546,528	47,937,843	46,325,205	46,210,809	47,306,893	47,283,296	47,824,342	49,273,088	49,119,864	48,554,523	50,821,353	50,742,986	51,127,299	51,669,981	52,154,808	53,703,501	52,832,723	54,253,798	55,150,470	56,174,102
2005	22,488,048	44,608,457	49,434,920	49,646,436	47,797,978	48,954,351	47,088,272	47,541,162	48,784,942	51,099,548	52,442,483	51,397,326	51,228,613	50,744,403	50,822,635	50,535,625	51,060,689	52,667,656	54,505,875	55,032,720	56,301,560	
2006	31,832,623	53,549,208	62,338,770	61,114,334	60,211,839	59,551,150	58,048,199	58,461,909	59,997,401	60,391,825	62,850,085	63,035,706	63,760,131	64,460,056	62,840,328	63,433,943	62,918,015	63,995,148	64,768,350	66,403,803		
2007	25,975,543	44,626,001	50,691,895	49,139,944	50,089,496	50,652,895	52,508,809	55,199,041	58,892,661	60,062,273	58,599,975	57,554,062	60,160,112	60,732,997	61,997,282	64,545,785	65,679,240	66,313,783	67,018,628			
2008	20,265,288	40,556,655	42,094,625	44,046,311	44,845,556	48,600,828	49,138,736	51,575,988	52,294,965	51,756,735	51,069,124	48,969,086	49,117,731	48,849,433	49,279,351	50,697,164	49,763,413	49,808,946				
2009	23,022,141	39,954,751	49,377,158	52,873,823	52,216,852	51,407,183	52,374,883	52,649,745	53,190,845	56,119,038	54,451,632	54,621,562	54,843,865	56,383,991	56,605,972	57,260,566	58,400,909					
2010	28,924,643	61,430,894	54,305,760	59,107,381	56,512,157	58,662,812	56,711,501	57,979,741	58,503,029	60,521,851	55,381,674	56,416,315	57,980,149	58,270,264	56,291,271	56,083,702						
2011	33,284,566	64,505,391	50,095,380	51,332,619	55,450,009	57,949,982	56,780,332	57,276,384	54,528,010	54,248,936	55,454,596	56,427,161	60,795,792	61,282,466	62,371,280							
2012	29,934,822	51,471,199	59,050,899	60,791,868	60,764,020	57,968,931	52,986,957	54,847,484	56,913,991	57,987,079	55,909,857	54,683,389	55,134,615	55,528,291								
2013	26,503,788	55,591,413	61,933,250	59,259,981	57,165,299	51,969,610	51,986,774	50,906,469	50,779,616	49,978,180	50,108,576	50,369,587	50,810,495									
2014	24,177,339	46,259,953	48,210,482	47,594,259	48,723,091	48,004,679	46,002,787	45,673,516	45,653,619	45,743,588	45,053,760	46,522,776										
2015	28,129,934	55,410,130	61,027,790	61,292,861	60,956,125	61,661,629	60,999,722	60,667,383	61,070,932	57,925,514	59,029,828											
2016	31,327,671	57,440,618	66,141,482	68,292,089	72,910,057	75,455,430	72,709,175	74,276,702	73,912,267	72,569,958												
2017	32,258,206	61,569,418	61,319,321	57,745,746	61,284,073	69,135,892	66,962,689	67,473,289	66,334,289													
2018	27,835,547	47,061,538	48,779,355	49,474,544	54,124,552	56,603,697	50,934,971	52,122,154														
2019	23,696,504	42,447,072	42,351,707	50,754,423	55,771,343	57,464,052	56,759,154															
2020	18,575,477	30,146,356	44,103,187	48,266,570	53,180,326	55,349,904																
2021	19,360,036	39,204,924	41,268,017	42,645,887																		
2022	16,600,175	32,329,163																				

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Paid Loss & ALAE - With Z-Files
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	3,637,105	9,478,801	16,455,878	18,482,710	20,231,879	21,251,557	22,951,138	24,358,221	25,592,641	26,860,454	28,101,007	29,242,173	30,564,552	31,611,554	32,526,793	33,504,657	34,423,978	35,279,794	36,074,167	37,043,038	37,866,375	38,669,409
2005	3,279,192	9,740,218	16,753,051	19,076,470	21,049,593	21,994,321	23,612,443	25,140,688	26,642,221	28,091,200	29,450,361	30,539,351	31,572,539	32,531,029	33,428,811	34,442,616	35,325,835	36,960,332	38,117,341	39,027,896	39,989,270	
2006	3,527,227	10,229,571	18,282,875	20,564,186	22,993,378	24,205,890	26,926,149	29,058,995	30,740,333	32,303,015	33,867,232	35,299,614	36,753,502	37,812,603	39,467,449	40,601,043	41,759,632	42,742,511	43,826,115	44,852,955		
2007	3,575,819	10,020,536	18,645,923	21,063,740	23,600,910	24,873,979	27,167,195	28,985,849	30,738,842	32,375,347	34,175,288	35,356,595	36,687,791	37,915,869	39,138,680	41,295,528	42,420,521	43,567,377	44,624,237			
2008	3,510,954	9,857,807	18,518,664	21,467,095	24,098,311	25,416,126	27,669,522	29,727,251	31,244,354	32,810,025	34,119,094	34,915,942	35,676,992	36,055,915	37,100,776	38,125,960	38,883,651	39,600,564				
2009	3,742,912	11,350,241	19,366,829	22,131,538	24,536,529	25,912,074	28,735,388	30,595,303	32,306,476	33,966,025	35,389,832	36,694,846	37,955,283	39,292,207	40,466,277	41,649,553	42,756,412					
2010	3,571,700	11,108,884	20,937,499	24,322,717	27,353,591	28,795,629	31,560,295	33,560,574	35,239,703	36,510,288	37,536,866	38,537,007	39,833,118	40,876,997	41,677,890	42,316,817						
2011	3,319,445	11,264,361	21,296,056	24,598,218	27,782,113	29,335,220	32,030,360	34,170,423	35,219,323	36,653,660	38,331,043	39,644,500	40,825,741	41,962,690	43,004,533							
2012	5,159,701	13,594,426	24,164,269	27,520,897	30,638,121	32,310,391	34,908,919	36,590,088	38,255,780	39,615,513	40,606,043	41,274,198	41,902,946	42,551,690								
2013	4,174,827	12,656,387	24,884,663	28,294,598	31,266,003	32,702,898	34,879,931	36,407,133	37,463,172	38,262,855	38,948,833	39,600,928	40,248,864									
2014	3,705,383	11,982,963	21,817,182	25,464,314	27,988,054	29,293,956	31,340,337	32,593,291	33,653,125	34,333,418	34,971,008	35,587,620										
2015	4,840,528	15,414,013	27,067,760	30,751,108	34,074,093	35,858,523	38,381,729	40,681,432	42,425,157	43,748,483	44,871,746											
2016	5,117,465	14,957,009	26,925,175	31,099,383	34,136,254	35,728,567	39,132,864	41,856,609	43,903,328	45,620,760												
2017	5,107,011	15,235,083	27,805,159	31,492,971	35,070,134	37,020,104	39,834,945	41,548,354	43,012,695													
2018	4,581,223	12,510,640	25,133,690	28,489,715	30,532,552	31,771,208	33,977,053	35,913,536														
2019	3,772,726	13,278,421	21,164,242	24,192,538	26,578,517	27,938,912	31,096,298															
2020	3,314,353	10,190,059	16,850,974	19,161,257	21,490,849	22,848,227																
2021	3,255,577	9,926,615	17,685,004	20,861,387																		
2022	2,878,450	9,892,425																				

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Reported Loss & ALAE - Travel Only
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	2,821,341	4,307,749	3,372,509	2,926,192	2,810,048	2,866,030	2,855,578	2,741,424	2,646,223	2,670,046	2,663,588	2,651,399	2,722,375	2,707,453	2,727,873	2,729,006	2,713,203	2,624,413	2,647,504	2,638,400	2,655,011	2,668,381
2005	2,627,270	4,584,367	3,068,686	2,683,913	2,588,192	2,602,144	2,512,479	2,440,191	2,390,242	2,401,663	2,335,556	2,311,417	2,281,822	2,265,783	2,337,439	2,271,802	2,271,470	2,240,530	2,239,397	2,229,986	2,233,713	
2006	3,289,673	5,601,555	4,211,270	3,547,720	3,399,475	3,350,253	3,128,657	2,978,346	3,074,130	3,011,628	3,248,119	3,112,010	3,055,662	3,052,505	2,951,116	2,984,690	2,907,725	2,900,457	2,911,584	2,874,176		
2007	3,130,375	5,483,277	3,825,526	3,120,569	2,970,310	2,965,025	3,007,559	3,325,331	3,538,455	3,362,617	3,350,256	3,618,211	3,595,949	3,378,351	3,353,677	3,358,890	3,349,214	3,345,165	3,343,027			
2008	2,823,079	4,837,409	3,549,719	3,045,596	2,971,301	3,018,430	3,103,228	3,167,874	3,345,432	3,337,213	3,197,418	3,342,597	3,078,508	3,068,170	3,051,536	3,081,412	3,066,499	3,059,063				
2009	2,605,442	4,496,767	4,072,628	3,231,024	2,874,360	2,825,381	2,763,752	2,836,998	2,843,287	2,858,326	2,921,818	2,790,362	2,707,406	2,731,810	2,759,335	2,759,875	2,735,319					
2010	2,894,877	5,580,086	4,146,942	4,061,368	3,458,969	3,196,157	3,188,969	3,301,818	3,279,904	3,313,929	3,115,530	3,177,605	3,137,718	3,118,047	3,117,192	3,161,556						
2011	3,182,140	6,618,172	2,921,864	2,928,039	3,264,922	3,300,034	3,245,593	3,231,403	3,231,352	3,243,811	3,237,902	3,256,233	3,287,396	3,240,230	3,345,676							
2012	3,383,995	5,969,361	5,315,763	4,847,265	4,546,268	3,560,336	3,221,880	3,288,720	3,181,146	3,029,500	3,035,130	3,033,909	3,100,864	3,100,017								
2013	3,616,940	7,092,489	6,035,835	4,230,836	3,714,910	3,206,945	3,108,320	2,925,879	2,803,648	2,765,451	2,769,121	2,767,425	2,780,943									
2014	3,341,313	5,889,808	4,472,269	3,654,468	3,386,144	3,117,889	2,631,716	2,520,703	2,465,263	2,461,901	2,452,222	2,435,251										
2015	3,569,997	6,482,327	5,802,607	4,762,398	3,498,511	3,202,216	2,722,696	2,615,792	2,578,565	2,578,999	2,585,730											
2016	4,104,617	7,061,430	6,039,154	4,684,926	3,447,885	2,921,420	2,790,569	2,786,350	2,839,203	2,847,731												
2017	4,265,702	7,585,508	4,899,209	4,115,490	2,883,703	2,523,630	2,413,962	2,384,322	2,362,340													
2018	3,504,446	6,259,674	3,832,816	3,123,287	2,238,579	1,996,348	1,876,437	1,908,198														
2019	3,340,536	5,335,378	2,901,662	2,341,669	1,634,361	1,444,125	1,416,511															
2020	2,361,672	3,420,357	2,151,747	1,699,612	1,238,549	1,176,479																
2021	2,566,210	4,637,992	2,817,231	2,258,618																		
2022	2,413,542	4,338,931																				

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Paid Loss & ALAE - Travel Only
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	218,120	715,888	1,459,768	1,699,614	1,837,057	1,897,894	2,014,936	2,098,693	2,169,489	2,220,785	2,281,689	2,349,534	2,405,104	2,450,299	2,491,801	2,530,625	2,548,159	2,561,021	2,574,298	2,582,488	2,595,070	2,612,551
2005	201,067	709,624	1,337,577	1,537,811	1,668,096	1,742,159	1,857,669	1,914,327	1,963,473	2,006,538	2,033,258	2,049,131	2,059,905	2,070,720	2,080,867	2,094,779	2,104,324	2,116,849	2,120,354	2,123,300	2,130,650	
2006	231,410	736,316	1,475,159	1,707,728	1,924,895	2,032,763	2,187,928	2,264,780	2,337,766	2,394,851	2,456,869	2,507,837	2,547,181	2,584,927	2,623,800	2,660,166	2,699,394	2,712,833	2,727,187	2,743,669		
2007	227,050	742,530	1,539,477	1,839,156	2,096,106	2,209,634	2,433,185	2,605,815	2,738,419	2,829,517	2,896,515	2,937,064	2,961,767	2,992,620	3,024,084	3,045,985	3,057,239	3,070,112	3,086,356			
2008	216,753	740,989	1,491,021	1,881,453	2,157,040	2,305,810	2,523,070	2,680,956	2,780,499	2,824,077	2,874,079	2,904,162	2,920,154	2,929,796	2,936,633	2,939,504	2,943,935	2,955,966				
2009	211,527	777,189	1,491,201	1,770,782	1,976,246	2,093,824	2,266,621	2,371,991	2,433,351	2,477,857	2,515,880	2,543,587	2,569,685	2,593,886	2,604,978	2,626,197	2,640,761					
2010	190,686	677,610	1,472,938	1,832,693	2,169,007	2,301,535	2,551,012	2,710,547	2,811,575	2,880,614	2,923,194	2,956,614	2,981,285	2,992,242	3,000,731	3,007,764						
2011	181,911	716,352	1,567,479	1,944,438	2,273,494	2,382,956	2,596,083	2,705,317	2,779,934	2,844,002	2,883,087	2,918,483	2,969,994	2,984,165	3,005,958							
2012	238,033	795,059	1,623,031	1,962,594	2,258,185	2,390,205	2,578,344	2,709,869	2,798,676	2,843,987	2,875,751	2,896,857	2,926,573	2,942,815								
2013	225,946	748,261	1,562,648	1,886,437	2,181,116	2,310,366	2,503,530	2,594,771	2,643,881	2,667,016	2,676,938	2,686,028	2,699,237									
2014	177,702	631,352	1,340,785	1,624,337	1,845,449	1,933,045	2,073,136	2,135,829	2,164,807	2,181,064	2,191,211	2,199,206										
2015	250,215	800,555	1,537,027	1,844,585	2,097,390	2,199,684	2,339,522	2,443,356	2,472,671	2,488,783	2,502,064											
2016	226,448	735,900	1,460,745	1,800,667	2,077,915	2,208,796	2,424,869	2,491,164	2,540,258	2,591,367												
2017	197,359	727,666	1,462,142	1,763,730	1,965,751	2,078,928	2,160,478	2,199,662	2,227,196													
2018	173,666	561,548	1,230,060	1,483,211	1,591,295	1,646,207	1,724,484	1,770,803														
2019	111,572	478,725	820,709	973,474	1,068,732	1,121,365	1,204,951															
2020	94,150	350,769	656,785	772,135	887,528	932,494																
2021	112,938	387,553	858,989	1,051,431																		
2022	95,442	398,178																				

Manitoba Public Insurance
 Automobile Insurance Division - Accident Benefits - Other (Indexed)
 Reported Loss & ALAE - Z-Files
 March 31, 2023

Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Reported Loss & ALAE - With Z-Files - Adjusted
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	23,616,704	49,141,570	67,251,369	65,149,299	62,009,402	61,846,989	62,629,040	62,012,161	62,059,515	63,695,798	63,290,772	61,872,696	64,180,506	63,584,900	63,612,835	63,973,543	64,251,637	65,631,346	64,220,760	65,314,648	66,153,003	66,603,742
2005	30,169,795	59,982,626	65,567,768	65,919,063	62,728,009	64,235,485	61,187,914	61,105,254	62,498,088	65,139,119	65,943,743	64,285,106	63,569,718	62,603,910	62,446,287	61,884,964	62,179,045	63,470,677	65,023,084	65,482,889	66,219,089	
2006	41,773,896	70,260,272	80,801,729	79,344,911	77,211,825	76,375,465	73,542,813	73,857,731	75,454,647	74,909,614	77,266,218	76,775,375	77,015,275	77,442,926	75,280,225	75,524,374	74,378,858	75,018,340	75,708,724	76,645,339		
2007	33,257,134	57,113,156	64,404,545	62,556,326	62,989,677	63,695,882	65,811,251	68,836,993	72,320,893	73,202,733	70,826,329	69,110,231	71,739,156	72,050,618	73,035,558	75,142,020	75,794,497	76,331,185	76,273,847			
2008	25,394,311	50,981,732	52,335,457	54,867,737	55,714,970	60,379,849	60,808,429	62,970,452	63,396,819	62,256,017	61,088,489	58,508,175	58,484,759	57,961,986	58,082,220	59,279,714	58,250,326	57,931,679				
2009	28,358,733	49,220,777	60,831,551	65,325,137	64,281,820	63,290,119	63,567,149	63,446,928	63,522,762	66,398,087	64,236,519	64,160,239	64,095,401	65,285,505	65,129,752	65,723,406	66,342,970					
2010	35,502,042	75,496,354	66,480,575	72,421,683	68,215,108	70,825,162	67,977,232	68,809,675	68,890,863	70,842,841	64,830,562	65,647,825	66,838,114	66,727,677	64,594,155	63,899,454						
2011	40,581,366	78,574,617	60,058,445	61,540,532	65,876,296	68,821,692	66,772,602	66,816,626	63,437,107	62,857,509	63,869,565	64,456,924	68,617,837	69,017,084	69,457,590							
2012	35,459,368	60,951,714	69,344,198	71,446,941	70,667,037	67,518,945	61,368,238	63,213,582	65,246,212	66,097,121	63,410,870	61,791,656	62,192,033	62,141,744								
2013	30,886,477	64,835,750	71,310,370	68,367,798	65,408,905	59,552,936	59,329,777	57,904,539	57,521,580	56,321,737	56,191,918	56,404,308	56,486,431									
2014	27,641,845	52,928,688	54,595,400	53,944,597	54,950,007	54,157,774	51,708,631	51,106,516	50,747,884	50,573,937	49,803,456	50,928,778										
2015	31,657,423	62,390,288	68,247,317	68,590,084	67,859,051	68,647,452	67,502,074	66,558,183	66,523,229	63,178,273	63,810,956											
2016	34,883,073	63,980,176	73,105,243	75,522,045	79,962,739	82,737,505	78,787,027	79,655,705	79,115,538	76,770,379												
2017	35,515,393	67,802,875	66,877,636	63,001,087	66,104,052	74,429,828	71,446,289	71,833,688	69,831,410													
2018	30,228,075	51,102,390	52,125,714	52,853,383	57,206,443	59,771,283	53,784,001	54,405,190														
2019	25,188,853	45,111,210	44,367,283	53,070,061	58,092,707	59,833,286	58,140,502															
2020	19,371,402	31,422,881	45,699,785	49,981,570	53,895,897	56,065,475																
2021	20,106,698	40,693,482	41,611,873	42,989,743																		
2022	16,600,175	32,329,163																				

*Prior years' figures indexed to current benefit level; Travel indexed separately from other benefits

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Reported Loss & ALAE - Z-Files - Adjusted
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Prior years' figures indexed to current benefit level

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Case Reserves - Expenses Only - Adjusted
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	-	-	-	-	-	-	-	-	-	-	-	539,729	600,671	468,495	414,729	375,141	83,115	182,539	154,164	280,773	271,644	216,564
2005	-	-	-	-	-	-	-	-	-	-	669,378	584,979	458,990	447,789	517,127	230,055	284,282	250,582	199,814	210,130	205,977	
2006	-	-	-	-	-	-	-	-	-	1,049,800	1,188,969	1,033,259	921,329	823,909	482,892	567,572	586,490	606,894	524,938	511,542		
2007	-	-	-	-	-	-	-	-	885,610	907,966	843,787	748,053	662,493	438,650	381,044	308,830	305,023	344,328	341,248			
2008	-	-	-	-	-	-	-	987,143	1,039,755	866,042	790,645	584,604	325,940	249,750	201,731	229,543	167,526	182,727				
2009	-	-	-	-	-	-	1,048,663	1,065,927	900,001	740,953	669,087	299,449	249,424	326,242	276,675	274,855	263,067					
2010	-	-	-	-	2,346,852	2,227,143	1,252,162	922,086	921,746	822,956	522,785	427,464	398,875	339,279	263,356	282,949						
2011	-	-	3,639,832	3,036,141	1,920,571	1,574,452	970,106	804,568	870,945	541,119	308,780	347,155	334,971	283,611	263,107							
2012	2,739,766	4,905,052	3,527,294	3,099,946	2,490,275	1,683,130	1,179,321	986,324	513,435	449,875	337,461	347,596	317,779	244,159								
2013	2,755,550	4,832,722	3,503,122	2,589,759	2,146,051	1,209,405	911,639	484,408	378,105	295,319	259,455	243,777	249,889									
2014	2,176,746	3,670,240	2,508,738	2,096,059	1,790,832	1,440,907	826,235	734,970	529,287	380,434	327,212	273,677										
2015	2,494,911	4,446,941	3,800,473	3,143,828	2,293,451	1,925,865	1,574,427	1,110,686	489,530	373,058	357,160											
2016	3,119,121	4,783,324	3,850,244	2,911,630	2,324,525	2,749,169	1,890,463	997,942	721,320	577,882												
2017	2,809,117	4,493,009	2,394,451	1,742,694	2,024,480	2,172,312	1,315,683	770,245	528,089													
2018	2,233,367	3,756,234	1,742,243	1,267,334	1,637,659	1,818,988	1,250,595	583,090														
2019	2,013,959	2,728,746	1,353,679	1,278,324	1,622,028	1,760,282	1,155,550															
2020	1,334,636	1,678,553	1,038,919	892,509	1,368,086	1,429,996																
2021	1,469,690	2,358,080	1,356,830	1,016,519																		
2022	1,304,535	2,074,518																				

*Prior years' figures indexed to current benefit level

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Case Reserves - Excess Reserves - Adjusted
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	-	-	-	-	-	-	-	-	-	74,661	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	6,259	118,213	85,178	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	265,046	306,149	149,814	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	440,499	308,618	224,122	95,551	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	874,776	565,388	221,725	188,743	63,484	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	1,007,921	3,949,556	1,849,237	1,393,718	215,733	186,383	146,589	74,760	-	-	-	-	-	-	-	-	-	-	-	-
2010	2,270,932	12,030,343	5,603,263	5,381,058	2,479,728	690,345	468,318	339,349	370,401	1,181,975	1,066,258	902,650	880,634	861,677	857,390	-	-	-	-	-	-	-
2011	10,565,836	18,428,180	2,688,270	581,280	581,563	638,186	242,392	184,634	164,536	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	4,688,592	4,185,216	2,474,887	2,785,133	2,526,648	820,670	317,163	266,392	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	1,610,210	5,066,558	4,049,101	1,592,862	1,175,769	491,603	438,763	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	1,686,356	2,243,857	1,427,235	1,057,966	1,220,031	1,000,649	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	1,610,736	2,891,849	3,981,330	3,662,331	1,479,502	854,111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	3,629,871	4,652,906	5,106,987	3,367,827	577,478	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	3,657,319	5,680,446	943,976	1,104,930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	975,514	1,718,297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	426,524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Prior years' figures indexed to current benefit level

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Evaluation in Months

Insurance Year	7	12	19	24	31	36	48	60	72	84
2004	23,617	49,142	67,251	65,149	62,009	61,847	62,629	62,012	62,060	63,621
2005	30,170	59,983	65,568	65,919	62,728	64,235	61,188	61,099	62,380	65,054
2006	41,774	70,260	80,802	79,345	77,212	76,375	73,543	73,593	75,148	73,710
2007	33,257	57,113	64,405	62,556	62,990	63,696	65,371	68,528	71,211	72,199
2008	25,394	50,982	52,335	54,868	55,715	59,505	60,243	61,762	62,168	61,326
2009	28,359	49,221	59,824	61,376	62,433	61,896	62,303	62,195	62,476	65,582
2010	33,231	63,466	60,877	67,041	63,389	67,908	66,257	67,548	67,599	68,838
2011	30,016	60,146	53,730	57,923	63,374	66,609	65,560	65,827	62,402	62,316
2012	28,031	51,861	63,342	65,562	65,650	65,015	59,872	61,961	64,733	65,647
2013	26,521	54,936	63,758	64,185	62,087	57,852	57,979	57,420	57,143	56,026
2014	23,779	47,015	50,659	50,791	51,939	51,716	50,882	50,372	50,219	50,194
2015	27,552	55,051	60,466	61,784	64,086	65,867	65,928	65,447	66,034	62,805
2016	28,134	54,544	64,148	69,243	77,061	79,988	76,897	78,658	78,394	76,192
2017	29,049	57,629	63,539	60,153	64,080	72,258	70,131	71,063	69,303	
2018	27,019	45,628	50,383	51,586	55,569	57,952	52,533	53,822		
2019	22,748	42,382	43,014	51,792	56,471	58,073	56,985			
2020	18,037	29,744	44,661	49,089	52,528	54,635				
2021	18,637	38,335	40,255	41,973						
2022	15,296	30,255								

Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.0808	1.3685	0.9687	0.9518	0.9974	1.0126	0.9902	1.0008	1.0252	0.9948
2005	1.9882	1.0931	1.0054	0.9516	1.0240	0.9526	0.9985	1.0210	1.0429	1.0034
2006	1.6819	1.1500	0.9820	0.9731	0.9892	0.9629	1.0007	1.0211	0.9809	1.0321
2007	1.7173	1.1277	0.9713	1.0069	1.0112	1.0263	1.0483	1.0391	1.0139	0.9693
2008	2.0076	1.0266	1.0484	1.0154	1.0680	1.0124	1.0252	1.0066	0.9865	0.9832
2009	1.7356	1.2154	1.0259	1.0172	0.9914	1.0066	0.9983	1.0045	1.0497	0.9693
2010	1.9098	0.9592	1.1012	0.9455	1.0713	0.9757	1.0195	1.0007	1.0183	0.9187
2011	2.0038	0.8933	1.0780	1.0941	1.0510	0.9843	1.0041	0.9480	0.9986	1.0200
2012	1.8501	1.2214	1.0350	1.0013	0.9903	0.9209	1.0349	1.0447	1.0141	0.9608
2013	2.0715	1.1606	1.0067	0.9673	0.9318	1.0022	0.9904	0.9952	0.9805	0.9983
2014	1.9772	1.0775	1.0026	1.0226	0.9957	0.9839	0.9900	0.9970	0.9995	0.9857
2015	1.9981	1.0983	1.0218	1.0373	1.0278	1.0009	0.9927	1.0090	0.9511	1.0103
2016	1.9387	1.1761	1.0794	1.1129	1.0380	0.9613	1.0229	0.9966	0.9719	
2017	1.9839	1.1025	0.9467	1.0653	1.1276	0.9706	1.0133	0.9752		
2018	1.6887	1.1042	1.0239	1.0772	1.0429	0.9065	1.0245			
2019	1.8631	1.0149	1.2041	1.0903	1.0284	0.9813				
2020	1.6491	1.5015	1.0992	1.0701	1.0401					
2021	2.0570	1.0501	1.0427							
2022	1.9780									
Latest 9 Volume Weighted	1.9053	1.1308	1.0410	1.0482	1.0253	0.9677	1.0107	0.9962	0.9961	0.9781
Latest 6 Volume Weighted	1.8654	1.1407	1.0583	1.0761	1.0513	0.9676	1.0065	1.0024	0.9848	0.9806
Latest 3 Volume Weighted	1.8922	1.1581	1.1167	1.0794	1.0370	0.9541	1.0200	0.9933	0.9720	0.9990
Simple Average of Middle 4 of Last 6	1.8686	1.1082	1.0613	1.0757	1.0373	0.9743	1.0048	0.9994	0.9876	0.9888
Simple Average of Middle 3 of Last 5	1.8452	1.0856	1.0552	1.0792	1.0403	0.9711	1.0096	0.9963	0.9840	0.9981
Selected March 22	2.0000	1.2000	1.1200	1.0900	1.0400	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Oct 22	2.0000	1.2000	1.1200	1.0900	1.0400	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Factors*	2.0000	1.2000	1.1200	1.0900	1.0400	1.0000	1.0000	1.0000	1.0000	1.0000
Selected Ultimate	3.2539	1.6269	1.3558	1.2105	1.1106	1.0679	1.0679	1.0679	1.0679	1.0679

*216-Ult Factor - Successive LDF's reduced by 5% starting at 1.0034 for the 216-228 factor for 17 years

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
63,291	61,333	63,580	63,116	63,198	63,598	64,169	65,449	64,067	65,034	65,881	66,387
65,274	63,700	63,111	62,156	61,929	61,655	61,895	63,220	64,823	65,273	66,013	
76,077	75,742	76,094	76,619	74,797	74,957	73,792	74,411	75,184	76,134		
69,983	68,362	71,077	71,612	72,655	74,833	75,489	75,987	75,933			
60,298	57,924	58,159	57,712	57,880	59,050	58,083	57,749				
63,567	63,861	63,846	64,959	64,853	65,449	66,080					
63,242	64,318	65,559	65,527	63,473	63,617						
63,561	64,110	68,283	68,733	69,194							
63,073	61,444	61,874	61,898								
55,932	56,161	56,237									
49,476	50,655										
63,454											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
0.9691	1.0366	0.9927	1.0013	1.0063	1.0090	1.0200	0.9789	1.0151	1.0130	1.0077
0.9759	0.9907	0.9849	0.9963	0.9956	1.0039	1.0214	1.0254	1.0069	1.0113	
0.9956	1.0046	1.0069	0.9762	1.0021	0.9845	1.0084	1.0104	1.0126		
0.9768	1.0397	1.0075	1.0146	1.0300	1.0088	1.0066	0.9993			
0.9606	1.0041	0.9923	1.0029	1.0202	0.9836	0.9943				
1.0046	0.9998	1.0174	0.9984	1.0092	1.0096					
1.0170	1.0193	0.9995	0.9687	1.0023						
1.0086	1.0651	1.0066	1.0067							
0.9742	1.0070	1.0004								
1.0041	1.0014									
1.0238										

0.9953	1.0150	1.0013	0.9954	1.0095	0.9999	1.0102	1.0034	1.0116	1.0122	1.0077
1.0047	1.0167	1.0042	0.9943	1.0100	0.9999	1.0102	1.0034	1.0116	1.0122	1.0077
0.9987	1.0258	1.0023	0.9915	1.0102	1.0016	1.0038	1.0109	1.0116	1.0122	1.0077
1.0086	1.0079	1.0035	0.9961	1.0084	1.0015	1.0116	1.0048	1.0126	1.0122	1.0077
1.0099	1.0092	1.0022	1.0027	1.0105	0.9990	1.0116	1.0048	1.0126	1.0122	1.0077
1.0000	1.0000	1.0015	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0405
1.0000	1.0000	1.0015	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0405
1.0000	1.0000	1.0015	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0035	1.0405
1.0679	1.0679	1.0679	1.0663	1.0625	1.0588	1.0551	1.0515	1.0478	1.0441	1.0405

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	2.4323	2.5874	2.7726	2.5248	2.4715	3.2539	3.2539	3.2539
12	1.2766	1.3870	1.4653	1.3512	1.3394	1.6269	1.6269	1.6269
19	1.1290	1.2160	1.2652	1.2192	1.2338	1.3558	1.3558	1.3558
24	1.0845	1.1490	1.1331	1.1488	1.1692	1.2105	1.2105	1.2105
31	1.0346	1.0677	1.0497	1.0680	1.0834	1.1106	1.1106	1.1106
36	1.0091	1.0156	1.0123	1.0295	1.0414	1.0679	1.0679	1.0679
48	1.0427	1.0496	1.0609	1.0567	1.0724	1.0679	1.0679	1.0679
60	1.0317	1.0428	1.0402	1.0516	1.0622	1.0679	1.0679	1.0679
72	1.0356	1.0404	1.0472	1.0522	1.0661	1.0679	1.0679	1.0679
84	1.0396	1.0564	1.0773	1.0654	1.0835	1.0679	1.0679	1.0679
96	1.0629	1.0773	1.0784	1.0775	1.0856	1.0679	1.0679	1.0679
108	1.0679	1.0722	1.0798	1.0683	1.0749	1.0679	1.0679	1.0679
120	1.0521	1.0546	1.0527	1.0599	1.0651	1.0679	1.0679	1.0679
132	1.0508	1.0502	1.0503	1.0562	1.0628	1.0663	1.0663	1.0663
144	1.0557	1.0562	1.0594	1.0604	1.0600	1.0625	1.0625	1.0625
156	1.0457	1.0457	1.0486	1.0515	1.0489	1.0588	1.0588	1.0588
168	1.0458	1.0458	1.0469	1.0499	1.0499	1.0551	1.0551	1.0551
180	1.0353	1.0353	1.0430	1.0378	1.0378	1.0515	1.0515	1.0515
192	1.0318	1.0318	1.0318	1.0328	1.0328	1.0478	1.0478	1.0478
204	1.0200	1.0200	1.0200	1.0200	1.0200	1.0441	1.0441	1.0441
216	1.0077	1.0077	1.0077	1.0077	1.0077	1.0405	1.0405	1.0405

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	2.0000	3.2537	30.73%	7		3.2537	2.0000	2.0000	3.2539
12	1.2000	1.6269		12	61.47%	1.6269	1.2000	1.2000	1.6269
19	1.1200	1.3557	73.76%	19		1.3557	1.1200	1.1200	1.3558
24	1.0900	1.2105		24	82.61%	1.2105	1.0900	1.0900	1.2105
31	1.0400	1.1105	90.05%	31		1.1105	1.0400	1.0400	1.1106
36	1.0000	1.0678		36	93.65%	1.0678	1.0000	1.0000	1.0679
43	1.0000	1.0678	93.65%	48	93.65%	1.0678	1.0000	1.0000	1.0679
55	1.0000	1.0678	93.65%	60	93.65%	1.0678	1.0000	1.0000	1.0679
67	1.0000	1.0678	93.65%	72	93.65%	1.0678	1.0000	1.0000	1.0679
79	1.0000	1.0678	93.65%	84	93.65%	1.0678	1.0000	1.0000	1.0679
91	1.0000	1.0678	93.65%	96	93.65%	1.0678	1.0000	1.0000	1.0679
103	1.0000	1.0678	93.65%	108	93.65%	1.0678	1.0000	1.0000	1.0679
115	1.0000	1.0678	93.65%	120	93.65%	1.0678	1.0015	1.0015	1.0679
127	1.0035	1.0678	93.65%	132	93.79%	1.0662	1.0035	1.0035	1.0663
139	1.0035	1.0641	93.98%	144	94.12%	1.0625	1.0035	1.0035	1.0625
151	1.0035	1.0604	94.31%	156	94.44%	1.0588	1.0035	1.0035	1.0588
163	1.0035	1.0567	94.64%	168	94.78%	1.0551	1.0035	1.0035	1.0551
175	1.0035	1.0530	94.97%	180	95.11%	1.0514	1.0035	1.0035	1.0515
187	1.0035	1.0493	95.30%	192	95.44%	1.0478	1.0035	1.0035	1.0478
199	1.0035	1.0456	95.63%	204	95.77%	1.0441	1.0035	1.0035	1.0441
Tail	1.0420	1.0420	95.97%	Tail	96.11%	1.0405	1.0405	1.0405	1.0405

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Restated Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	864,485	66,013	1.0405	68,687	2,674	16,312	7.95%
2006	656,746	874,152	76,134	1.0441	79,494	3,361	21,551	9.09%
2007	679,930	888,135	75,933	1.0478	79,562	3,629	22,394	8.96%
2008	709,787	908,956	57,749	1.0515	60,721	2,972	10,208	6.68%
2009	741,553	928,286	66,080	1.0551	69,724	3,644	15,644	7.51%
2010	761,034	946,991	63,617	1.0588	67,359	3,743	13,767	7.11%
2011	772,649	953,813	69,194	1.0625	73,522	4,328	19,367	7.71%
2012	769,715	922,515	61,898	1.0663	65,999	4,101	12,977	7.15%
2013	781,394	921,764	56,237	1.0679	60,053	3,816	10,562	6.51%
2014	822,358	949,205	50,655	1.0679	54,093	3,437	10,935	5.70%
2015	877,262	993,698	63,454	1.0679	67,760	4,306	14,158	6.82%
2016	923,168	1,033,297	76,192	1.0679	81,363	5,170	26,949	7.87%
2017	977,104	1,079,631	69,303	1.0679	74,006	4,703	23,322	6.85%
2018	1,044,467	1,135,889	53,822	1.0679	57,475	3,652	16,209	5.06%
2019	1,099,731	1,166,819	56,985	1.0679	60,852	3,867	25,663	5.22%
2020	1,134,690	1,177,995	54,635	1.0679	58,343	3,708	32,502	4.95%
2021	1,159,166	1,197,418	41,973	1.2105	50,810	8,837	21,785	4.24%
2022	1,126,492	1,126,492	30,255	1.6269	49,223	18,968	22,437	4.37%
	15,669,653	18,069,540	1,090,129		1,179,045	88,916	336,742	6.53%

Notes:

(3) Indexed to match the indexing done on losses

(9) = (6) / (3)

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Restated Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Based on 3rd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	68,687				68,687	7.95%	7.95%	100.00%	7.95%	7.95%
2006	874,152	79,494	69,202			69,202	7.92%	9.09%	100.00%	9.09%	9.09%
2007	888,135	79,562	80,091	69,721		74,906	8.43%	8.96%	100.00%	8.96%	8.96%
2008	908,956	60,721	80,159	80,691	70,244	77,031	8.47%	6.68%	100.00%	6.68%	6.68%
2009	928,286	69,724	61,176	80,760	81,297	74,411	8.02%	7.51%	100.00%	7.51%	7.51%
2010	946,991	67,359	70,247	61,635	81,365	71,082	7.51%	7.11%	100.00%	7.11%	7.11%
2011	953,813	73,522	67,865	70,774	62,097	66,912	7.02%	7.71%	100.00%	7.71%	7.71%
2012	922,515	65,999	74,074	68,374	71,304	71,251	7.72%	7.15%	100.00%	7.15%	7.15%
2013	921,764	60,053	66,494	74,629	68,886	70,003	7.59%	6.51%	100.00%	6.51%	6.51%
2014	949,205	54,093	60,503	66,993	75,189	67,562	7.12%	5.70%	100.00%	5.70%	5.70%
2015	993,698	67,760	54,498	60,957	67,495	60,983	6.14%	6.82%	100.00%	6.82%	6.82%
2016	1,033,297	81,363	68,268	54,907	61,414	61,530	5.95%	7.87%	100.00%	7.87%	7.87%
2017	1,079,631	74,006	81,973	68,780	55,319	68,691	6.36%	6.85%	100.00%	6.85%	6.85%
2018	1,135,889	57,475	74,561	82,588	69,296	75,482	6.65%	5.06%	75.00%	5.46%	5.46%
2019	1,166,819	60,852	57,906	75,121	83,207	72,078	6.18%	5.22%	50.00%	5.70%	5.70%
2020	1,177,995	58,343	61,308	58,340	75,684	65,111	5.53%	4.95%	75.00%	5.10%	5.10%
2021	1,197,418	50,810	58,781	61,768	58,777	59,775	4.99%	4.24%	75.00%	4.43%	4.43%
2022	1,126,492	49,223	51,191	59,222	62,231	57,548	5.11%	4.37%	25.00%	4.92%	4.92%
	18,069,540	1,179,045	1,138,296	1,095,258	1,043,807	1,232,243					

Trend in Losses Based on Exponential Regression (a):

-1.74%

Selected Trend (b):

0.75%

Notes:

(3) Ultimate Losses from Page 14

(7) = Average [(4), (5), (6)]

(11) = (9) * (10) + (8) * [1 - (10)]

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 23

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Restated Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	864,485	7.95%	68,687	96.11%	3.89%	66,013	66,013	2,674	68,687	7.95%
2006	874,152	9.09%	79,494	95.77%	4.23%	76,134	76,134	3,361	79,494	9.09%
2007	888,135	8.96%	79,562	95.44%	4.56%	75,933	75,933	3,629	79,562	8.96%
2008	908,956	6.68%	60,721	95.11%	4.89%	57,749	57,749	2,972	60,721	6.68%
2009	928,286	7.51%	69,724	94.77%	5.23%	66,080	66,080	3,644	69,724	7.51%
2010	946,991	7.11%	67,359	94.44%	5.56%	63,617	63,617	3,743	67,359	7.11%
2011	953,813	7.71%	73,522	94.11%	5.89%	69,194	69,194	4,328	73,522	7.71%
2012	922,515	7.15%	65,999	93.79%	6.21%	61,898	61,898	4,101	65,999	7.15%
2013	921,764	6.51%	60,053	93.65%	6.35%	56,237	56,237	3,816	60,053	6.51%
2014	949,205	5.70%	54,093	93.65%	6.35%	50,655	50,655	3,437	54,093	5.70%
2015	993,698	6.82%	67,760	93.65%	6.35%	63,454	63,454	4,306	67,760	6.82%
2016	1,033,297	7.87%	81,363	93.65%	6.35%	76,192	76,192	5,170	81,363	7.87%
2017	1,079,631	6.85%	74,006	93.65%	6.35%	69,303	69,303	4,703	74,006	6.85%
2018	1,135,889	5.46%	61,976	93.65%	6.35%	58,038	53,822	3,938	57,761	5.09%
2019	1,166,819	5.70%	66,465	93.65%	6.35%	62,241	56,985	4,224	61,209	5.25%
2020	1,177,995	5.10%	60,035	93.65%	6.35%	56,220	54,635	3,815	58,451	4.96%
2021	1,197,418	4.43%	53,051	82.61%	17.39%	43,825	41,973	9,226	51,200	4.28%
2022	1,126,492	4.92%	55,467	61.46%	38.54%	34,092	30,255	21,374	51,629	4.58%
	18,069,540		1,199,337			1,106,874	1,090,129	92,463	1,182,591	6.54%

Notes:
 (10) = (8) + (9)

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Insurance Year	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	5,022,695	13,057,012	22,432,885	25,151,405	27,454,690	28,800,887	30,995,761	32,781,138	34,313,882	35,882,794	37,404,508	38,763,833	40,317,951	41,522,869	42,557,188	43,649,987	44,665,247	45,595,811	46,438,830	47,444,980	48,296,016	49,099,049
2005	4,438,886	13,160,452	22,380,925	25,437,173	27,986,508	29,204,616	31,253,978	33,157,036	35,017,141	36,798,996	38,424,671	39,707,627	40,899,329	41,984,410	42,988,843	44,108,611	45,069,017	46,803,402	48,004,697	48,945,424	49,906,799	
2006	4,652,906	13,482,417	23,843,038	26,772,957	29,840,904	31,372,351	34,750,170	37,391,155	39,455,079	41,320,926	43,159,651	44,808,936	46,453,521	47,637,295	49,464,621	50,696,982	51,926,799	52,947,685	54,067,651	55,094,491		
2007	4,622,013	12,929,460	23,817,785	26,854,872	29,985,501	31,559,072	34,374,770	36,592,316	38,676,926	40,597,881	42,670,150	44,005,906	45,494,812	46,850,829	48,180,278	50,469,011	51,637,353	52,822,597	53,879,456			
2008	4,453,338	12,477,619	23,186,775	26,808,624	30,036,099	31,650,724	34,397,829	36,844,548	38,623,768	40,427,487	41,907,417	42,797,992	43,638,421	44,050,389	45,159,087	46,223,503	47,006,385	47,723,297				
2009	4,648,024	14,070,958	23,925,457	27,318,367	30,254,493	31,933,812	35,296,255	37,479,261	39,449,515	41,326,760	42,918,735	44,359,856	45,730,290	47,149,112	48,368,399	49,591,614	50,698,473					
2010	4,412,141	13,708,551	25,714,857	29,836,440	33,427,449	35,139,384	38,374,593	40,670,767	42,566,928	43,986,028	45,119,050	46,206,315	47,581,841	48,665,962	49,493,641	50,132,569						
2011	4,068,749	13,791,288	25,709,301	29,620,433	33,341,853	35,162,508	38,256,477	40,674,276	41,844,999	43,427,923	45,251,637	46,645,716	47,873,937	49,049,000	50,090,844							
2012	6,154,580	16,194,926	28,576,908	32,500,991	36,075,615	37,995,367	40,927,926	42,803,823	44,641,638	46,119,820	47,171,222	47,865,655	48,516,400	49,165,143								
2013	4,901,155	14,851,695	28,901,616	32,811,866	36,160,643	37,780,789	40,208,974	41,893,694	43,041,553	43,890,344	44,602,868	45,276,864	45,924,800									
2014	4,262,847	13,781,274	24,879,795	28,994,627	31,809,641	33,267,450	35,524,365	36,886,204	38,011,099	38,717,954	39,377,010	39,993,622										
2015	5,468,548	17,413,638	30,424,989	34,534,117	38,198,217	40,166,826	42,909,135	45,350,584	47,161,938	48,529,611	49,652,874											
2016	5,717,920	16,708,699	29,910,993	34,513,027	37,812,241	39,542,288	43,157,287	45,987,426	48,103,749	49,821,181												
2017	5,636,983	16,811,925	30,473,053	34,479,879	38,278,094	40,348,605	43,273,878	45,045,476	46,509,816													
2018	4,980,040	13,598,657	27,001,127	30,565,429	32,690,212	33,978,163	36,260,089	38,196,572														
2019	4,004,441	14,095,166	22,294,546	25,444,044	27,912,761	29,320,260	32,477,646															
2020	3,444,314	10,591,883	17,485,461	19,876,828	22,206,420	23,563,798																
2021	3,367,754	10,270,470	18,028,860	21,205,243																		
2022	2,878,450	9,892,425																				

*Prior years' figures indexed to current benefit level; Travel indexed separately from other benefits

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	5,023	13,057	22,433	25,151	27,455	28,801	30,996	32,781	34,314	35,883
2005	4,439	13,160	22,381	25,437	27,987	29,205	31,254	33,157	35,017	36,799
2006	4,653	13,482	23,843	26,773	29,841	31,372	34,750	37,391	39,455	41,321
2007	4,622	12,929	23,818	26,855	29,986	31,559	34,375	36,592	38,677	40,598
2008	4,453	12,478	23,187	26,809	30,036	31,651	34,398	36,845	38,624	40,427
2009	4,648	14,071	23,925	27,318	30,254	31,934	35,296	37,479	39,450	41,327
2010	4,412	13,709	25,715	29,836	33,427	35,139	38,375	40,671	42,567	43,986
2011	4,069	13,791	25,709	29,620	33,342	35,163	38,256	40,674	41,845	43,428
2012	6,155	16,195	28,577	32,501	36,076	37,995	40,928	42,804	44,642	46,120
2013	4,901	14,852	28,902	32,812	36,161	37,781	40,209	41,894	43,042	43,890
2014	4,263	13,781	24,880	28,995	31,810	33,267	35,524	36,886	38,011	38,718
2015	5,469	17,414	30,425	34,534	38,198	40,167	42,909	45,351	47,162	48,530
2016	5,718	16,709	29,911	34,513	37,812	39,542	43,157	45,987	48,104	49,821
2017	5,637	16,812	30,473	34,480	38,278	40,349	43,274	45,045	46,510	
2018	4,980	13,599	27,001	30,565	32,690	33,978	36,260	38,197		
2019	4,004	14,095	22,295	25,444	27,913	29,320	32,478			
2020	3,444	10,592	17,485	19,877	22,206	23,564				
2021	3,368	10,270	18,029	21,205						
2022	2,878	9,892								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	2.5996	1.7181	1.1212	1.0916	1.0490	1.0762	1.0576	1.0468	1.0457	1.0424
2005	2.9648	1.7006	1.1366	1.1002	1.0435	1.0702	1.0609	1.0561	1.0509	1.0442
2006	2.8976	1.7685	1.1229	1.1146	1.0513	1.1077	1.0760	1.0552	1.0473	1.0445
2007	2.7974	1.8421	1.1275	1.1166	1.0525	1.0892	1.0645	1.0570	1.0497	1.0510
2008	2.8019	1.8583	1.1562	1.1204	1.0538	1.0868	1.0711	1.0483	1.0467	1.0366
2009	3.0273	1.7003	1.1418	1.1075	1.0555	1.1053	1.0618	1.0526	1.0476	1.0385
2010	3.1070	1.8758	1.1603	1.1204	1.0512	1.0921	1.0598	1.0466	1.0333	1.0258
2011	3.3896	1.8642	1.1521	1.1256	1.0546	1.0880	1.0632	1.0288	1.0378	1.0420
2012	2.6314	1.7646	1.1373	1.1100	1.0532	1.0772	1.0458	1.0429	1.0331	1.0228
2013	3.0302	1.9460	1.1353	1.1021	1.0448	1.0643	1.0419	1.0274	1.0197	1.0162
2014	3.2329	1.8053	1.1654	1.0971	1.0458	1.0678	1.0383	1.0305	1.0186	1.0170
2015	3.1843	1.7472	1.1351	1.1061	1.0515	1.0683	1.0569	1.0399	1.0290	1.0231
2016	2.9222	1.7901	1.1539	1.0956	1.0458	1.0914	1.0656	1.0460	1.0357	
2017	2.9824	1.8126	1.1315	1.1102	1.0541	1.0725	1.0409	1.0325		
2018	2.7306	1.9856	1.1320	1.0695	1.0394	1.0672	1.0534			
2019	3.5199	1.5817	1.1413	1.0970	1.0504	1.1077				
2020	3.0752	1.6508	1.1368	1.1172	1.0611					
2021	3.0496	1.7554	1.1762							
2022	3.4367									
Latest 9 Volume Weighted	3.0976	1.7905	1.1440	1.1002	1.0492	1.0776	1.0519	1.0386	1.0334	1.0301
Latest 6 Volume Weighted	3.0956	1.7690	1.1439	1.0986	1.0498	1.0784	1.0498	1.0368	1.0293	1.0246
Latest 3 Volume Weighted	3.1737	1.6537	1.1508	1.0912	1.0489	1.0807	1.0533	1.0395	1.0285	1.0190
Simple Average of Middle 4 of Last 6	3.0074	1.7522	1.1410	1.1022	1.0505	1.0750	1.0483	1.0365	1.0294	1.0222
Simple Average of Middle 3 of Last 5	3.0358	1.7396	1.1367	1.1009	1.0501	1.0774	1.0504	1.0343	1.0273	1.0210
Selected March 22	3.1000	1.8000	1.1400	1.1000	1.0500	1.0765	1.0515	1.0355	1.0300	1.0300
Selected Oct 22	3.1000	1.8000	1.1400	1.1000	1.0500	1.0765	1.0515	1.0355	1.0300	1.0300
Selected Factors*	3.1000	1.8000	1.1400	1.1000	1.0500	1.0765	1.0515	1.0355	1.0300	1.0300
Selected Ultimate	14.1447	4.5628	2.5349	2.2236	2.0214	1.9252	1.7884	1.7008	1.6425	1.5946

*216-Ult Factor - Successive LDF's reduced by 5% starting at 1.0161 for the 216-228 factor for 17 years

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
37,405	38,764	40,318	41,523	42,557	43,650	44,665	45,596	46,439	47,445	48,296	49,099
38,425	39,708	40,899	41,984	42,989	44,109	45,069	46,803	48,005	48,945	49,907	
43,160	44,809	46,454	47,637	49,465	50,697	51,927	52,948	54,068	55,094		
42,670	44,006	45,495	46,851	48,180	50,469	51,637	52,823	53,879			
41,907	42,798	43,638	44,050	45,159	46,224	47,006	47,723				
42,919	44,360	45,730	47,149	48,368	49,592	50,698					
45,119	46,206	47,582	48,666	49,494	50,133						
45,252	46,646	47,874	49,049	50,091							
47,171	47,866	48,516	49,165								
44,603	45,277	45,925									
39,377	39,994										
49,653											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0363	1.0401	1.0299	1.0249	1.0257	1.0233	1.0208	1.0185	1.0217	1.0179	1.0166
1.0334	1.0300	1.0265	1.0239	1.0260	1.0218	1.0385	1.0257	1.0196	1.0196	
1.0382	1.0367	1.0255	1.0384	1.0249	1.0243	1.0197	1.0212	1.0190		
1.0313	1.0338	1.0298	1.0284	1.0475	1.0231	1.0230	1.0200			
1.0213	1.0196	1.0094	1.0252	1.0236	1.0169	1.0153				
1.0336	1.0309	1.0310	1.0259	1.0253	1.0223					
1.0241	1.0298	1.0228	1.0170	1.0129						
1.0308	1.0263	1.0245	1.0212							
1.0147	1.0136	1.0134								
1.0151	1.0143									
1.0157										

1.0249	1.0260	1.0235	1.0256	1.0265	1.0220	1.0233	1.0213	1.0200	1.0188	1.0166
1.0223	1.0224	1.0219	1.0259	1.0267	1.0220	1.0233	1.0213	1.0200	1.0188	1.0166
1.0151	1.0181	1.0202	1.0213	1.0205	1.0209	1.0194	1.0221	1.0200	1.0188	1.0166
1.0214	1.0225	1.0226	1.0252	1.0250	1.0226	1.0211	1.0206	1.0196	1.0188	1.0166
1.0183	1.0235	1.0202	1.0241	1.0246	1.0224	1.0211	1.0206	1.0196	1.0188	1.0166
1.0300	1.0300	1.0300	1.0300	1.0300	1.0280	1.0230	1.0190	1.0170	1.0165	1.2055
1.0300	1.0300	1.0300	1.0300	1.0300	1.0280	1.0230	1.0190	1.0170	1.0165	1.2055
1.0300	1.0300	1.0300	1.0300	1.0300	1.0280	1.0230	1.0190	1.0170	1.0165	1.2055
1.5482	1.5031	1.4593	1.4168	1.3755	1.3355	1.2991	1.2699	1.2462	1.2254	1.2055

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	11.7356	11.3527	10.5878	10.8060	10.6958	14.1447	14.1447	14.1447
12	3.7886	3.6673	3.3361	3.5932	3.5233	4.5628	4.5628	4.5628
19	2.1160	2.0731	2.0174	2.0506	2.0253	2.5349	2.5349	2.5349
24	1.8497	1.8124	1.7530	1.7973	1.7818	2.2236	2.2236	2.2236
31	1.6813	1.6497	1.6065	1.6306	1.6184	2.0214	2.0214	2.0214
36	1.6024	1.5714	1.5315	1.5523	1.5412	1.9252	1.9252	1.9252
48	1.4870	1.4572	1.4171	1.4440	1.4305	1.7884	1.7884	1.7884
60	1.4136	1.3880	1.3454	1.3775	1.3619	1.7008	1.7008	1.7008
72	1.3611	1.3387	1.2943	1.3290	1.3167	1.6425	1.6425	1.6425
84	1.3171	1.3006	1.2585	1.2910	1.2817	1.5946	1.5946	1.5946
96	1.2787	1.2694	1.2350	1.2630	1.2554	1.5482	1.5482	1.5482
108	1.2475	1.2417	1.2166	1.2365	1.2328	1.5031	1.5031	1.5031
120	1.2159	1.2145	1.1950	1.2093	1.2046	1.4593	1.4593	1.4593
132	1.1880	1.1885	1.1713	1.1826	1.1807	1.4168	1.4168	1.4168
144	1.1583	1.1585	1.1468	1.1535	1.1529	1.3755	1.3755	1.3755
156	1.1284	1.1284	1.1239	1.1255	1.1252	1.3355	1.3355	1.3355
168	1.1041	1.1041	1.1008	1.1006	1.1006	1.2991	1.2991	1.2991
180	1.0790	1.0790	1.0799	1.0778	1.0778	1.2699	1.2699	1.2699
192	1.0565	1.0565	1.0565	1.0560	1.0560	1.2462	1.2462	1.2462
204	1.0357	1.0357	1.0357	1.0357	1.0357	1.2254	1.2254	1.2254
216	1.0166	1.0166	1.0166	1.0166	1.0166	1.2055	1.2055	1.2055

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	3.1000	14.1402	7.07%	7		14.1402	3.1000	3.1000	14.1447
12	1.8000	4.5613		12	21.92%	4.5613	1.8000	1.8000	4.5628
19	1.1400	2.5341	39.46%	19		2.5341	1.1400	1.1400	2.5349
24	1.1000	2.2229		24	44.99%	2.2229	1.1000	1.1000	2.2236
31	1.0500	2.0208	49.49%	31		2.0208	1.0500	1.0500	2.0214
36	1.0500	1.9246		36	51.96%	1.9246	1.0763	1.0765	1.9252
43	1.0600	1.8329	54.56%	48	55.92%	1.7882	1.0514	1.0515	1.7884
55	1.0400	1.7292	57.83%	60	58.79%	1.7008	1.0357	1.0355	1.7008
67	1.0300	1.6627	60.14%	72	60.90%	1.6421	1.0300	1.0300	1.6425
79	1.0300	1.6142	61.95%	84	62.72%	1.5943	1.0300	1.0300	1.5946
91	1.0300	1.5672	63.81%	96	64.60%	1.5479	1.0300	1.0300	1.5482
103	1.0300	1.5216	65.72%	108	66.54%	1.5028	1.0300	1.0300	1.5031
115	1.0300	1.4773	67.69%	120	68.54%	1.4590	1.0300	1.0300	1.4593
127	1.0300	1.4342	69.72%	132	70.60%	1.4165	1.0300	1.0300	1.4168
139	1.0300	1.3925	71.82%	144	72.71%	1.3753	1.0300	1.0300	1.3755
151	1.0300	1.3519	73.97%	156	74.89%	1.3352	1.0279	1.0280	1.3355
163	1.0250	1.3125	76.19%	168	76.98%	1.2990	1.0229	1.0230	1.2991
175	1.0200	1.2805	78.09%	180	78.74%	1.2699	1.0189	1.0190	1.2699
187	1.0175	1.2554	79.66%	192	80.24%	1.2463	1.0171	1.0170	1.2462
199	1.0165	1.2338	81.05%	204	81.61%	1.2254	1.0164	1.0165	1.2254
Tail	1.2138	1.2138	82.39%	Tail	82.94%	1.2056	1.2056	1.2055	1.2055

Selected Development in 4th and Subsequent Years: 41.67%

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Paid Loss & ALAE - Without Z-Files - Adjusted
March 31, 2023

Appendix F
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Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Restated Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2005	632,408	864,485	49,907	1.2055	60,163	10,256	16,312	(6,056)	6.96%
2006	656,746	874,152	55,094	1.2254	67,512	12,418	21,551	(9,133)	7.72%
2007	679,930	888,135	53,879	1.2462	67,146	13,266	22,394	(9,128)	7.56%
2008	709,787	908,956	47,723	1.2699	60,604	12,881	10,208	2,673	6.67%
2009	741,553	928,286	50,698	1.2991	65,863	15,164	15,644	(480)	7.10%
2010	761,034	946,991	50,133	1.3355	66,951	16,819	13,767	3,052	7.07%
2011	772,649	953,813	50,091	1.3755	68,902	18,812	19,367	(555)	7.22%
2012	769,715	922,515	49,165	1.4168	69,658	20,493	12,977	7,516	7.55%
2013	781,394	921,764	45,925	1.4593	67,019	21,094	10,562	10,532	7.27%
2014	822,358	949,205	39,994	1.5031	60,114	20,121	10,935	9,186	6.33%
2015	877,262	993,698	49,653	1.5482	76,872	27,219	14,158	13,061	7.74%
2016	923,168	1,033,297	49,821	1.5946	79,447	29,626	26,949	2,677	7.69%
2017	977,104	1,079,631	46,510	1.6425	76,391	29,881	23,322	6,559	7.08%
2018	1,044,467	1,135,889	38,197	1.7008	64,964	26,768	16,209	10,559	5.72%
2019	1,099,731	1,166,819	32,478	1.7884	58,082	25,605	25,663	(58)	4.98%
2020	1,134,690	1,177,995	23,564	1.9252	45,365	21,801	32,502	(10,701)	3.85%
2021	1,159,166	1,197,418	21,205	2.2236	47,152	25,946	21,785	4,161	3.94%
2022	1,126,492	1,126,492	9,892	4.5628	45,137	35,245	22,437	12,808	4.01%
	15,669,653	18,069,540	763,929		1,147,342	383,413	336,742	46,671	6.35%

Notes:

- (3) Indexed to match the indexing done on losses
- (10) = (6) / (3)

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Paid Loss & ALAE - Without Z-Files - Adjusted
March 31, 2023

Appendix F
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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Restated Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Based on 3rd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	60,163				60,163	6.96%	6.96%	100.00%	6.96%	7.95%
2006	874,152	67,512	60,614			60,614	6.93%	7.72%	100.00%	7.72%	9.09%
2007	888,135	67,146	68,019	61,068		64,544	7.27%	7.56%	100.00%	7.56%	8.96%
2008	908,956	60,604	67,649	68,529	61,526	65,902	7.25%	6.67%	100.00%	6.67%	6.68%
2009	928,286	65,863	61,058	68,157	69,043	66,086	7.12%	7.10%	100.00%	7.10%	7.51%
2010	946,991	66,951	66,357	61,516	68,668	65,514	6.92%	7.07%	100.00%	7.07%	7.11%
2011	953,813	68,902	67,453	66,854	61,978	65,428	6.86%	7.22%	100.00%	7.22%	7.71%
2012	922,515	69,658	69,419	67,959	67,356	68,245	7.40%	7.55%	100.00%	7.55%	7.15%
2013	921,764	67,019	70,180	69,940	68,469	69,530	7.54%	7.27%	100.00%	7.27%	6.51%
2014	949,205	60,114	67,522	70,707	70,464	69,564	7.33%	6.33%	100.00%	6.33%	5.70%
2015	993,698	76,872	60,565	68,028	71,237	66,610	6.70%	7.74%	100.00%	7.74%	6.82%
2016	1,033,297	79,447	77,449	61,019	68,538	69,002	6.68%	7.69%	100.00%	7.69%	7.87%
2017	1,079,631	76,391	80,043	78,030	61,477	73,183	6.78%	7.08%	100.00%	7.08%	6.85%
2018	1,135,889	64,964	76,964	80,643	78,615	78,741	6.93%	5.72%	75.00%	6.02%	5.46%
2019	1,166,819	58,082	65,451	77,541	81,248	74,747	6.41%	4.98%	50.00%	5.69%	5.70%
2020	1,177,995	45,365	58,518	65,942	78,123	67,528	5.73%	3.85%	75.00%	4.32%	5.10%
2021	1,197,418	47,152	45,705	58,957	66,437	57,033	4.76%	3.94%	75.00%	4.14%	4.43%
2022	1,126,492	45,137	47,505	46,048	59,399	50,984	4.53%	4.01%	25.00%	4.40%	4.92%
	18,069,540	1,147,342	1,110,471	1,070,938	1,032,577	1,193,415					

Trend in Losses Based on Exponential Regression (a):

0.53%

Selected Trend (b):

0.75%

Notes:

(3) Ultimate Losses from Page 22

(7) = Average [(4), (5), (6)]

(11) = (9) * (10) + (8) * [1 - (10)]

(12) Selected Initial Ult Loss Ratio from Page 15

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Paid Loss & ALAE - Without Z-Files - Adjusted
March 31, 2023

Appendix F
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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Restated	Selected	Initial	Expected Percentage:		Expected	Actual	Expected	Estimated	Expected	Estimated
	Earned Premium	Initial Ult Loss Ratio	Expected Ult Losses	Paid	Unpaid	Paid Loss	Paid Loss	Unpaid Loss	Ultimate Losses	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	864,485	7.95%	68,687	82.95%	17.05%	56,978	49,907	11,709	61,616	(4,603)	7.13%
2006	874,152	9.09%	79,494	81.61%	18.39%	64,873	55,094	14,622	69,716	(6,929)	7.98%
2007	888,135	8.96%	79,562	80.24%	19.76%	63,842	53,879	15,719	69,599	(6,675)	7.84%
2008	908,956	6.68%	60,721	78.75%	21.25%	47,815	47,723	12,905	60,629	2,697	6.67%
2009	928,286	7.51%	69,724	76.98%	23.02%	53,670	50,698	16,053	66,752	409	7.19%
2010	946,991	7.11%	67,359	74.88%	25.12%	50,438	50,133	16,921	67,054	3,154	7.08%
2011	953,813	7.71%	73,522	72.70%	27.30%	53,449	50,091	20,073	70,164	706	7.36%
2012	922,515	7.15%	65,999	70.58%	29.42%	46,583	49,165	19,416	68,581	6,439	7.43%
2013	921,764	6.51%	60,053	68.53%	31.47%	41,151	45,925	18,902	64,826	8,340	7.03%
2014	949,205	5.70%	54,093	66.53%	33.47%	35,987	39,994	18,105	58,099	7,170	6.12%
2015	993,698	6.82%	67,760	64.59%	35.41%	43,767	49,653	23,993	73,646	9,835	7.41%
2016	1,033,297	7.87%	81,363	62.71%	37.29%	51,023	49,821	30,340	80,161	3,391	7.76%
2017	1,079,631	6.85%	74,006	60.88%	39.12%	45,058	46,510	28,949	75,458	5,627	6.99%
2018	1,135,889	5.46%	61,976	58.80%	41.20%	36,440	38,197	25,536	63,733	9,327	5.61%
2019	1,166,819	5.70%	66,465	55.92%	44.08%	37,165	32,478	29,300	61,778	3,637	5.29%
2020	1,177,995	5.10%	60,035	51.94%	48.06%	31,184	23,564	28,851	52,415	(3,651)	4.45%
2021	1,197,418	4.43%	53,051	44.97%	55.03%	23,858	21,205	29,193	50,398	7,408	4.21%
2022	1,126,492	4.92%	55,467	21.92%	78.08%	12,156	9,892	43,310	53,203	20,873	4.72%
	18,069,540		1,199,337			795,439	763,929	403,898	1,167,827	67,156	6.46%

Notes:
(10) = (8) + (9)

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Indexed)
Discount Factors for Unpaid
March 31, 2023

Period in Months	Selected Factor	Growth in Paid	Paid in Period	Cumulative Paid	Discount Factor to 192 Months [a]		Discounted Paid in Period [b]		Discounted Cumulative Paid [b]		Disc to Undisc Cumulative Paid [b]		Discount to Beginning of Period [c]	
					No Margin	Margin	No Margin	Margin	No Margin	Margin	No Margin	Margin	No Margin	Margin
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(4)*(6)	(9)=(4)*(7)	(10)	(11)	(12)=(10)/(5)	(13)=(11)/(5)	(14)	(15)
192-204	1.0170	1,017.00	17.00	245.95	98.99%	99.19%	16.83	16.86	208.74	215.28	84.87%	87.53%	84.87%	87.53%
204-216	1.0165	1,033.78	16.78	228.95	97.00%	97.58%	16.28	16.37	191.91	198.42	83.82%	86.66%	85.54%	88.09%
216-228	1.0161	1,050.46	16.68	212.17	95.05%	95.99%	15.85	16.01	175.63	182.04	82.78%	85.80%	86.21%	88.65%
228-240	1.0153	1,066.56	16.10	195.49	93.14%	94.43%	15.00	15.21	159.78	166.03	81.73%	84.93%	86.86%	89.20%
240-252	1.0146	1,082.09	15.53	179.39	91.27%	92.90%	14.18	14.43	144.78	150.83	80.71%	84.08%	87.53%	89.76%
252-264	1.0138	1,097.06	14.97	163.86	89.44%	91.39%	13.39	13.68	130.61	136.40	79.71%	83.24%	88.22%	90.34%
264-276	1.0131	1,111.48	14.42	148.89	87.64%	89.91%	12.64	12.96	117.22	122.72	78.73%	82.42%	88.92%	90.92%
276-288	1.0125	1,125.36	13.88	134.47	85.88%	88.45%	11.92	12.27	104.58	109.75	77.77%	81.62%	89.64%	91.52%
288-300	1.0119	1,138.70	13.35	120.60	84.16%	87.01%	11.23	11.61	92.66	97.48	76.84%	80.83%	90.38%	92.14%
300-312	1.0113	1,151.53	12.83	107.25	82.47%	85.60%	10.58	10.98	81.43	85.87	75.93%	80.06%	91.14%	92.77%
312-324	1.0107	1,163.86	12.33	94.42	80.81%	84.21%	9.96	10.38	70.85	74.88	75.04%	79.31%	91.92%	93.41%
324-336	1.0102	1,175.70	11.84	82.09	79.19%	82.84%	9.37	9.80	60.89	64.50	74.17%	78.57%	92.72%	94.07%
336-348	1.0097	1,187.05	11.36	70.26	77.60%	81.50%	8.81	9.26	51.52	54.70	73.33%	77.85%	93.54%	94.75%
348-360	1.0092	1,197.95	10.89	58.90	76.04%	80.18%	8.28	8.73	42.70	45.44	72.50%	77.15%	94.39%	95.44%
360-372	1.0087	1,208.39	10.44	48.01	74.51%	78.88%	7.78	8.24	34.42	36.71	71.70%	76.46%	95.26%	96.15%
372-384	1.0083	1,218.40	10.01	37.56	73.01%	77.60%	7.31	7.77	26.64	28.47	70.92%	75.79%	96.15%	96.88%
384-396	1.0079	1,227.99	9.59	27.55	71.55%	76.34%	6.86	7.32	19.33	20.70	70.16%	75.14%	97.07%	97.63%
396-408	1.0075	1,237.17	9.18	17.97	70.11%	75.10%	6.44	6.89	12.47	13.38	69.42%	74.50%	98.02%	98.40%
408-Ult	1.0071	1,245.95	8.79	8.79	68.70%	73.88%	6.04	6.49	6.04	6.49	68.70%	73.88%	98.99%	99.19%

Notes:

(2) - Per comment in Page 19: 216-Ult Factor - Successive LDF's reduced by 5% st

(3), (4) & (5) - Assuming Paid at 192 Months of 1,000

(14) = (12) / [(6) * (1 + Discount Rate Without Margin) ^ 0.5]

(15) = (13) / [(7) * (1 + Discount Rate With Margin) ^ 0.5]

[a] Assuming the Paid in Period is paid in the middle of the period:

Discount Rate Without Margin 2.05%

Discount Rate With Margin 1.65%

[b] As at 192 months

[c] Represents the discounting of the remaining unpaid at the beginning of the period back to the beginning of the period.

For example, the discount factor for the period 300-312 represents the remaining unpaid at 300 months discounted back to 300 months.

July 13, 2023



Building a better
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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix G
Accident Benefits Other Non-Indexed - Undiscounted
Gross IBNR Calculations

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Non-Indexed)
Reported Loss & ALAE - With Z-Files
March 31, 2023

Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	10,863,456	21,301,662	24,065,860	24,372,824	25,030,752	25,641,314	25,597,069	25,462,269	25,395,764	25,445,309	25,245,918	25,346,461	25,322,325	25,369,559	25,507,364	25,544,330	25,583,905	25,596,024	25,602,609	25,680,678	25,691,236	25,691,258	
2005	13,300,354	23,243,920	26,142,111	27,515,134	28,170,288	28,527,064	28,637,983	28,281,251	28,192,550	28,380,017	28,526,472	28,431,997	28,340,407	28,330,850	28,469,285	28,469,325	28,446,969	28,470,512	28,560,783	28,570,820	28,566,923		
2006	17,881,379	29,196,335	33,477,308	33,147,756	33,512,439	33,850,439	33,627,042	33,301,703	33,437,684	33,824,989	34,093,238	34,050,801	34,151,143	34,168,806	34,217,579	34,269,868	34,264,424	34,387,138	34,417,602	34,440,173			
2007	14,589,889	24,177,745	27,620,794	28,263,353	28,240,464	28,271,765	28,153,100	28,497,911	28,841,111	28,811,645	28,749,873	28,909,429	28,991,106	28,999,795	29,067,420	29,236,508	29,314,183	29,341,604	29,399,007				
2008	12,433,931	26,348,095	27,378,145	26,916,192	27,393,087	27,516,699	27,697,701	28,213,995	28,315,253	28,278,509	28,561,696	29,010,371	29,236,937	28,792,619	29,097,070	29,134,683	29,173,062	29,241,614					
2009	13,592,106	24,385,374	26,457,236	26,686,203	27,720,221	28,019,674	29,002,395	29,319,650	29,484,519	29,398,650	29,633,381	29,657,501	29,735,103	29,805,514	29,822,991	29,863,009	29,890,054						
2010	11,654,816	20,359,059	22,992,832	24,207,762	26,576,992	27,559,996	27,953,542	28,267,296	28,372,820	28,391,412	28,602,240	28,640,703	28,751,964	28,823,492	28,933,453	28,973,395							
2011	11,541,489	22,605,145	25,578,495	27,691,280	29,488,486	30,425,389	31,058,922	31,237,727	31,374,276	31,662,008	31,840,238	31,987,203	32,053,900	32,103,344	32,119,609								
2012	14,678,392	21,303,452	25,436,878	26,776,153	28,398,283	28,528,388	28,602,119	28,978,341	28,978,529	29,529,381	29,682,204	29,754,379	29,801,992	29,800,572									
2013	11,056,541	20,148,621	24,304,562	26,235,341	26,379,408	26,636,331	26,711,505	27,204,041	27,371,557	27,509,708	27,593,731	27,642,281	27,681,512										
2014	9,369,072	17,566,157	21,370,846	24,257,186	26,372,930	27,062,687	27,529,409	27,734,445	27,696,388	27,856,990	27,946,419	27,988,610											
2015	9,808,758	17,707,682	21,872,546	23,995,005	28,011,610	28,658,796	32,340,649	30,244,985	28,908,727	29,132,217	29,208,297												
2016	10,551,457	21,433,904	26,800,784	27,943,303	33,711,978	36,961,707	37,133,018	31,710,452	31,864,663	31,964,414													
2017	11,151,246	20,746,898	24,614,720	33,698,776	34,127,017	34,921,853	29,032,400	29,182,825	29,730,716														
2018	10,179,859	25,699,956	28,203,912	29,645,255	30,077,901	29,143,910	28,327,295	25,742,705															
2019	12,951,401	22,180,455	25,415,281	25,543,724	25,933,346	25,933,370	23,694,405																
2020	14,107,454	22,449,991	24,471,902	25,733,324	25,324,363	25,469,079																	
2021	14,475,510	24,985,560	27,927,311	28,569,675																			
2022	15,790,850	26,843,325																					

Manitoba Public Insurance
 Automobile Insurance Division - Accident Benefits - Other (Non-Indexed)
 Reported Loss & ALAE - Z-Files
 March 31, 2023

Insurance Year (April-March)	Evaluation in Months																						
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Insurance Year	Evaluation in Months									
	7	12	19	24	31	36	48	60	72	84
2004	10,863	21,302	24,066	24,373	25,031	25,641	25,597	25,462	25,396	25,445
2005	13,300	23,244	26,142	27,515	28,170	28,527	28,638	28,281	28,193	28,380
2006	17,881	29,196	33,477	33,148	33,512	33,850	33,627	33,302	33,438	33,825
2007	14,590	24,178	27,621	28,263	28,240	28,272	28,153	28,498	28,841	28,812
2008	12,434	26,348	27,378	26,916	27,393	27,517	27,698	28,214	28,315	28,279
2009	13,592	24,385	26,457	26,686	27,720	28,020	29,002	29,320	29,485	29,399
2010	11,655	20,359	22,993	24,208	26,577	27,560	27,954	28,267	28,373	28,391
2011	11,541	22,605	25,578	27,691	29,488	30,425	31,059	31,238	31,374	31,662
2012	14,678	21,303	25,437	26,776	28,398	28,528	28,602	28,978	28,979	29,529
2013	11,057	20,149	24,305	26,235	26,379	26,636	26,712	27,204	27,372	27,510
2014	9,369	17,566	21,371	24,257	26,373	27,063	27,529	27,734	27,696	27,857
2015	9,809	17,708	21,873	23,995	28,012	28,659	32,341	30,245	28,909	29,132
2016	10,551	21,434	26,801	27,943	33,712	36,962	37,133	31,710	31,865	31,964
2017	11,151	20,747	24,615	33,699	34,127	34,922	29,032	29,183	29,731	
2018	10,180	25,700	28,204	29,645	30,078	29,144	28,327	25,743		
2019	12,951	22,180	25,415	25,544	25,933	25,933	23,694			
2020	14,107	22,450	24,472	25,733	25,324	25,469				
2021	14,476	24,986	27,927	28,570						
2022	15,791	26,843								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	1.9609	1.1298	1.0128	1.0270	1.0244	0.9983	0.9947	0.9974	1.0020	0.9922
2005	1.7476	1.1247	1.0525	1.0238	1.0127	1.0039	0.9875	0.9969	1.0066	1.0052
2006	1.6328	1.1466	0.9902	1.0110	1.0101	0.9934	0.9903	1.0041	1.0116	1.0079
2007	1.6572	1.1424	1.0233	0.9992	1.0011	0.9958	1.0122	1.0120	0.9990	0.9979
2008	2.1190	1.0391	0.9831	1.0177	1.0045	1.0066	1.0186	1.0036	0.9987	1.0100
2009	1.7941	1.0850	1.0087	1.0387	1.0108	1.0351	1.0109	1.0056	0.9971	1.0080
2010	1.7468	1.1294	1.0528	1.0979	1.0370	1.0143	1.0112	1.0037	1.0007	1.0074
2011	1.9586	1.1315	1.0826	1.0649	1.0318	1.0208	1.0058	1.0044	1.0092	1.0056
2012	1.4513	1.1940	1.0527	1.0606	1.0046	1.0026	1.0132	1.0000	1.0190	1.0052
2013	1.8223	1.2063	1.0794	1.0055	1.0097	1.0028	1.0184	1.0062	1.0050	1.0031
2014	1.8749	1.2166	1.1351	1.0872	1.0262	1.0172	1.0074	0.9986	1.0058	1.0032
2015	1.8053	1.2352	1.0970	1.1674	1.0231	1.1285	0.9352	0.9558	1.0077	1.0026
2016	2.0314	1.2504	1.0426	1.2064	1.0964	1.0046	0.8540	1.0049	1.0031	
2017	1.8605	1.1864	1.3690	1.0127	1.0233	0.8314	1.0052	1.0188		
2018	2.5246	1.0974	1.0511	1.0146	0.9689	0.9720	0.9088			
2019	1.7126	1.1458	1.0051	1.0153	1.0000	0.9137				
2020	1.5914	1.0901	1.0515	0.9841	1.0057					
2021	1.7261	1.1177	1.0230							
2022	1.6999									
Latest 9 Volume Weighted	1.8417	1.1662	1.0917	1.0595	1.0193	0.9857	0.9688	0.9996	1.0052	1.0048
Latest 6 Volume Weighted	1.8168	1.1450	1.0870	1.0638	1.0220	0.9747	0.9489	0.9971	1.0083	1.0045
Latest 3 Volume Weighted	1.6739	1.1178	1.0261	1.0051	0.9903	0.9006	0.9169	0.9930	1.0055	1.0030
Simple Average of Middle 4 of Last 6	1.8326	1.1369	1.0421	1.0525	1.0130	0.9769	0.9641	1.0024	1.0069	1.0043
Simple Average of Middle 3 of Last 5	1.7664	1.1203	1.0419	1.0142	1.0097	0.9634	0.9497	1.0032	1.0062	1.0038
Selected March 22	1.5900	1.1300	1.0300	1.0200	1.0150	1.0000	1.0000	1.0015	1.0040	1.0040
Selected Oct 22	1.7000	1.1300	1.0300	1.0200	1.0150	1.0000	1.0000	1.0015	1.0040	1.0040
Selected Factors	1.7000	1.1300	1.0300	1.0200	1.0150	1.0000	1.0000	1.0015	1.0040	1.0040
Selected Ultimate	2.1066	1.2392	1.0966	1.0647	1.0438	1.0284	1.0284	1.0284	1.0268	1.0227

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
25,246	25,346	25,322	25,370	25,507	25,544	25,584	25,596	25,603	25,681	25,691	25,691
28,526	28,432	28,340	28,331	28,469	28,469	28,447	28,471	28,561	28,571	28,567	
34,093	34,051	34,151	34,169	34,218	34,270	34,264	34,387	34,418	34,440		
28,750	28,909	28,991	29,000	29,067	29,237	29,314	29,342	29,399			
28,562	29,010	29,237	28,793	29,097	29,135	29,173	29,242				
29,633	29,658	29,735	29,806	29,823	29,863	29,890					
28,602	28,641	28,752	28,823	28,933	28,973						
31,840	31,987	32,054	32,103	32,120							
29,682	29,754	29,802	29,801								
27,594	27,642	27,682									
27,946	27,989										
29,208											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0040	0.9990	1.0019	1.0054	1.0014	1.0015	1.0005	1.0003	1.0030	1.0004	1.0000
0.9967	0.9968	0.9997	1.0049	1.0000	0.9992	1.0008	1.0032	1.0004	0.9999	
0.9988	1.0029	1.0005	1.0014	1.0015	0.9998	1.0036	1.0009	1.0007		
1.0055	1.0028	1.0003	1.0023	1.0058	1.0027	1.0009	1.0020			
1.0157	1.0078	0.9848	1.0106	1.0013	1.0013	1.0023				
1.0008	1.0026	1.0024	1.0006	1.0013	1.0009					
1.0013	1.0039	1.0025	1.0038	1.0014						
1.0046	1.0021	1.0015	1.0005							
1.0024	1.0016	1.0000								
1.0018	1.0014									
1.0015										
1.0035	1.0025	0.9993	1.0036	1.0018	1.0009	1.0017	1.0016	1.0012	1.0001	1.0000
1.0021	1.0032	0.9986	1.0031	1.0019	1.0009	1.0017	1.0016	1.0012	1.0001	1.0000
1.0019	1.0017	1.0013	1.0016	1.0013	1.0016	1.0024	1.0019	1.0012	1.0001	1.0000
1.0018	1.0025	1.0010	1.0020	1.0014	1.0009	1.0014	1.0014	1.0007	1.0001	1.0000
1.0019	1.0021	1.0013	1.0022	1.0014	1.0007	1.0014	1.0014	1.0007	1.0001	1.0000
1.0040	1.0030	1.0015	1.0015	1.0015	1.0015	1.0015	1.0015	1.0010	1.0005	1.0010
1.0040	1.0030	1.0015	1.0015	1.0015	1.0015	1.0015	1.0015	1.0010	1.0005	1.0010
1.0040	1.0030	1.0015	1.0015	1.0015	1.0015	1.0015	1.0015	1.0010	1.0005	1.0010
1.0187	1.0146	1.0116	1.0100	1.0085	1.0070	1.0055	1.0040	1.0025	1.0015	1.0010

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Reported Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	2.4811	2.3300	1.6043	2.2395	1.9835	1.9703	2.1066	2.1066
12	1.3472	1.2824	0.9584	1.2220	1.1229	1.2392	1.2392	1.2392
19	1.1552	1.1200	0.8574	1.0749	1.0023	1.0966	1.0966	1.0966
24	1.0581	1.0304	0.8356	1.0315	0.9620	1.0647	1.0647	1.0647
31	0.9987	0.9686	0.8314	0.9801	0.9485	1.0438	1.0438	1.0438
36	0.9798	0.9477	0.8395	0.9675	0.9395	1.0284	1.0284	1.0284
48	0.9941	0.9723	0.9322	0.9904	0.9751	1.0284	1.0284	1.0284
60	1.0261	1.0247	1.0167	1.0272	1.0268	1.0284	1.0284	1.0284
72	1.0265	1.0276	1.0238	1.0247	1.0235	1.0268	1.0268	1.0268
84	1.0212	1.0192	1.0183	1.0177	1.0172	1.0227	1.0227	1.0227
96	1.0163	1.0146	1.0153	1.0133	1.0133	1.0187	1.0187	1.0187
108	1.0128	1.0124	1.0133	1.0116	1.0114	1.0146	1.0146	1.0146
120	1.0103	1.0092	1.0116	1.0090	1.0093	1.0116	1.0116	1.0116
132	1.0110	1.0106	1.0103	1.0079	1.0080	1.0100	1.0100	1.0100
144	1.0074	1.0075	1.0087	1.0059	1.0057	1.0085	1.0085	1.0085
156	1.0056	1.0056	1.0073	1.0045	1.0043	1.0070	1.0070	1.0070
168	1.0047	1.0047	1.0057	1.0036	1.0036	1.0055	1.0055	1.0055
180	1.0029	1.0029	1.0033	1.0022	1.0022	1.0040	1.0040	1.0040
192	1.0014	1.0014	1.0014	1.0008	1.0008	1.0025	1.0025	1.0025
204	1.0001	1.0001	1.0001	1.0001	1.0001	1.0015	1.0015	1.0015
216	1.0000	1.0000	1.0000	1.0000	1.0000	1.0010	1.0010	1.0010

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Reported	Months of Devt	Percentage Reported	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	1.7000	2.1066	47.47%	7		2.1066	1.7000	1.7000	2.1066
12	1.1300	1.2392		12	80.70%	1.2392	1.1300	1.1300	1.2392
19	1.0300	1.0966	91.19%	19		1.0966	1.0300	1.0300	1.0966
24	1.0200	1.0647		24	93.93%	1.0647	1.0200	1.0200	1.0647
31	1.0150	1.0438	95.81%	31		1.0438	1.0150	1.0150	1.0438
36	1.0000	1.0284		36	97.24%	1.0284	1.0000	1.0000	1.0284
43	1.0000	1.0284	97.24%	48	97.24%	1.0284	1.0000	1.0000	1.0284
55	1.0000	1.0284	97.24%	60	97.24%	1.0284	1.0017	1.0015	1.0284
67	1.0040	1.0284	97.24%	72	97.40%	1.0266	1.0040	1.0040	1.0268
79	1.0040	1.0243	97.63%	84	97.79%	1.0226	1.0040	1.0040	1.0227
91	1.0040	1.0202	98.02%	96	98.19%	1.0185	1.0040	1.0040	1.0187
103	1.0040	1.0161	98.41%	108	98.58%	1.0144	1.0030	1.0030	1.0146
115	1.0015	1.0121	98.81%	120	98.87%	1.0114	1.0015	1.0015	1.0116
127	1.0015	1.0105	98.96%	132	99.02%	1.0099	1.0015	1.0015	1.0100
139	1.0015	1.0090	99.10%	144	99.17%	1.0084	1.0015	1.0015	1.0085
151	1.0015	1.0075	99.25%	156	99.32%	1.0069	1.0015	1.0015	1.0070
163	1.0015	1.0060	99.40%	168	99.46%	1.0054	1.0015	1.0015	1.0055
175	1.0015	1.0045	99.55%	180	99.61%	1.0039	1.0013	1.0015	1.0040
187	1.0010	1.0030	99.70%	192	99.74%	1.0026	1.0010	1.0010	1.0025
199	1.0010	1.0020	99.80%	204	99.84%	1.0016	1.0006	1.0005	1.0015
Tail	1.0010	1.0010	99.90%	Tail	99.90%	1.0010	1.0010	1.0010	1.0010

Selected Development in 4th and Subsequent Years: 41.67%

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Projected Ultimate Losses & ALAE Using the Development Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Reported Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	IBNR	Case Reserves	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2005	632,408	28,567	1.0010	28,595	29	3	4.52%
2006	656,746	34,440	1.0015	34,492	52	80	5.25%
2007	679,930	29,399	1.0025	29,473	74	30	4.33%
2008	709,787	29,242	1.0040	29,359	117	26	4.14%
2009	741,553	29,890	1.0055	30,055	165	(4)	4.05%
2010	761,034	28,973	1.0070	29,177	203	8	3.83%
2011	772,649	32,120	1.0085	32,394	274	228	4.19%
2012	769,715	29,801	1.0100	30,100	299	44	3.91%
2013	781,394	27,682	1.0116	28,001	320	48	3.58%
2014	822,358	27,989	1.0146	28,397	408	212	3.45%
2015	877,262	29,208	1.0187	29,753	545	384	3.39%
2016	923,168	31,964	1.0227	32,691	726	556	3.54%
2017	977,104	29,731	1.0268	30,528	797	516	3.12%
2018	1,044,467	25,743	1.0284	26,473	730	2,285	2.53%
2019	1,099,731	23,694	1.0284	24,366	672	4,257	2.22%
2020	1,134,690	25,469	1.0284	26,191	722	10,083	2.31%
2021	1,159,166	28,570	1.0647	30,417	1,847	17,411	2.62%
2022	1,126,492	26,843	1.2392	33,263	6,420	19,457	2.95%
	15,669,653	519,324		533,724	14,400	55,624	3.41%

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Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	28,595			28,595	4.52%	4.52%	100.00%	4.52%	4.52%
2006	656,746	34,492	28,595		28,595	4.35%	5.25%	100.00%	5.25%	5.25%
2007	679,930	29,473	34,492	28,595	31,544	4.64%	4.33%	100.00%	4.33%	4.33%
2008	709,787	29,359	29,473	34,492	31,982	4.51%	4.14%	100.00%	4.14%	4.14%
2009	741,553	30,055	29,359	29,473	29,416	3.97%	4.05%	100.00%	4.05%	4.05%
2010	761,034	29,177	30,055	29,359	29,707	3.90%	3.83%	100.00%	3.83%	3.83%
2011	772,649	32,394	29,177	30,055	29,616	3.83%	4.19%	100.00%	4.19%	4.19%
2012	769,715	30,100	32,394	29,177	30,785	4.00%	3.91%	100.00%	3.91%	3.91%
2013	781,394	28,001	30,100	32,394	31,247	4.00%	3.58%	100.00%	3.58%	3.58%
2014	822,358	28,397	28,001	30,100	29,051	3.53%	3.45%	100.00%	3.45%	3.45%
2015	877,262	29,753	28,397	28,001	28,199	3.21%	3.39%	100.00%	3.39%	3.39%
2016	923,168	32,691	29,753	28,397	29,075	3.15%	3.54%	100.00%	3.54%	3.54%
2017	977,104	30,528	32,691	29,753	31,222	3.20%	3.12%	100.00%	3.12%	3.12%
2018	1,044,467	26,473	30,528	32,691	31,609	3.03%	2.53%	75.00%	2.66%	2.66%
2019	1,099,731	24,366	26,473	30,528	28,500	2.59%	2.22%	50.00%	2.40%	2.40%
2020	1,134,690	26,191	24,366	26,473	25,420	2.24%	2.31%	25.00%	2.26%	2.26%
2021	1,159,166	30,417	26,191	24,366	25,279	2.18%	2.62%	25.00%	2.29%	2.29%
2022	1,126,492	33,263	30,417	26,191	28,304	2.51%	2.95%	25.00%	2.62%	2.62%
	15,669,653	533,724	500,461	470,044	528,146					

Trend in Losses Based on Exponential Regression (a):

-0.38%

Selected Trend (b):

0.00%

Notes:

(3) Ultimate Losses from Page 7

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(a) Based on the Projected Ultimate Losses

(b) Based on the exponential trend rounded up to the nearest 0.25%; minimum 0.00%

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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Reported Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage:		Expected Reported Loss	Actual Reported Loss	Expected Unreported Loss	Estimated Ultimate Losses	Estimated Ultimate Loss Ratio
				Reported	Unreported					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	4.52%	28,595	99.90%	0.10%	28,567	28,567	29	28,595	4.52%
2006	656,746	5.25%	34,492	99.85%	0.15%	34,440	34,440	52	34,492	5.25%
2007	679,930	4.33%	29,473	99.75%	0.25%	29,399	29,399	74	29,473	4.33%
2008	709,787	4.14%	29,359	99.60%	0.40%	29,242	29,242	117	29,359	4.14%
2009	741,553	4.05%	30,055	99.45%	0.55%	29,890	29,890	165	30,055	4.05%
2010	761,034	3.83%	29,177	99.30%	0.70%	28,973	28,973	203	29,177	3.83%
2011	772,649	4.19%	32,394	99.15%	0.85%	32,120	32,120	274	32,394	4.19%
2012	769,715	3.91%	30,100	99.01%	0.99%	29,801	29,801	299	30,100	3.91%
2013	781,394	3.58%	28,001	98.86%	1.14%	27,682	27,682	320	28,001	3.58%
2014	822,358	3.45%	28,397	98.56%	1.44%	27,989	27,989	408	28,397	3.45%
2015	877,262	3.39%	29,753	98.17%	1.83%	29,208	29,208	545	29,753	3.39%
2016	923,168	3.54%	32,691	97.78%	2.22%	31,964	31,964	726	32,691	3.54%
2017	977,104	3.12%	30,528	97.39%	2.61%	29,731	29,731	797	30,528	3.12%
2018	1,044,467	2.66%	27,757	97.24%	2.76%	26,991	25,743	765	26,508	2.54%
2019	1,099,731	2.40%	26,433	97.24%	2.76%	25,704	23,694	729	24,423	2.22%
2020	1,134,690	2.26%	25,612	97.24%	2.76%	24,906	25,469	706	26,175	2.31%
2021	1,159,166	2.29%	26,563	93.93%	6.07%	24,950	28,570	1,613	30,183	2.60%
2022	1,126,492	2.62%	29,544	80.70%	19.30%	23,842	26,843	5,702	32,545	2.89%
	15,669,653		528,924			515,399	519,324	13,525	532,849	3.40%

Notes:
 (10) = (8) + (9)

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Insurance Year (April-March)	Evaluation in Months																					
	7	12	19	24	31	36	48	60	72	84	96	108	120	132	144	156	168	180	192	204	216	228
2004	1,170,342	4,887,865	10,583,971	15,588,411	19,139,328	20,921,255	23,222,634	23,846,594	24,709,621	24,989,319	25,134,463	25,248,461	25,209,368	25,274,719	25,451,748	25,504,655	25,548,844	25,575,738	25,593,650	25,677,200	25,688,813	25,691,258
2005	3,032,717	7,576,615	13,696,717	18,503,654	21,798,849	23,280,262	25,126,928	26,433,599	27,142,037	27,656,741	28,098,883	28,223,452	28,261,197	28,294,121	28,409,739	28,445,634	28,429,113	28,434,181	28,557,196	28,564,391	28,564,391	
2006	3,395,269	9,435,822	17,682,382	22,567,594	26,130,968	27,787,897	30,643,920	31,921,324	32,391,634	32,996,240	33,558,833	33,848,243	34,050,116	34,142,075	34,179,910	34,241,597	34,257,924	34,328,592	34,359,592	34,360,041		
2007	2,931,920	7,303,536	13,080,678	17,698,829	21,780,198	24,305,775	25,764,436	26,987,769	27,574,742	28,087,264	28,515,490	28,678,011	28,831,638	28,874,050	28,926,455	29,170,664	29,271,140	29,331,164	29,369,006			
2008	2,204,842	6,515,008	12,660,011	18,276,650	21,792,401	23,019,177	25,286,209	26,771,896	27,463,383	27,836,870	28,167,146	28,667,800	28,799,592	28,650,114	29,015,795	29,117,345	29,155,408	29,215,375				
2009	2,830,926	7,197,447	12,251,906	16,154,018	21,620,966	23,859,882	27,184,761	28,314,011	29,018,963	29,219,696	29,439,277	29,595,103	29,679,522	29,761,262	29,773,723	29,860,866	29,893,634					
2010	1,104,063	5,642,958	11,939,112	17,665,459	22,770,197	24,869,513	26,671,074	27,639,809	28,109,783	28,242,810	28,391,199	28,545,932	28,653,874	28,803,515	28,899,324	28,965,110						
2011	3,917,347	8,865,266	16,218,868	21,048,464	25,053,555	27,252,453	29,679,220	30,575,995	30,903,412	31,343,812	31,536,307	31,753,321	31,816,490	31,866,220	31,891,436							
2012	3,173,436	7,245,781	12,986,554	17,401,922	22,665,022	24,826,276	27,627,222	28,097,126	28,589,801	29,188,089	29,504,389	29,645,194	29,725,186	29,756,473								
2013	3,095,074	7,595,012	12,723,717	17,182,570	21,879,349	24,144,364	25,603,486	26,830,976	26,986,259	27,377,460	27,522,666	27,577,307	27,633,491									
2014	3,288,266	7,599,570	12,342,563	16,827,432	21,916,339	23,785,499	26,294,181	26,890,972	27,315,430	27,563,086	27,743,562	27,776,872										
2015	2,375,818	7,961,428	11,940,407	14,865,937	19,250,539	21,559,818	23,206,557	25,671,375	28,150,708	28,577,513	28,823,937											
2016	3,455,112	9,671,882	15,462,911	17,879,228	20,373,971	21,832,667	24,562,945	30,321,192	31,017,955	31,408,058												
2017	2,520,793	8,896,703	14,023,077	14,817,584	16,595,741	18,972,243	25,875,414	27,930,930	29,214,407													
2018	3,653,700	7,166,424	9,140,255	11,637,754	13,725,674	15,159,737	19,019,740	23,457,241														
2019	2,093,122	5,790,308	8,452,025	11,226,024	13,858,834	15,076,144	19,437,481															
2020	1,648,155	5,798,148	9,046,817	11,193,420	13,601,058	15,386,060																
2021	1,197,047	4,634,674	8,695,526	11,158,795																		
2022	1,895,024	7,385,838																				

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Insurance Year	7	12	19	24	31	36	48	60	72	84
2004	1,170	4,888	10,584	15,588	19,139	20,921	23,223	23,847	24,710	24,989
2005	3,033	7,577	13,697	18,504	21,799	23,280	25,127	26,434	27,142	27,657
2006	3,395	9,436	17,682	22,568	26,131	27,788	30,644	31,921	32,392	32,996
2007	2,932	7,304	13,081	17,699	21,780	24,306	25,764	26,988	27,575	28,087
2008	2,205	6,515	12,660	18,277	21,792	23,019	25,286	26,772	27,463	27,837
2009	2,831	7,197	12,252	16,154	21,621	23,860	27,185	28,314	29,019	29,220
2010	1,104	5,643	11,939	17,665	22,770	24,870	26,671	27,640	28,110	28,243
2011	3,917	8,865	16,219	21,048	25,054	27,252	29,679	30,576	30,903	31,344
2012	3,173	7,246	12,987	17,402	22,665	24,826	27,627	28,097	28,590	29,188
2013	3,095	7,595	12,724	17,183	21,879	24,144	25,603	26,831	26,986	27,377
2014	3,288	7,600	12,343	16,827	21,916	23,785	26,294	26,891	27,315	27,563
2015	2,376	7,961	11,940	14,866	19,251	21,560	23,207	25,671	28,151	28,578
2016	3,455	9,672	15,463	17,879	20,374	21,833	24,563	30,321	31,018	31,408
2017	2,521	8,897	14,023	14,818	16,596	18,972	25,875	27,931	29,214	
2018	3,654	7,166	9,140	11,638	13,726	15,160	19,020	23,457		
2019	2,093	5,790	8,452	11,226	13,859	15,076	19,437			
2020	1,648	5,798	9,047	11,193	13,601	15,386				
2021	1,197	4,635	8,696	11,159						
2022	1,895	7,386								
Insurance Year	7-12	12-19	19-24	24-31	31-36	36-48	48-60	60-72	72-84	84-96
2004	4.1764	2.1654	1.4728	1.2278	1.0931	1.1100	1.0269	1.0362	1.0113	1.0058
2005	2.4983	1.8078	1.3510	1.1781	1.0680	1.0793	1.0520	1.0268	1.0190	1.0160
2006	2.7791	1.8740	1.2763	1.1579	1.0634	1.1028	1.0417	1.0147	1.0187	1.0171
2007	2.4910	1.7910	1.3531	1.2306	1.1160	1.0600	1.0475	1.0217	1.0186	1.0152
2008	2.9549	1.9432	1.4437	1.1924	1.0563	1.0985	1.0588	1.0258	1.0136	1.0119
2009	2.5424	1.7023	1.3185	1.3384	1.1036	1.1394	1.0415	1.0249	1.0069	1.0075
2010	5.1111	2.1158	1.4796	1.2890	1.0922	1.0724	1.0363	1.0170	1.0047	1.0053
2011	2.2631	1.8295	1.2978	1.1903	1.0878	1.0890	1.0302	1.0107	1.0143	1.0061
2012	2.2833	1.7923	1.3400	1.3024	1.0954	1.1128	1.0170	1.0175	1.0209	1.0108
2013	2.4539	1.6753	1.3504	1.2733	1.1035	1.0604	1.0479	1.0058	1.0145	1.0053
2014	2.3111	1.6241	1.3634	1.3024	1.0853	1.1055	1.0227	1.0158	1.0091	1.0065
2015	3.3510	1.4998	1.2450	1.2949	1.1200	1.0764	1.1062	1.0966	1.0152	1.0086
2016	2.7993	1.5987	1.1563	1.1395	1.0716	1.1251	1.2344	1.0230	1.0126	
2017	3.5293	1.5762	1.0567	1.1200	1.1432	1.3639	1.0794	1.0460		
2018	1.9614	1.2754	1.2732	1.1794	1.1045	1.2546	1.2333			
2019	2.7663	1.4597	1.3282	1.2345	1.0878	1.2893				
2020	3.5180	1.5603	1.2373	1.2151	1.1312					
2021	3.8718	1.8762	1.2833							
2022	3.8975									
Latest 9 Volume Weighted	2.9333	1.5638	1.2451	1.2318	1.1030	1.1490	1.0826	1.0279	1.0124	1.0086
Latest 6 Volume Weighted	3.0499	1.5449	1.2020	1.1934	1.1086	1.1891	1.1144	1.0334	1.0144	1.0071
Latest 3 Volume Weighted	3.7590	1.6146	1.2819	1.2093	1.1077	1.3074	1.1764	1.0531	1.0123	1.0069
Simple Average of Middle 4 of Last 6	3.1532	1.5487	1.2375	1.1921	1.1109	1.1936	1.1167	1.0256	1.0141	1.0067
Simple Average of Middle 3 of Last 5	3.2712	1.5321	1.2646	1.1780	1.1079	1.2230	1.1397	1.0282	1.0141	1.0071
Selected March 22	4.8000	1.6000	1.3000	1.2500	1.1000	1.3000	1.1265	1.0270	1.0100	1.0095
Selected Oct 22	3.3000	1.6000	1.3000	1.2000	1.1000	1.3000	1.1260	1.0290	1.0130	1.0095
Selected Factors	3.3000	1.6000	1.3000	1.2000	1.1000	1.3000	1.1260	1.0290	1.0130	1.0095
Selected Ultimate	14.3803	4.3577	2.7235	2.0950	1.7459	1.5871	1.2209	1.0843	1.0537	1.0402

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Evaluation in Months											
96	108	120	132	144	156	168	180	192	204	216	228
25,134	25,248	25,209	25,275	25,452	25,505	25,549	25,576	25,594	25,677	25,689	25,691
28,099	28,223	28,261	28,294	28,410	28,446	28,429	28,434	28,557	28,564	28,564	
33,559	33,848	34,050	34,142	34,180	34,242	34,258	34,329	34,360	34,360		
28,515	28,678	28,832	28,874	28,926	29,171	29,271	29,331	29,369			
28,167	28,668	28,800	28,650	29,016	29,117	29,155	29,215				
29,439	29,595	29,680	29,761	29,774	29,861	29,894					
28,391	28,546	28,654	28,804	28,899	28,965						
31,536	31,753	31,816	31,866	31,891							
29,504	29,645	29,725	29,756								
27,523	27,577	27,633									
27,744	27,777										
28,824											

96-108	108-120	120-132	132-144	144-156	156-168	168-180	180-192	192-204	204-216	216-Ult
1.0045	0.9985	1.0026	1.0070	1.0021	1.0017	1.0011	1.0007	1.0033	1.0005	1.0001
1.0044	1.0013	1.0012	1.0041	1.0013	0.9994	1.0002	1.0043	1.0003	1.0000	
1.0086	1.0060	1.0027	1.0011	1.0018	1.0005	1.0021	1.0009	1.0000		
1.0057	1.0054	1.0015	1.0018	1.0084	1.0034	1.0021	1.0013			
1.0178	1.0046	0.9948	1.0128	1.0035	1.0013	1.0021				
1.0053	1.0029	1.0028	1.0004	1.0029	1.0011					
1.0055	1.0038	1.0052	1.0033	1.0023						
1.0069	1.0020	1.0016	1.0008							
1.0048	1.0027	1.0011								
1.0020	1.0020									
1.0012										
1.0065	1.0034	1.0015	1.0037	1.0032	1.0012	1.0015	1.0018	1.0010	1.0002	1.0001
1.0043	1.0030	1.0012	1.0032	1.0033	1.0012	1.0015	1.0018	1.0010	1.0002	1.0001
1.0027	1.0022	1.0026	1.0015	1.0029	1.0019	1.0021	1.0021	1.0010	1.0002	1.0001
1.0044	1.0028	1.0017	1.0018	1.0026	1.0012	1.0017	1.0011	1.0003	1.0002	1.0001
1.0041	1.0025	1.0018	1.0020	1.0029	1.0010	1.0017	1.0011	1.0003	1.0002	1.0001
1.0070	1.0045	1.0040	1.0040	1.0040	1.0040	1.0035	1.0025	1.0015	1.0000	1.0000
1.0070	1.0040	1.0030	1.0030	1.0030	1.0030	1.0030	1.0025	1.0015	1.0000	1.0000
1.0070	1.0040	1.0030	1.0030	1.0030	1.0030	1.0030	1.0025	1.0015	1.0000	1.0000
1.0304	1.0232	1.0192	1.0161	1.0131	1.0100	1.0070	1.0040	1.0015	1.0000	1.0000

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Paid Loss & ALAE Development Factors to Ultimate

Months to Ultimate	Latest 9 Volume Weighted	Latest 6 Volume Weighted	Latest 3 Volume Weighted	Simple Average of Middle 4 of Last 6	Simple Average of Middle 3 of Last 5	Selected March 22 Factors	Selected Oct 22 Factors	Selected Factors
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7	10.3787	10.7040	17.5405	11.3701	12.3210	21.7995	14.3803	14.3803
12	3.5383	3.5097	4.6662	3.6059	3.7665	4.5416	4.3577	4.3577
19	2.2626	2.2718	2.8900	2.3283	2.4584	2.8385	2.7235	2.7235
24	1.8171	1.8901	2.2545	1.8814	1.9441	2.1834	2.0950	2.0950
31	1.4752	1.5838	1.8643	1.5782	1.6503	1.7468	1.7459	1.7459
36	1.3375	1.4286	1.6830	1.4206	1.4896	1.5880	1.5871	1.5871
48	1.1640	1.2014	1.2873	1.1902	1.2180	1.2215	1.2209	1.2209
60	1.0752	1.0780	1.0943	1.0658	1.0688	1.0843	1.0843	1.0843
72	1.0460	1.0432	1.0391	1.0392	1.0394	1.0558	1.0537	1.0537
84	1.0332	1.0284	1.0264	1.0248	1.0250	1.0454	1.0402	1.0402
96	1.0244	1.0211	1.0195	1.0180	1.0178	1.0355	1.0304	1.0304
108	1.0178	1.0167	1.0167	1.0136	1.0136	1.0283	1.0232	1.0232
120	1.0144	1.0137	1.0144	1.0107	1.0111	1.0237	1.0192	1.0192
132	1.0128	1.0125	1.0119	1.0090	1.0093	1.0197	1.0161	1.0161
144	1.0091	1.0092	1.0104	1.0072	1.0073	1.0156	1.0131	1.0131
156	1.0059	1.0059	1.0074	1.0046	1.0044	1.0115	1.0100	1.0100
168	1.0046	1.0046	1.0055	1.0034	1.0034	1.0075	1.0070	1.0070
180	1.0031	1.0031	1.0034	1.0017	1.0017	1.0040	1.0040	1.0040
192	1.0013	1.0013	1.0013	1.0006	1.0006	1.0015	1.0015	1.0015
204	1.0003	1.0003	1.0003	1.0003	1.0003	1.0000	1.0000	1.0000
216	1.0001	1.0001	1.0001	1.0001	1.0001	1.0000	1.0000	1.0000

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Interpolated Percentage of Ultimate Factors

For October				For March					
Months of Devt	RTR Factors	Factor to Ultimate	Percentage Paid	Months of Devt	Percentage Paid	Factor to Ultimate	RTR Factors	Selected RTR Factors	Sel'd Factor to Ultimate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7	3.3000	14.3830	6.95%	7		14.3830	3.3000	3.3000	14.3803
12	1.6000	4.3585		12	22.94%	4.3585	1.6000	1.6000	4.3577
19	1.3000	2.7241	36.71%	19		2.7241	1.3000	1.3000	2.7235
24	1.2000	2.0954		24	47.72%	2.0954	1.2000	1.2000	2.0950
31	1.1000	1.7462	57.27%	31		1.7462	1.1000	1.1000	1.7459
36	1.2000	1.5874		36	62.99%	1.5874	1.3000	1.3000	1.5871
43	1.2000	1.3229	75.59%	48	81.89%	1.2211	1.1262	1.1260	1.2209
55	1.0400	1.1024	90.71%	60	92.22%	1.0843	1.0293	1.0290	1.0843
67	1.0150	1.0600	94.34%	72	94.93%	1.0534	1.0129	1.0130	1.0537
79	1.0100	1.0443	95.76%	84	96.15%	1.0400	1.0094	1.0095	1.0402
91	1.0085	1.0340	96.71%	96	97.06%	1.0303	1.0070	1.0070	1.0304
103	1.0050	1.0253	97.54%	108	97.74%	1.0231	1.0042	1.0040	1.0232
115	1.0030	1.0202	98.02%	120	98.15%	1.0189	1.0030	1.0030	1.0192
127	1.0030	1.0171	98.32%	132	98.44%	1.0159	1.0030	1.0030	1.0161
139	1.0030	1.0141	98.61%	144	98.73%	1.0128	1.0030	1.0030	1.0131
151	1.0030	1.0110	98.91%	156	99.03%	1.0098	1.0030	1.0030	1.0100
163	1.0030	1.0080	99.20%	168	99.33%	1.0068	1.0028	1.0030	1.0070
175	1.0025	1.0050	99.50%	180	99.61%	1.0040	1.0025	1.0025	1.0040
187	1.0025	1.0025	99.75%	192	99.85%	1.0015	1.0015	1.0015	1.0015
199	1.0000	1.0000	100.00%	204	100.00%	1.0000	1.0000	1.0000	1.0000
Tail	1.0000	1.0000	100.00%	Tail	100.00%	1.0000	1.0000	1.0000	1.0000

Selected Development in 4th and Subsequent Years: 41.67%

Manitoba Public Insurance
 Automobile Insurance Division - Accident Benefits - Other (Non-Indexed)
 Paid Loss & ALAE - Without Z-Files
 March 31, 2023

Appendix G
 Page 15

Projected Ultimate Losses & ALAE Using the Development Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Paid Loss & ALAE	Development Factor to Ultimate	Ultimate Losses	Unpaid	Case Reserves	IBNR	Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2005	632,408	28,564	1.0000	28,564	-	3	(3)	4.52%
2006	656,746	34,360	1.0000	34,360	-	80	(80)	5.23%
2007	679,930	29,369	1.0015	29,413	44	30	14	4.33%
2008	709,787	29,215	1.0040	29,332	117	26	91	4.13%
2009	741,553	29,894	1.0070	30,103	210	(4)	214	4.06%
2010	761,034	28,965	1.0100	29,256	291	8	283	3.84%
2011	772,649	31,891	1.0131	32,308	417	228	189	4.18%
2012	769,715	29,756	1.0161	30,236	479	44	435	3.93%
2013	781,394	27,633	1.0192	28,163	529	48	481	3.60%
2014	822,358	27,777	1.0232	28,422	645	212	433	3.46%
2015	877,262	28,824	1.0304	29,700	876	384	492	3.39%
2016	923,168	31,408	1.0402	32,670	1,262	556	706	3.54%
2017	977,104	29,214	1.0537	30,783	1,569	516	1,053	3.15%
2018	1,044,467	23,457	1.0843	25,434	1,977	2,285	(308)	2.44%
2019	1,099,731	19,437	1.2209	23,731	4,293	4,257	36	2.16%
2020	1,134,690	15,386	1.5871	24,420	9,034	10,083	(1,049)	2.15%
2021	1,159,166	11,159	2.0950	23,378	12,219	17,411	(5,192)	2.02%
2022	1,126,492	7,386	4.3577	32,185	24,799	19,457	5,342	2.86%
	15,669,653	463,698		522,459	58,761	55,624	3,137	3.33%

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Non-Indexed)
Paid Loss & ALAE - Without Z-Files
March 31, 2023

Appendix G
Page 16

Development of Bornhuetter-Ferguson Initial Expected Loss Ratio

Insurance Year	Earned Premium	Projected Ultimate Losses	Based on Prior Year	Based on 2nd Prior Year	Fitted Ultimate Losses	Fitted Ultimate Loss Ratio	Projected Ultimate Loss Ratio	Weight	Weighted Initial Ult Loss Ratio	Selected Initial Ult Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2005	632,408	28,564			28,564	4.52%	4.52%	100.00%	4.52%	4.52%
2006	656,746	34,360	28,564		28,564	4.35%	5.23%	100.00%	5.23%	5.25%
2007	679,930	29,413	34,360	28,564	31,462	4.63%	4.33%	100.00%	4.33%	4.33%
2008	709,787	29,332	29,413	34,360	31,887	4.49%	4.13%	100.00%	4.13%	4.14%
2009	741,553	30,103	29,332	29,413	29,373	3.96%	4.06%	100.00%	4.06%	4.05%
2010	761,034	29,256	30,103	29,332	29,718	3.90%	3.84%	100.00%	3.84%	3.83%
2011	772,649	32,308	29,256	30,103	29,680	3.84%	4.18%	100.00%	4.18%	4.19%
2012	769,715	30,236	32,308	29,256	30,782	4.00%	3.93%	100.00%	3.93%	3.91%
2013	781,394	28,163	30,236	32,308	31,272	4.00%	3.60%	100.00%	3.60%	3.58%
2014	822,358	28,422	28,163	30,236	29,199	3.55%	3.46%	100.00%	3.46%	3.45%
2015	877,262	29,700	28,422	28,163	28,292	3.23%	3.39%	100.00%	3.39%	3.39%
2016	923,168	32,670	29,700	28,422	29,061	3.15%	3.54%	100.00%	3.54%	3.54%
2017	977,104	30,783	32,670	29,700	31,185	3.19%	3.15%	100.00%	3.15%	3.12%
2018	1,044,467	25,434	30,783	32,670	31,727	3.04%	2.44%	75.00%	2.59%	2.66%
2019	1,099,731	23,731	25,434	30,783	28,109	2.56%	2.16%	50.00%	2.36%	2.40%
2020	1,134,690	24,420	23,731	25,434	24,582	2.17%	2.15%	25.00%	2.16%	2.26%
2021	1,159,166	23,378	24,420	23,731	24,075	2.08%	2.02%	25.00%	2.06%	2.29%
2022	1,126,492	32,185	23,378	24,420	23,899	2.12%	2.86%	25.00%	2.31%	2.62%
	15,669,653	522,459	490,274	466,896	521,431					

Trend in Losses Based on Exponential Regression (a):

-0.99%

Selected Trend (b):

0.00%

Notes:

(3) Ultimate Losses from Page 15

(6) = Average [(4), (5)]

(10) = (8) * (9) + (7) * [1 - (9)]

(11) Selected Initial Ult Loss Ratio from Page 8

(a) Based on the Projected Ultimate Losses

(b) Selected Trend from Page 8

Manitoba Public Insurance
Automobile Insurance Division - Accident Benefits - Other (Non-Indexed)
Paid Loss & ALAE - Without Z-Files
March 31, 2023

Appendix G
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Projected Ultimate Losses and ALAE Using the Bornhuetter-Ferguson Method on Paid Loss & ALAE

Insurance Year	Earned Premium	Selected Initial Ult Loss Ratio	Initial Expected Ult Losses	Expected Percentage: Paid Unpaid		Expected Paid Loss	Actual Paid Loss	Expected Unpaid Loss	Estimated Ultimate Losses	Expected IBNR	Estimated Ultimate Loss Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2005	632,408	4.52%	28,595	100.00%	0.00%	28,595	28,564	-	28,564	(3)	4.52%
2006	656,746	5.25%	34,492	100.00%	0.00%	34,492	34,360	-	34,360	(80)	5.23%
2007	679,930	4.33%	29,473	99.85%	0.15%	29,428	29,369	44	29,413	14	4.33%
2008	709,787	4.14%	29,359	99.60%	0.40%	29,242	29,215	117	29,332	91	4.13%
2009	741,553	4.05%	30,055	99.30%	0.70%	29,845	29,894	209	30,103	213	4.06%
2010	761,034	3.83%	29,177	99.01%	0.99%	28,887	28,965	290	29,255	282	3.84%
2011	772,649	4.19%	32,394	98.71%	1.29%	31,976	31,891	418	32,309	190	4.18%
2012	769,715	3.91%	30,100	98.41%	1.59%	29,623	29,756	477	30,234	433	3.93%
2013	781,394	3.58%	28,001	98.12%	1.88%	27,475	27,633	526	28,160	478	3.60%
2014	822,358	3.45%	28,397	97.73%	2.27%	27,752	27,777	645	28,422	433	3.46%
2015	877,262	3.39%	29,753	97.05%	2.95%	28,875	28,824	878	29,702	494	3.39%
2016	923,168	3.54%	32,691	96.14%	3.86%	31,428	31,408	1,263	32,671	707	3.54%
2017	977,104	3.12%	30,528	94.90%	5.10%	28,972	29,214	1,556	30,770	1,040	3.15%
2018	1,044,467	2.66%	27,757	92.23%	7.77%	25,600	23,457	2,157	25,614	(128)	2.45%
2019	1,099,731	2.40%	26,433	81.91%	18.09%	21,651	19,437	4,782	24,220	525	2.20%
2020	1,134,690	2.26%	25,612	63.01%	36.99%	16,137	15,386	9,475	24,861	(608)	2.19%
2021	1,159,166	2.29%	26,563	47.73%	52.27%	12,679	11,159	13,884	25,043	(3,527)	2.16%
2022	1,126,492	2.62%	29,544	22.95%	77.05%	6,780	7,386	22,764	30,150	3,307	2.68%
	15,669,653		528,924			469,439	463,698	59,485	523,183	3,861	3.34%

Notes:
(10) = (8) + (9)

July 13, 2023



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix PE
PIPP Enhancement Benefits

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 1

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(9)-(4)	(7)=(5)+(6)	(8)=(7)/(2)	(9)
2004 & Prior		5,410	6,115	11,524	163	11,687		6,278
2005	632,408	973	1,669	2,642	125	2,766	0.44%	1,793
2006	656,746	965	1,367	2,332	23	2,354	0.36%	1,390
2007	679,930	845	1,136	1,981	7	1,988	0.29%	1,143
2008	709,787	553	694	1,247	11	1,258	0.18%	705
2009	741,553	710	894	1,604	589	2,193	0.30%	1,483
2010	761,034	252	460	713	4	717	0.09%	464
2011	772,649	218	682	899	(23)	876	0.11%	659
2012	769,715	389	625	1,014	(10)	1,005	0.13%	616
2013	781,394	298	577	874	441	1,316	0.17%	1,018
2014	822,358	-	-	-	314	314	0.04%	314
2015	877,262	9	-	9	341	350	0.04%	341
2016	923,168	521	964	1,484	412	1,897	0.21%	1,376
2017	977,104	259	1,107	1,366	1,142	2,508	0.26%	2,248
2018	1,044,467	70	507	576	139	715	0.07%	645
2019	1,099,731	10	56	65	1	66	0.01%	56
2020	1,134,690	189	1,708	1,897	12	1,909	0.17%	1,720
2021	1,159,166	82	1,050	1,132	592	1,723	0.15%	1,641
2022	1,126,492	18	32	50	1,974	2,024	0.18%	2,006
Total	15,669,653	11,769	19,641	31,410	6,255	37,665	0.24%	25,896

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(9) - PE Appendix A, Column 14 & PE Appendix B, Column 5

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 2

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(9)-(4)	(7)=(5)+(6)	(8)=(7)/(2)	(9)
PIPP Enhancement: Increasing the Maximum Personal Care								
2004 & Prior		5,001	9,416	14,417	256	14,673		9,672
2005	632,408	464	944	1,408	50	1,459	0.23%	994
2006	656,746	343	919	1,261	171	1,432	0.22%	1,089
2007	679,930	566	2,164	2,730	111	2,841	0.42%	2,275
2008	709,787	395	520	915	8	923	0.13%	528
2009	741,553	355	1,011	1,366	(55)	1,311	0.18%	957
2010	761,034	199	351	551	(8)	543	0.07%	344
2011	772,649	536	1,636	2,172	463	2,635	0.34%	2,099
2012	769,715	196	688	884	8	893	0.12%	697
2013	781,394	252	1,042	1,294	(39)	1,256	0.16%	1,004
2014	822,358	74	686	760	52	812	0.10%	738
2015	877,262	62	190	252	237	490	0.06%	428
2016	923,168	287	985	1,272	388	1,660	0.18%	1,373
2017	977,104	29	1,449	1,479	189	1,667	0.17%	1,638
2018	1,044,467	39	718	757	(5)	752	0.07%	713
2019	1,099,731	37	602	639	(352)	287	0.03%	250
2020	1,134,690	35	661	696	479	1,175	0.10%	1,140
2021	1,159,166	10	731	741	467	1,208	0.10%	1,198
2022	1,126,492	-	-	-	952	952	0.08%	952
Total	15,669,653	8,879	24,716	33,595	3,372	36,967	0.24%	28,088

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(9) - PE Appendix C, Column 10

Manitoba Public Insurance
Automobile Insurance Division
Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

PE Exhibit 1
Sheet 3

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(7)-(5)	(7)	(8)=(7)/(2)	(9)=(4)+(6)
PIPP Enhancement: Increasing the Maximum Permanent Impairment								
2004 & Prior		12,104	-	12,104	339	12,443		339
2005	632,408	1,381	-	1,381	-	1,381	0.22%	-
2006	656,746	1,535	-	1,535	-	1,535	0.23%	-
2007	679,930	1,391	-	1,391	-	1,391	0.20%	-
2008	709,787	1,353	-	1,353	-	1,353	0.19%	-
2009	741,553	734	-	734	275	1,010	0.14%	275
2010	761,034	853	-	853	95	948	0.12%	95
2011	772,649	997	-	997	91	1,087	0.14%	91
2012	769,715	731	-	731	91	822	0.11%	91
2013	781,394	858	-	858	95	953	0.12%	95
2014	822,358	730	-	730	209	939	0.11%	209
2015	877,262	618	-	618	177	795	0.09%	177
2016	923,168	1,357	-	1,357	339	1,696	0.18%	339
2017	977,104	1,188	-	1,188	194	1,382	0.14%	194
2018	1,044,467	692	-	692	99	792	0.08%	99
2019	1,099,731	542	40	582	154	736	0.07%	194
2020	1,134,690	706	-	706	308	1,015	0.09%	308
2021	1,159,166	478	-	478	583	1,061	0.09%	583
2022	1,126,492	99	-	99	972	1,071	0.10%	972
Total	15,669,653	28,346	40	28,386	4,023	32,409	0.21%	4,063

Notes:
(2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(7) - PE Appendix D, Column 9

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 4

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(9)-(4)	(7)=(5)+(6)	(8)=(7)/(2)	(9)

PIPP Enhancement: Change to Vehicle Purchase Policy

2004 & Prior		2,469	5,834	8,302	194	8,497		6,028
2005	632,408	110	397	507	23	530	0.08%	420
2006	656,746	549	1,449	1,998	(43)	1,956	0.30%	1,406
2007	679,930	320	1,062	1,382	83	1,466	0.22%	1,146
2008	709,787	165	876	1,041	(62)	980	0.14%	815
2009	741,553	227	645	871	34	906	0.12%	679
2010	761,034	227	644	871	33	904	0.12%	677
2011	772,649	193	313	505	21	527	0.07%	334
2012	769,715	175	615	791	36	827	0.11%	652
2013	781,394	-	-	-	-	-	0.00%	-
2014	822,358	178	671	849	(75)	774	0.09%	595
2015	877,262	81	209	290	14	304	0.03%	223
2016	923,168	172	981	1,153	299	1,452	0.16%	1,280
2017	977,104	50	451	501	565	1,065	0.11%	1,015
2018	1,044,467	50	120	170	892	1,062	0.10%	1,012
2019	1,099,731	90	938	1,028	239	1,268	0.12%	1,177
2020	1,134,690	46	318	364	782	1,147	0.10%	1,101
2021	1,159,166	-	216	216	838	1,054	0.09%	1,054
2022	1,126,492	-	-	-	1,028	1,028	0.09%	1,028
Total	15,669,653	5,103	15,737	20,840	4,903	25,743	0.16%	20,640

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(9) - PE Appendix E, Column 11

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 5

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
PIPP Enhancement: Death Benefits								
2004 & Prior		-	-	-	8,580	8,580		8,580
2005	632,408	-	-	-	987	987	0.16%	987
2006	656,746	-	-	-	1,513	1,513	0.23%	1,513
2007	679,930	-	-	-	1,332	1,332	0.20%	1,332
2008	709,787	-	-	-	801	801	0.11%	801
2009	741,553	-	-	-	885	885	0.12%	885
2010	761,034	-	-	-	799	799	0.10%	799
2011	772,649	-	-	-	946	946	0.12%	946
2012	769,715	-	-	-	646	646	0.08%	646
2013	781,394	-	-	-	694	694	0.09%	694
2014	822,358	-	-	-	865	865	0.11%	865
2015	877,262	-	-	-	886	886	0.10%	886
2016	923,168	-	-	-	1,181	1,181	0.13%	1,181
2017	977,104	-	-	-	1,138	1,138	0.12%	1,138
2018	1,044,467	-	-	-	772	772	0.07%	772
2019	1,099,731	-	-	-	833	833	0.08%	833
2020	1,134,690	-	-	-	1,066	1,066	0.09%	1,066
2021	1,159,166	-	-	-	1,115	1,115	0.10%	1,115
2022	1,126,492	-	-	-	1,266	1,266	0.11%	1,266
Total	15,669,653	-	-	-	26,305	26,305	0.17%	26,305

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(6) - PE Appendix F, Column 11

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 6

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(9)-(4)	(7)=(5)+(6)	(8)=(7)/(2)	(9)
PIPP Enhancement: Annual Spending Allowance								
2004 & Prior		184	1,926	2,110	(192)	1,918		1,734
2005	632,408	10	228	238	(76)	161	0.03%	152
2006	656,746	16	375	391	10	400	0.06%	385
2007	679,930	59	456	516	(154)	362	0.05%	302
2008	709,787	29	195	224	(27)	197	0.03%	168
2009	741,553	8	164	171	37	208	0.03%	200
2010	761,034	36	258	293	(66)	227	0.03%	191
2011	772,649	27	231	258	(7)	251	0.03%	224
2012	769,715	3	60	63	104	167	0.02%	164
2013	781,394	5	43	48	118	165	0.02%	160
2014	822,358	9	123	132	21	153	0.02%	144
2015	877,262	4	107	111	73	184	0.02%	179
2016	923,168	8	77	85	226	311	0.03%	303
2017	977,104	17	176	193	103	295	0.03%	278
2018	1,044,467	5	118	123	61	184	0.02%	179
2019	1,099,731	4	158	162	35	197	0.02%	193
2020	1,134,690	13	123	136	157	293	0.03%	280
2021	1,159,166	-	-	-	267	267	0.02%	267
2022	1,126,492	-	-	-	274	274	0.02%	274
Total	15,669,653	435	4,819	5,254	962	6,216	0.04%	5,781

Notes:
 (2) - From MPI
 (3) to (5) - From MPI Fiscal Year Summaries
 (9) - PE Appendix G, Column 10

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1
Sheet 7

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted
As of March 31, 2023
(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)=(9)-(4)	(7)=(5)+(6)	(8)=(7)/(2)	(9)
PIPP Enhancement: Caregiver Death Benefit								
2004 & Prior		-	-	-	-	-	-	-
2005	632,408	-	-	-	-	-	0.00%	-
2006	656,746	-	-	-	-	-	0.00%	-
2007	679,930	-	-	-	-	-	0.00%	-
2008	709,787	176	-	176	-	176	0.02%	-
2009	741,553	-	-	-	-	-	0.00%	-
2010	761,034	-	-	-	-	-	0.00%	-
2011	772,649	-	-	-	-	-	0.00%	-
2012	769,715	-	-	-	-	-	0.00%	-
2013	781,394	-	-	-	-	-	0.00%	-
2014	822,358	-	-	-	-	-	0.00%	-
2015	877,262	1,006	762	1,768	(12)	1,756	0.20%	749
2016	923,168	-	-	-	-	-	0.00%	-
2017	977,104	632	861	1,493	0	1,493	0.15%	861
2018	1,044,467	210	478	688	(5)	683	0.07%	473
2019	1,099,731	176	49	226	(1)	224	0.02%	48
2020	1,134,690	139	296	435	459	894	0.08%	755
2021	1,159,166	67	73	140	841	981	0.08%	914
2022	1,126,492	-	-	-	1,090	1,090	0.10%	1,090
Total	15,669,653	2,407	2,519	4,926	2,371	7,297	0.05%	4,890

Notes: (2) - From MPI
(3) to (5) - From MPI Fiscal Year Summaries
(9) - PE Appendix H, Column 11

Manitoba Public Insurance
Automobile Insurance Division

PE Exhibit 1

Sheet 8

Direct & Agency Ultimate Claim Experience (Including External Adjustment Expenses) - Undiscounted

As of March 31, 2023

(\$000)

Insurance Year	Earned Premium	As of March 31, 2023			Selected IBNR	Estimated Ultimate Claims	Estimated Ultimate Loss Ratio	Estimated Unpaid Claims
		Paid	Case Reserves	Reported				
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(5)+(6)	(8)=(7)/(2)	(9)=(4)+(6)
PIPP Enhancement: Total								
2004 & Prior		25,167	23,291	48,457	9,341	57,798		32,631
2005	632,408	2,938	3,238	6,176	1,108	7,284	1.15%	4,346
2006	656,746	3,407	4,110	7,517	1,674	9,190	1.40%	5,783
2007	679,930	3,181	4,818	7,999	1,379	9,379	1.38%	6,197
2008	709,787	2,671	2,286	4,957	731	5,688	0.80%	3,017
2009	741,553	2,034	2,713	4,747	1,766	6,513	0.88%	4,480
2010	761,034	1,567	1,713	3,280	856	4,137	0.54%	2,570
2011	772,649	1,969	2,862	4,831	1,491	6,322	0.82%	4,353
2012	769,715	1,494	1,989	3,483	876	4,359	0.57%	2,865
2013	781,394	1,412	1,662	3,074	1,310	4,384	0.56%	2,971
2014	822,358	991	1,480	2,471	1,385	3,856	0.47%	2,865
2015	877,262	1,781	1,268	3,049	1,715	4,764	0.54%	2,983
2016	923,168	2,344	3,007	5,351	2,845	8,197	0.89%	5,852
2017	977,104	2,175	4,043	6,218	3,330	9,549	0.98%	7,374
2018	1,044,467	1,066	1,941	3,007	1,953	4,960	0.47%	3,894
2019	1,099,731	859	1,843	2,702	910	3,612	0.33%	2,753
2020	1,134,690	1,128	3,107	4,235	3,263	7,498	0.66%	6,370
2021	1,159,166	637	2,069	2,706	4,703	7,409	0.64%	6,772
2022	1,126,492	116	32	149	7,555	7,704	0.68%	7,587
Total	15,669,653	56,938.397	67,472	124,411	48,191	172,602	1.10%	115,663

Notes:
 (2) - From MPI
 (3) to (5) - From MPI Fiscal Year Summaries
 (6) - Total All PIPP Enhancements

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 1

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Increasing the Weekly Indemnity to IAW											
2004 & Prior	6,278	87.53%	83.83%	5,495	5,263	232	10.00%	526	6,021	163	(94)
2005	1,793	85.29%	81.22%	1,529	1,456	73	10.00%	146	1,675	125	6
2006	1,390	83.78%	79.49%	1,164	1,105	60	10.00%	110	1,275	23	(92)
2007	1,143	85.94%	82.00%	982	937	45	10.00%	94	1,076	7	(60)
2008	705	86.72%	82.88%	612	585	27	10.00%	58	670	11	(24)
2009	1,483	85.17%	81.12%	1,263	1,203	60	10.00%	120	1,383	589	490
2010	464	84.90%	80.75%	394	375	19	10.00%	37	432	4	(29)
2011	659	84.71%	80.59%	558	531	27	10.00%	53	611	(23)	(71)
2012	616	85.14%	81.07%	524	499	25	10.00%	50	574	(10)	(51)
2013	1,018	82.99%	78.63%	845	801	44	10.00%	80	925	441	348
2014	314	84.95%	80.81%	266	253	13	10.00%	25	292	314	292
2015	341	84.30%	80.06%	287	273	14	10.00%	27	315	341	315
2016	1,376	83.43%	79.09%	1,148	1,088	60	10.00%	109	1,257	412	293
2017	2,248	82.11%	77.58%	1,846	1,744	102	10.00%	174	2,021	1,142	914
2018	645	81.43%	76.90%	525	496	29	10.00%	50	575	139	68
2019	56	86.91%	83.07%	49	47	2	10.00%	5	54	1	(2)
2020	1,720	80.11%	75.31%	1,378	1,295	83	10.00%	130	1,508	12	(200)
2021	1,641	81.20%	76.57%	1,333	1,257	76	15.00%	188	1,521	592	471
2022	2,006	83.28%	78.93%	1,671	1,583	87	15.00%	238	1,908	1,974	1,876
Total	25,896	84.45%	80.29%	21,870	20,792	1,079	10.68%	2,221	24,091	6,255	4,450

Notes:
 (2) - PE Exhibit 1, Column 9
 (5) - PE Appendix A, Column 14 & PE Appendix B, Column 8
 (6) - PE Appendix A, Column 14 & PE Appendix B, Column 11
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Weekly Indemnity
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 2

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Increasing the Maximum Personal Care											
2004 & Prior	9,672	85.26%	81.23%	8,247	7,856	391	10.00%	786	9,033	256	(383)
2005	994	86.78%	82.93%	863	824	38	10.00%	82	945	50	1
2006	1,089	81.55%	76.93%	888	838	50	10.00%	84	972	171	54
2007	2,275	80.12%	75.39%	1,822	1,715	108	10.00%	171	1,994	111	(170)
2008	528	84.46%	80.25%	446	424	22	10.00%	42	488	8	(32)
2009	957	83.25%	78.90%	796	755	42	10.00%	75	872	(55)	(140)
2010	344	87.05%	83.33%	299	286	13	10.00%	29	328	(8)	(24)
2011	2,099	80.79%	76.18%	1,696	1,599	97	10.00%	160	1,856	463	220
2012	697	76.49%	71.39%	533	497	36	10.00%	50	583	8	(106)
2013	1,004	79.85%	75.10%	801	754	48	15.00%	113	914	(39)	(128)
2014	738	79.51%	74.73%	587	552	35	15.00%	83	670	52	(17)
2015	428	87.89%	84.22%	376	360	16	15.00%	54	430	237	240
2016	1,373	79.72%	74.94%	1,095	1,029	66	15.00%	154	1,249	388	264
2017	1,638	80.72%	76.06%	1,322	1,246	76	15.00%	187	1,509	189	60
2018	713	79.24%	74.32%	565	530	35	15.00%	79	644	(5)	(74)
2019	250	71.09%	65.33%	178	163	14	15.00%	25	202	(352)	(400)
2020	1,140	79.99%	75.23%	912	857	54	15.00%	129	1,040	479	379
2021	1,198	80.15%	75.40%	960	903	57	15.00%	135	1,096	467	365
2022	952	80.27%	75.58%	764	720	45	15.00%	108	872	952	872
Total	28,088	82.42%	78.00%	23,151	21,909	1,242	11.62%	2,547	25,697	3,372	981

Notes:
 (2) - PE Exhibit 1, Column 9
 (5) & (6) - PE Appendix C, Column 10
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 3

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)	(4)	(5)=(2)*(3)	(6)=(2)*(4)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Increasing the Maximum Permanent Impairment											
2004 & Prior	339	98.25%	98.02%	333	333	1	10.00%	33	367	339	367
2005	-	98.25%	98.02%	-	-	-	10.00%	-	-	-	-
2006	-	98.25%	98.02%	-	-	-	10.00%	-	-	-	-
2007	-	98.25%	98.02%	-	-	-	10.00%	-	-	-	-
2008	-	96.97%	96.57%	-	-	-	10.00%	-	-	-	-
2009	275	95.60%	95.02%	263	262	2	10.00%	26	289	275	289
2010	95	94.07%	93.29%	89	88	1	10.00%	9	98	95	98
2011	91	92.52%	91.55%	84	83	1	10.00%	8	92	91	92
2012	91	90.98%	89.83%	83	82	1	10.00%	8	91	91	91
2013	95	89.46%	88.14%	85	84	1	10.00%	8	94	95	94
2014	209	88.40%	86.97%	184	181	3	10.00%	18	203	209	203
2015	177	88.31%	86.88%	156	153	3	10.00%	15	171	177	171
2016	339	88.33%	86.91%	300	295	5	10.00%	29	329	339	329
2017	194	88.41%	87.01%	172	169	3	10.00%	17	189	194	189
2018	99	89.79%	88.55%	89	88	1	10.00%	9	98	99	98
2019	194	93.28%	92.46%	181	180	2	10.00%	18	199	154	159
2020	308	94.24%	93.52%	290	288	2	10.00%	29	319	308	319
2021	583	93.10%	92.23%	543	538	5	10.00%	54	597	583	597
2022	972	92.57%	91.63%	900	891	9	10.00%	89	989	972	989
Total	4,063	92.39%	91.44%	3,754	3,715	39	10.00%	371	4,125	4,023	4,085

Notes:
 (2) - PE Exhibit 1, Column 9
 (3) - Exhibit 8, Sheet 7, Column 3
 (4) - Exhibit 8, Sheet 7, Column 4
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Non-Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 4

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Change to Vehicle Purchase Policy											
2004 & Prior	6,028	86.54%	82.96%	5,216	5,001	216	10.00%	500	5,717	194	(117)
2005	420	85.36%	81.61%	358	343	16	10.00%	34	393	23	(4)
2006	1,406	82.60%	78.34%	1,161	1,102	60	10.00%	110	1,272	(43)	(177)
2007	1,146	81.72%	77.44%	936	887	49	10.00%	89	1,025	83	(37)
2008	815	85.66%	81.97%	698	668	30	10.00%	67	765	(62)	(112)
2009	679	89.09%	85.97%	605	584	21	10.00%	58	663	34	19
2010	677	82.78%	78.74%	560	533	27	10.00%	53	614	33	(31)
2011	334	87.96%	84.67%	294	283	11	10.00%	28	322	21	10
2012	652	78.70%	74.05%	513	483	30	10.00%	48	561	36	(54)
2013	-	100.00%	100.00%	-	-	-	15.00%	-	-	-	-
2014	595	84.20%	80.23%	501	478	24	15.00%	72	573	(75)	(98)
2015	223	83.99%	79.93%	187	178	9	15.00%	27	214	14	5
2016	1,280	79.57%	74.95%	1,018	959	59	15.00%	144	1,162	299	181
2017	1,015	86.89%	83.29%	882	846	36	15.00%	127	1,009	565	558
2018	1,012	87.46%	83.87%	885	849	36	15.00%	127	1,013	892	893
2019	1,177	80.60%	76.14%	949	896	52	15.00%	134	1,083	239	145
2020	1,101	85.01%	81.12%	936	893	43	15.00%	134	1,070	782	751
2021	1,054	87.80%	84.28%	925	888	37	15.00%	133	1,059	838	843
2022	1,028	88.87%	85.48%	913	878	35	15.00%	132	1,045	1,028	1,045
Total	20,640	84.98%	81.14%	17,539	16,747	792	12.05%	2,018	19,557	4,903	3,820

Notes:
 (2) - PE Exhibit 1, Column 9
 (5) - PE Appendix E, Column 12
 (6) - PE Appendix E, Column 13
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 5

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Death Benefits											
2004 & Prior	8,580	84.38%	80.37%	7,240	6,896	344	10.00%	690	7,929	8,580	7,929
2005	987	83.73%	79.64%	826	786	40	10.00%	79	905	987	905
2006	1,513	80.30%	75.75%	1,215	1,146	69	10.00%	115	1,330	1,513	1,330
2007	1,332	80.07%	75.53%	1,067	1,006	60	10.00%	101	1,167	1,332	1,167
2008	801	83.45%	79.22%	668	635	34	10.00%	63	732	801	732
2009	885	83.66%	79.50%	741	704	37	10.00%	70	811	885	811
2010	799	78.95%	74.21%	631	593	38	10.00%	59	690	799	690
2011	946	80.37%	75.76%	760	716	44	10.00%	72	832	946	832
2012	646	79.17%	74.60%	511	482	30	10.00%	48	559	646	559
2013	694	80.99%	76.52%	562	531	31	10.00%	53	615	694	615
2014	865	81.39%	76.95%	704	666	38	10.00%	67	770	865	770
2015	886	84.03%	79.99%	744	708	36	10.00%	71	815	886	815
2016	1,181	78.64%	73.92%	929	873	56	10.00%	87	1,016	1,181	1,016
2017	1,138	80.36%	75.86%	914	863	51	10.00%	86	1,001	1,138	1,001
2018	772	81.08%	76.76%	626	592	33	10.00%	59	685	772	685
2019	833	75.64%	70.42%	630	587	43	10.00%	59	689	833	689
2020	1,066	75.99%	70.87%	810	756	55	10.00%	76	886	1,066	886
2021	1,115	80.01%	75.49%	892	841	50	10.00%	84	976	1,115	976
2022	1,266	79.98%	75.47%	1,013	955	57	10.00%	96	1,108	1,266	1,108
Total	26,305	81.67%	77.31%	21,483	20,336	1,147	10.00%	2,034	23,517	26,305	23,517

Notes:
 (2) - PE Exhibit 1, Column 9
 (5) - PE Appendix F, Column 12
 (6) - PE Appendix F, Column 13
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Non-Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 6

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Annual Spending Allowance											
2004 & Prior	1,734	86.28%	82.40%	1,496	1,429	67	10.00%	143	1,639	(192)	(287)
2005	152	85.55%	81.54%	130	124	6	10.00%	12	142	(76)	(86)
2006	385	82.79%	78.37%	319	302	17	10.00%	30	349	10	(26)
2007	302	81.49%	76.94%	246	233	14	10.00%	23	270	(154)	(187)
2008	168	85.30%	81.28%	143	137	7	10.00%	14	157	(27)	(38)
2009	200	85.11%	81.06%	171	162	8	10.00%	16	187	37	23
2010	191	81.48%	76.93%	156	147	9	10.00%	15	171	(66)	(87)
2011	224	82.95%	78.61%	186	176	10	10.00%	18	204	(7)	(28)
2012	164	80.40%	75.76%	132	124	8	10.00%	12	144	104	84
2013	160	82.79%	78.46%	133	126	7	15.00%	19	152	118	109
2014	144	83.60%	79.33%	121	114	6	15.00%	17	138	21	15
2015	179	85.05%	80.98%	153	145	7	15.00%	22	174	73	68
2016	303	81.34%	76.78%	246	233	14	15.00%	35	281	226	204
2017	278	81.68%	77.17%	227	215	13	15.00%	32	260	103	84
2018	179	82.43%	78.06%	148	140	8	15.00%	21	169	61	50
2019	193	78.45%	74.35%	152	144	8	15.00%	22	173	35	15
2020	280	79.97%	75.20%	224	211	13	15.00%	32	256	157	133
2021	267	81.96%	77.51%	219	207	12	15.00%	31	250	267	250
2022	274	82.02%	77.57%	225	213	12	15.00%	32	257	274	257
Total	5,781	83.48%	79.24%	4,826	4,581	245	11.91%	545	5,372	962	553

Notes: (2) - PE Exhibit 1, Column 9
 (5) & (6) - PE Appendix G, Column 10
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 7

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)	(9)=(6)*(8)	(10)	(11)	(12)
PIPP Enhancement: Caregiver Death Benefit											
2004 & Prior	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2005	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2006	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2007	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2008	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2009	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2010	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2011	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2012	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2013	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2014	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2015	749	101.03%	99.82%	757	748	9	10.00%	75	832	(12)	70
2016	-	100.00%	100.00%	-	-	-	10.00%	-	-	-	-
2017	861	99.99%	98.42%	861	847	13	10.00%	85	946	0	85
2018	473	98.20%	96.45%	465	456	8	10.00%	46	510	(5)	33
2019	48	101.76%	101.36%	49	49	0	10.00%	5	54	(1)	5
2020	755	99.28%	97.45%	749	736	14	10.00%	74	823	459	527
2021	914	98.82%	96.77%	903	884	19	10.00%	88	991	841	919
2022	1,090	99.22%	97.43%	1,081	1,062	20	10.00%	106	1,187	1,090	1,187
Total	4,890	99.49%	97.80%	4,865	4,782	83	10.00%	478	5,343	2,371	2,825

Notes:
 (2) - PE Exhibit 1, Column 9
 (5) - PE Appendix H, Column 12
 (6) - PE Appendix H, Column 13
 (8) - Exhibit 7, Sheet 1, Column 9 for Accident Benefits - Other (Non-Indexed)
 (10) = (6)+(7)+(9)
 (11) - PE Exhibit 1, Column 6
 (12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023
(\$000)

PE Exhibit 2
Sheet 8

Insurance Year	Estimated Unpaid Claims	Discount Factor		Discounted Unpaid		Interest PFAD	Claims Devt. Margin	Claims Devt. PFAD	CIA Rules Unpaid Claims	Selected IBNR	Required IBNR
		With Margin	Without Margin	With Margin	Without Margin						
(1)	(2)	(3)=(5)/(2)	(4)=(6)/(2)	(5)	(6)	(7)=(5)-(6)	(8)=(9)/(6)	(9)	(10)	(11)	(12)
PIPP Enhancement: Total											
2004 & Prior	32,631	85.89%	82.06%	28,028	26,777	1,251	10.00%	2,678	30,705	9,341	7,415
2005	4,346	85.29%	81.30%	3,706	3,533	173	10.00%	353	4,060	1,108	822
2006	5,783	82.10%	77.68%	4,748	4,492	256	10.00%	449	5,197	1,674	1,088
2007	6,197	81.54%	77.09%	5,053	4,778	276	10.00%	478	5,531	1,379	713
2008	3,017	85.09%	81.11%	2,567	2,447	120	10.00%	245	2,812	731	526
2009	4,480	85.69%	81.91%	3,839	3,669	169	10.00%	367	4,206	1,766	1,493
2010	2,570	82.86%	78.71%	2,129	2,023	107	10.00%	202	2,332	856	618
2011	4,353	82.20%	77.85%	3,578	3,389	189	10.00%	339	3,917	1,491	1,055
2012	2,865	80.14%	75.63%	2,296	2,167	129	10.00%	217	2,513	876	524
2013	2,971	81.66%	77.24%	2,426	2,295	131	11.92%	273	2,700	1,310	1,038
2014	2,865	82.50%	78.33%	2,364	2,244	119	12.55%	282	2,645	1,385	1,165
2015	2,983	89.20%	86.05%	2,661	2,567	94	11.33%	291	2,951	1,715	1,683
2016	5,852	80.93%	76.50%	4,736	4,477	259	12.48%	559	5,295	2,845	2,288
2017	7,374	84.43%	80.43%	6,225	5,931	295	11.94%	708	6,934	3,330	2,890
2018	3,894	84.82%	80.94%	3,303	3,151	151	12.41%	391	3,694	1,953	1,753
2019	2,753	79.48%	75.04%	2,188	2,066	122	12.91%	267	2,455	910	611
2020	6,370	83.19%	79.06%	5,299	5,036	264	11.95%	602	5,901	3,263	2,794
2021	6,772	85.28%	81.50%	5,775	5,519	256	12.95%	715	6,490	4,703	4,421
2022	7,587	86.54%	83.06%	6,566	6,302	265	12.69%	800	7,366	7,555	7,334
Total	115,663	84.29%	80.29%	97,488	92,863	4,626	11.00%	10,215	107,703	48,191	40,231

Notes: (2) - PE Exhibit 1, Column 9
(5), (6) & (9) - Total All PIPP Enhancements
(10) = (6)+(7)+(9)
(11) - PE Exhibit 1, Column 6
(12) = (11)+[(10)-(2)]

Manitoba Public Insurance
Automobile Insurance Division
Calculation of Equity in Direct & Agency Unearned Premium
As of March 31, 2023
(\$000)

PE Exhibit 3
Sheet 1

Insurance Year	Estimated Ultimate Claims							Restated Earned Premium	Estimated Ultimate Loss Ratio						
	Incr WI to IAW	Incr Max PC	Incr Max PI	Change Veh Pur	Death Benefits	Annual Spending	C/Giver DB		Incr WI to IAW	Incr Max PC	Incr Max PI	Change Veh Pur	Death Benefits	Annual Spending	C/Giver DB
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2004 & Prior	11,687	14,673	12,443	8,497	8,580	1,918	-								
2005	2,766	1,459	1,381	530	987	161	-	864,485	0.32%	0.17%	0.16%	0.06%	0.11%	0.02%	0.00%
2006	2,354	1,432	1,535	1,956	1,513	400	-	874,152	0.27%	0.16%	0.18%	0.22%	0.17%	0.05%	0.00%
2007	1,988	2,841	1,391	1,466	1,332	362	-	888,135	0.22%	0.32%	0.16%	0.17%	0.15%	0.04%	0.00%
2008	1,258	923	1,353	980	801	197	176	908,956	0.14%	0.10%	0.15%	0.11%	0.09%	0.02%	0.02%
2009	2,193	1,311	1,010	906	885	208	-	928,286	0.24%	0.14%	0.11%	0.10%	0.10%	0.02%	0.00%
2010	717	543	948	904	799	227	-	946,991	0.08%	0.06%	0.10%	0.10%	0.08%	0.02%	0.00%
2011	876	2,635	1,087	527	946	251	-	953,813	0.09%	0.28%	0.11%	0.06%	0.10%	0.03%	0.00%
2012	1,005	893	822	827	646	167	-	922,515	0.11%	0.10%	0.09%	0.09%	0.07%	0.02%	0.00%
2013	1,316	1,256	953	-	694	165	-	921,764	0.14%	0.14%	0.10%	0.00%	0.08%	0.02%	0.00%
2014	314	812	939	774	865	153	-	949,205	0.03%	0.09%	0.10%	0.08%	0.09%	0.02%	0.00%
2015	350	490	795	304	886	184	1,756	993,698	0.04%	0.05%	0.08%	0.03%	0.09%	0.02%	0.18%
2016	1,897	1,660	1,696	1,452	1,181	311	-	1,033,297	0.18%	0.16%	0.16%	0.14%	0.11%	0.03%	0.00%
2017	2,508	1,667	1,382	1,065	1,138	295	1,493	1,079,631	0.23%	0.15%	0.13%	0.10%	0.11%	0.03%	0.14%
2018	715	752	792	1,062	772	184	683	1,135,889	0.06%	0.07%	0.07%	0.09%	0.07%	0.02%	0.06%
2019	66	287	736	1,268	833	197	224	1,166,819	0.01%	0.02%	0.06%	0.11%	0.07%	0.02%	0.02%
2020	1,909	1,175	1,015	1,147	1,066	293	894	1,177,995	0.16%	0.10%	0.09%	0.10%	0.09%	0.02%	0.08%
2021	1,723	1,208	1,061	1,054	1,115	267	981	1,197,418	0.14%	0.10%	0.09%	0.09%	0.09%	0.02%	0.08%
2022	2,024	952	1,071	1,028	1,266	274	1,090	1,126,492	0.18%	0.08%	0.10%	0.09%	0.11%	0.02%	0.10%
Total	37,665	36,967	32,409	25,743	26,305	6,216	7,297	18,069,540	0.21%	0.20%	0.18%	0.14%	0.15%	0.03%	0.04%
								Selected Ultimate Loss Ratio (a):	0.12%	0.08%	0.10%	0.09%	0.09%	0.02%	0.08%
								Discount Factor (Including Interest & Claims Devt PFAD) (b):	0.9512	0.9161	1.0173	1.0170	0.8753	0.9366	1.0896
								Discounted Ultimate Loss Ratio (c):	0.11%	0.07%	0.10%	0.09%	0.08%	0.02%	0.09%
								Total Discounted Ultimate Loss Ratio (d):							0.57%
								Direct & Agency Unearned Premium as of March 31, 2022 (e):							585,267
								Expected Claims (Including External Adjustment Expenses) (f):							3,309

Notes:
 (2) to (7) - PE Exhibit 1, Column 7
 (8) - From Appendix F, Page 14, Column 3
 (a) - Selected per the 10-Year Volume Weighted Hi-Lo Average
 (b) - PE Exhibit 2, [Column 10 / Column 2] for 2022
 (c) = (a) * (b)
 (e) - Exhibit 6, Sheet 1
 (f) = (d) * (e)

Manitoba Public Insurance
Automobile Insurance Division
Estimate of Liabilities Including Provision for Adverse Deviation (Direct & Agency)
As of March 31, 2023

PE Exhibit 4
Sheet 1

PIPP Enhancement: Quality of Life Enhancements

247	Catastrophic claimants (PE Appendix G, Column 8)
62	Paneled; Assume 25% of catastrophic claimants
185	Remaining catastrophic claimants

I) Cottage Modifications

35,000	Manitobans with cottages
1,200,000	Total Manitobans
2.92%	Percent of Manitobans with cottages
5	Expected number of cottages requiring modifications; 185 x 2.92%
\$ 150,000	Expected cost per cottage
\$ 750,000	Estimated Ultimate Claims - Cottage Modifications

II) Attendant Care (for Work)

	Per claimant cost:
\$ 20	Cost per hour
8	Hours per day (above PCA and Home Care)
240	Expected number of working days per year
\$ 38,400	Total per claimant cost per year
20	Expected working life (in years)
\$ 768,000	Total expected per claimant cost
0	Expected number of claimants utilizing benefit
\$ -	Estimated Ultimate Claims - Attendant Care

III) Activity Cost

	Per claimant cost:
\$ 2,000	Total per claimant cost per year
25	Expected life (in years)
\$ 50,000	Total expected per claimant cost
46	Expected number of claimants utilizing benefit; 185 x 25.00%
\$ 2,300,000	Estimated Ultimate Claims - Activity Cost

\$ 3,050,000	Estimated Ultimate Claims - All Cost [(I) + (II) + (III)]	(a)
\$ 915,183	Paid	(b)
\$ 419,518	Case Reserves	(c)
\$ 1,334,701	Reported	(d)
\$ 1,715,299	Estimated IBNR [(a) - (d)]	(e)
\$ 2,134,817	Estimated Unpaid Claims [(c) + (e)]	(f)
	82.42% Discount Factor With Margin [PE Exhibit 2, Sheet 2, Column 3]	(g)
	78.00% Discount Factor Without Margin [PE Exhibit 2, Sheet 2, Column 4]	(h)
\$ 1,759,564	Discounted Unpaid With Margin [(f) x (g)]	(i)
\$ 1,665,193	Discounted Unpaid Without Margin [(f) x (h)]	(j)
\$ 94,370	Interest PFAD [(i) - (j)]	(k)
	11.62% Claims Development Margin [PE Exhibit 2, Sheet 2, Column 8]	(l)
\$ 193,554	Claims Development PFAD [(j) x (l)]	(m)
\$ 1,953,118	CIA Rules Unpaid Claims [(j) + (k) + (m)]	(n)
\$ 1,533,600	Required IBNR [(n) - (f) + (e)]	(o)

(b), (c), & (d) - From MPI Fiscal Year Summaries

PE Appendix A

PIPP Enhancement: Increasing the Weekly Indemnity to IAW

Estimated Unpaid Claims - Undiscounted

Insurance Year	CAT Claims = Yes				CAT Claims = Potential				All CAT Claims			All CAT Claims - Selected		
	Count	IRI	RIB	IRI & RIB	Count	IRI	RIB	IRI & RIB	Count	IRI & RIB	Average	Count	IRI & RIB	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2004 & Prior	32	3,632,303	1,927,643	5,559,946	0	-	-	-	32	5,559,946	173,748	32	5,559,946	173,748
2005	6	1,400,071	344,265	1,744,336	0	-	-	-	6	1,744,336	290,723	6	1,744,336	290,723
2006	5	1,100,474	260,389	1,360,864	0	-	-	-	5	1,360,864	272,173	5	1,360,864	272,173
2007	5	844,011	298,621	1,142,632	0	-	-	-	5	1,142,632	228,526	5	1,142,632	228,526
2008	3	513,402	191,934	705,336	0	-	-	-	3	705,336	235,112	3	705,336	235,112
2009	4	654,562	249,719	904,281	2	519,766	58,892	578,658	6	1,482,939	247,156	6	1,482,939	247,156
2010	2	405,233	59,139	464,372	0	-	-	-	2	464,372	232,186	2	464,372	232,186
2011	3	544,791	113,793	658,584	0	-	-	-	3	658,584	219,528	3	658,584	219,528
2012	2	523,242	92,451	615,693	0	-	-	-	2	615,693	307,846	2	615,693	307,846
2013	3	459,498	128,836	588,335	1	363,334	66,527	429,861	4	1,018,196	254,549	4	1,018,196	254,549
2014	0	-	-	-	1	273,668	39,837	313,505	1	313,505	313,505	1	313,505	313,505
2015	0	-	-	-	1	260,679	80,184	340,863	1	340,863	340,863	1	340,863	340,863
2016	3	819,386	200,737	1,020,123	1	268,182	87,746	355,928	4	1,376,051	344,013	4	1,376,051	344,013
2017	5	1,247,123	250,476	1,497,599	2	662,886	88,002	750,888	7	2,248,486	321,212	7	2,248,486	321,212
2018	1	446,144	65,500	511,644	1	-	133,685	133,685	2	645,329	322,665	2	645,329	322,665
2019	1	47,146	9,350	56,496	0	-	-	-	1	56,496	56,496	1	56,496	56,496
2020	4	1,476,616	243,535	1,720,151	0	-	-	-	4	1,720,151	430,038	4	1,720,151	430,038
2021	3	940,986	127,020	1,068,006	0	-	-	-	3	1,068,006	356,002	5	1,641,159	328,232
2022	0	-	-	-	0	-	-	-	0	-	-	7	2,006,038	286,577
Total	82	15,054,989	4,563,408	19,618,397	9	2,348,515	554,873	2,903,388	91	22,521,784	247,492	100	25,100,976	251,010

Notes:

(13) for 2019 & After: Judgmentally selected per the more recent maximum observed weighted by year - 2019, 2020, & 2021 at 50%, 75%, & 100% respectively

(14) for 2019 & After: [(13) - (10)] * F + (11) where F = [Sum (11) for 2009 to 2018] / [Sum (10) for 2009 to 2018]

PE Appendix A

PIPP Enhancement: Increasing the Weekly Indemnity to IAW

Estimated Unpaid Claims - Discounted with Margin

Insurance Year	CAT Claims = Yes				CAT Claims = Potential				All CAT Claims			All CAT Claims - Selected		
	Count	IRI	RIB	IRI & RIB	Count	IRI	RIB	IRI & RIB	Count	IRI & RIB	Average	Count	IRI & RIB	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2004 & Prior	32	3,325,158	1,554,578	4,879,737	0	-	-	-	32	4,879,737	152,492	32	4,879,737	152,492
2005	6	1,260,834	227,042	1,487,875	0	-	-	-	6	1,487,875	247,979	6	1,487,875	247,979
2006	5	970,042	170,610	1,140,652	0	-	-	-	5	1,140,652	228,130	5	1,140,652	228,130
2007	5	759,125	222,821	981,946	0	-	-	-	5	981,946	196,389	5	981,946	196,389
2008	3	459,918	151,736	611,654	0	-	-	-	3	611,654	203,885	3	611,654	203,885
2009	4	592,656	190,142	782,799	2	446,930	33,261	480,191	6	1,262,990	210,498	6	1,262,990	210,498
2010	2	358,040	36,189	394,229	0	-	-	-	2	394,229	197,115	2	394,229	197,115
2011	3	476,738	81,145	557,883	0	-	-	-	3	557,883	185,961	3	557,883	185,961
2012	2	462,981	61,227	524,208	0	-	-	-	2	524,208	262,104	2	524,208	262,104
2013	3	401,475	101,019	502,495	1	306,506	36,011	342,517	4	845,012	211,253	4	845,012	211,253
2014	0	-	-	-	1	241,920	24,409	266,328	1	266,328	266,328	1	266,328	266,328
2015	0	-	-	-	1	235,427	51,913	287,341	1	287,341	287,341	1	287,341	287,341
2016	3	717,596	128,823	846,419	1	243,828	57,772	301,600	4	1,148,019	287,005	4	1,148,019	287,005
2017	5	1,084,511	158,485	1,242,996	2	556,710	46,456	603,166	7	1,846,162	263,737	7	1,846,162	263,737
2018	1	365,505	32,725	398,230	1	-	127,269	127,269	2	525,499	262,750	2	525,499	262,750
2019	1	42,889	6,209	49,098	0	-	-	-	1	49,098	49,098	1	49,098	49,098
2020	4	1,244,852	133,193	1,378,045	0	-	-	-	4	1,378,045	344,511	4	1,378,045	344,511
2021	3	786,458	68,781	855,240	0	-	-	-	3	855,240	285,080	5	1,332,557	266,511
2022	0	-	-	-	0	-	-	-	0	-	-	7	1,670,610	238,659
Total	82	13,308,780	3,324,725	16,633,505	9	2,031,321	377,092	2,408,413	91	19,041,918	209,252	100	21,189,844	211,898

Notes:

(13) for 2019 & After: Judgmentally selected per the more recent maximum observed weighted by year - 2019, 2020, & 2021 at 50%, 75%, & 100% respectively

(14) for 2019 & After: [(13) - (10)] * F + (11) where F = [Sum (11) for 2009 to 2018] / [Sum (10) for 2009 to 2018]

PE Appendix A

PIPP Enhancement: Increasing the Weekly Indemnity to IAW

Estimated Unpaid Claims - Discounted without Margin

Insurance Year	CAT Claims = Yes				CAT Claims = Potential				All CAT Claims			All CAT Claims - Selected		
	Count	IRI	RIB	IRI & RIB	Count	IRI	RIB	IRI & RIB	Count	IRI & RIB	Average	Count	IRI & RIB	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2004 & Prior	32	3,214,153	1,462,322	4,676,475	0	-	-	-	32	4,676,475	146,140	32	4,676,475	146,140
2005	6	1,214,152	202,844	1,416,996	0	-	-	-	6	1,416,996	236,166	6	1,416,996	236,166
2006	5	929,509	152,826	1,082,335	0	-	-	-	5	1,082,335	216,467	5	1,082,335	216,467
2007	5	731,200	205,770	936,970	0	-	-	-	5	936,970	187,394	5	936,970	187,394
2008	3	442,527	142,039	584,566	0	-	-	-	3	584,566	194,855	3	584,566	194,855
2009	4	571,998	176,405	748,403	2	426,003	28,585	454,587	6	1,202,990	200,498	6	1,202,990	200,498
2010	2	343,262	31,705	374,968	0	-	-	-	2	374,968	187,484	2	374,968	187,484
2011	3	456,514	74,223	530,737	0	-	-	-	3	530,737	176,912	3	530,737	176,912
2012	2	444,297	54,827	499,124	0	-	-	-	2	499,124	249,562	2	499,124	249,562
2013	3	384,334	94,705	479,039	1	290,889	30,649	321,538	4	800,578	200,144	4	800,578	200,144
2014	0	-	-	-	1	231,960	21,391	253,351	1	253,351	253,351	1	253,351	253,351
2015	0	-	-	-	1	226,760	46,123	272,884	1	272,884	272,884	1	272,884	272,884
2016	3	686,986	114,640	801,626	1	235,204	51,536	286,741	4	1,088,367	272,092	4	1,088,367	272,092
2017	5	1,036,598	140,485	1,177,083	2	527,957	39,299	567,256	7	1,744,340	249,191	7	1,744,340	249,191
2018	1	344,787	27,320	372,107	1	-	124,164	124,164	2	496,270	248,135	2	496,270	248,135
2019	1	41,383	5,548	46,931	0	-	-	-	1	46,931	46,931	1	46,931	46,931
2020	4	1,181,691	113,797	1,295,489	0	-	-	-	4	1,295,489	323,872	4	1,295,489	323,872
2021	3	745,502	58,747	804,249	0	-	-	-	3	804,249	268,083	5	1,256,660	251,332
2022	0	-	-	-	0	-	-	-	0	-	-	7	1,583,439	226,206
Total	82	12,768,893	3,058,205	15,827,098	9	1,938,774	341,747	2,280,521	91	18,107,619	198,985	100	20,143,468	201,435

Notes:

(13) for 2019 & After: Judgmentally selected per the more recent maximum observed weighted by year - 2019, 2020, & 2021 at 50%, 75%, & 100% respectively

(14) for 2019 & After: [(13) - (10)] * F + (11) where F = [Sum (11) for 2009 to 2018] / [Sum (10) for 2009 to 2018]

PE Appendix B

PIPP Enhancement: Increasing the Weekly Indemnity to IAW

Adjustment to 2009 IAW for Claimants at Older IAW Levels

Estimated Unpaid Claims

Insurance Year	Count	Undiscounted			Discounted with Margin			Discounted Without Margin		
		IRI	RIB	IRI & RIB	IRI	RIB	IRI & RIB	IRI	RIB	IRI & RIB
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2004 & Prior	23	590,719	127,065	717,784	530,908	84,198	615,106	510,973	75,307	586,280
2005	2	42,401	6,474	48,875	37,519	4,006	41,524	35,984	3,520	39,504
2006	3	25,047	3,815	28,862	21,525	2,162	23,687	20,512	1,860	22,372
2007	0	-	-	-	-	-	-	-	-	-
2008	0	-	-	-	-	-	-	-	-	-
2009	0	-	-	-	-	-	-	-	-	-
2010	0	-	-	-	-	-	-	-	-	-
2011	0	-	-	-	-	-	-	-	-	-
2012	0	-	-	-	-	-	-	-	-	-
2013	0	-	-	-	-	-	-	-	-	-
2014	0	-	-	-	-	-	-	-	-	-
2015	0	-	-	-	-	-	-	-	-	-
2016	0	-	-	-	-	-	-	-	-	-
2017	0	-	-	-	-	-	-	-	-	-
2018	0	-	-	-	-	-	-	-	-	-
2019	0	-	-	-	-	-	-	-	-	-
2020	0	-	-	-	-	-	-	-	-	-
2021	0	-	-	-	-	-	-	-	-	-
2022	0	-	-	-	-	-	-	-	-	-
Total	28	658,167	137,354	795,521	589,951	90,365	680,316	567,469	80,687	648,155

PE Appendix C

PIPP Enhancement: Increasing the Maximum Personal Care

Estimated Unpaid Claims - Undiscounted

Insurance Year	CAT Claims = Yes		CAT Claims = Potential		All CAT Claims			All CAT Claims - Selected		
	Count	PC	Count	PC	Count	PC	Average	Count	PC	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2004 & Prior	46	9,672,380	0	-	46	9,672,380	210,269	46	9,672,380	210,269
2005	5	994,156	0	-	5	994,156	198,831	5	994,156	198,831
2006	4	1,089,472	0	-	4	1,089,472	272,368	4	1,089,472	272,368
2007	9	2,274,593	0	-	9	2,274,593	252,733	9	2,274,593	252,733
2008	2	527,941	0	-	2	527,941	263,971	2	527,941	263,971
2009	4	956,561	0	-	4	956,561	239,140	4	956,561	239,140
2010	2	343,589	0	-	2	343,589	171,795	2	343,589	171,795
2011	7	1,669,023	2	430,239	9	2,099,261	233,251	9	2,099,261	233,251
2012	2	696,612	0	-	2	696,612	348,306	2	696,612	348,306
2013	4	1,003,626	0	-	4	1,003,626	250,906	4	1,003,626	250,906
2014	3	738,299	0	-	3	738,299	246,100	3	738,299	246,100
2015	3	427,667	0	-	3	427,667	142,556	3	427,667	142,556
2016	4	1,028,434	2	344,734	6	1,373,168	228,861	6	1,373,168	228,861
2017	7	1,638,062	0	-	7	1,638,062	234,009	7	1,638,062	234,009
2018	2	712,831	0	-	2	712,831	356,415	2	712,831	356,415
2019	1	250,203	0	-	1	250,203	250,203	1	250,203	250,203
2020	2	663,478	0	-	2	663,478	331,739	4	1,139,546	284,886
2021	3	959,967	0	-	3	959,967	319,989	4	1,198,001	299,500
2022	0	-	0	-	0	-	-	4	952,135	238,034
Total	110	25,646,895	4	774,973	114	26,421,868	231,771	121	28,088,105	232,133

Notes:

(9) for 2020 & After: Greater of the average for 2010 to 2019 or column (6)

(10) for 2020 & After: [(9) - (6)] * F + (7) where F = [Sum (7) for 2010 to 2019] / [Sum (6) for 2010 to 2019]

PE Appendix C

PIPP Enhancement: Increasing the Maximum Personal Care

Estimated Unpaid Claims - Discounted with Margin

Insurance Year	CAT Claims = Yes		CAT Claims = Potential		All CAT Claims			All CAT Claims - Selected		
	Count	PC	Count	PC	Count	PC	Average	Count	PC	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2004 & Prior	46	8,247,030	0	-	46	8,247,030	179,283	46	8,247,030	179,283
2005	5	862,682	0	-	5	862,682	172,536	5	862,682	172,536
2006	4	888,499	0	-	4	888,499	222,125	4	888,499	222,125
2007	9	1,822,354	0	-	9	1,822,354	202,484	9	1,822,354	202,484
2008	2	445,884	0	-	2	445,884	222,942	2	445,884	222,942
2009	4	796,333	0	-	4	796,333	199,083	4	796,333	199,083
2010	2	299,103	0	-	2	299,103	149,552	2	299,103	149,552
2011	7	1,376,912	2	319,132	9	1,696,043	188,449	9	1,696,043	188,449
2012	2	532,815	0	-	2	532,815	266,408	2	532,815	266,408
2013	4	801,392	0	-	4	801,392	200,348	4	801,392	200,348
2014	3	587,052	0	-	3	587,052	195,684	3	587,052	195,684
2015	3	375,893	0	-	3	375,893	125,298	3	375,893	125,298
2016	4	823,106	2	271,651	6	1,094,758	182,460	6	1,094,758	182,460
2017	7	1,322,317	0	-	7	1,322,317	188,902	7	1,322,317	188,902
2018	2	564,819	0	-	2	564,819	282,410	2	564,819	282,410
2019	1	177,878	0	-	1	177,878	177,878	1	177,878	177,878
2020	2	529,371	0	-	2	529,371	264,686	4	911,529	227,882
2021	3	769,063	0	-	3	769,063	256,354	4	960,142	240,036
2022	0	-	0	-	0	-	-	4	764,315	191,079
Total	110	21,222,506	4	590,783	114	21,813,289	191,345	121	23,150,840	191,329

Notes:

(9) for 2020 & After: Greater of the average for 2010 to 2019 or column (6)

(10) for 2020 & After: [(9) - (6)] * F + (7) where F = [Sum (7) for 2010 to 2019] / [Sum (6) for 2010 to 2019]

PE Appendix C

PIPP Enhancement: Increasing the Maximum Personal Care

Estimated Unpaid Claims - Discounted without Margin

Insurance Year	CAT Claims = Yes		CAT Claims = Potential		All CAT Claims			All CAT Claims - Selected		
	Count	PC	Count	PC	Count	PC	Average	Count	PC	Average
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2004 & Prior	46	7,856,496	0	-	46	7,856,496	170,793	46	7,856,496	170,793
2005	5	824,486	0	-	5	824,486	164,897	5	824,486	164,897
2006	4	838,156	0	-	4	838,156	209,539	4	838,156	209,539
2007	9	1,714,836	0	-	9	1,714,836	190,537	9	1,714,836	190,537
2008	2	423,659	0	-	2	423,659	211,829	2	423,659	211,829
2009	4	754,701	0	-	4	754,701	188,675	4	754,701	188,675
2010	2	286,318	0	-	2	286,318	143,159	2	286,318	143,159
2011	7	1,303,623	2	295,628	9	1,599,251	177,695	9	1,599,251	177,695
2012	2	497,306	0	-	2	497,306	248,653	2	497,306	248,653
2013	4	753,720	0	-	4	753,720	188,430	4	753,720	188,430
2014	3	551,727	0	-	3	551,727	183,909	3	551,727	183,909
2015	3	360,181	0	-	3	360,181	120,060	3	360,181	120,060
2016	4	774,311	2	254,697	6	1,029,008	171,501	6	1,029,008	171,501
2017	7	1,245,966	0	-	7	1,245,966	177,995	7	1,245,966	177,995
2018	2	529,755	0	-	2	529,755	264,878	2	529,755	264,878
2019	1	163,455	0	-	1	163,455	163,455	1	163,455	163,455
2020	2	497,394	0	-	2	497,394	248,697	4	857,224	214,306
2021	3	723,374	0	-	3	723,374	241,125	4	903,290	225,822
2022	0	-	0	-	0	-	-	4	719,660	179,915
Total	110	20,099,465	4	550,325	114	20,649,790	181,139	121	21,909,196	181,068

Notes:

(9) for 2020 & After: Greater of the average for 2010 to 2019 or column (6)

(10) for 2020 & After: [(9) - (6)] * F + (7) where F = [Sum (7) for 2010 to 2019] / [Sum (6) for 2010 to 2019]

PE Appendix D

PIPP Enhancement: Increasing the Maximum Permanent Impairment

Estimated Ultimate Claims - Undiscounted

Insurance Year	CAT Claims = Yes			CAT Claims = Potential			All CAT Claims	
	Count	PI	Average	Selected Avg	Count	PI	Count	PI
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
2004 & Prior	107	12,103,758	113,119	113,119	3	339,358	110	12,443,116
2005	13	1,380,973	106,229	106,229	0	-	13	1,380,973
2006	15	1,534,789	102,319	102,319	0	-	15	1,534,789
2007	15	1,390,769	92,718	92,718	0	-	15	1,390,769
2008	15	1,353,248	90,217	90,217	0	-	15	1,353,248
2009	8	734,202	91,775	91,775	3	275,326	11	1,009,527
2010	9	853,017	94,780	94,780	1	94,780	10	947,797
2011	11	996,690	90,608	90,608	1	90,608	12	1,087,298
2012	8	730,714	91,339	91,339	1	91,339	9	822,054
2013	9	857,550	95,283	95,283	1	95,283	10	952,833
2014	7	729,953	104,279	104,279	2	208,558	9	938,512
2015	7	618,282	88,326	88,326	2	176,652	9	794,933
2016	12	1,357,087	113,091	113,091	3	339,272	15	1,696,359
2017	13	1,187,799	91,369	97,200	2	194,400	15	1,382,199
2018	8	694,629	86,829	97,200	1	97,200	9	791,829
2019	6	542,037	90,340	97,200	2	194,400	8	736,437
2020	7	722,911	103,273	97,200	3	291,600	10	1,014,511
2021	5	477,695	95,539	97,200	6	583,200	11	1,060,895
2022	1	98,692	98,692	97,200	10	972,000	11	1,070,692
Total	276	28,364,795			41	4,043,975	317	32,408,771

Notes:

(5): Prior to 2017 per column (4); 2017 to 2022 per the weighted average for 2013 to 2022

(7) = (5) * (6)

PE Appendix E

PIPP Enhancement: Change to Vehicle Purchase Policy

Estimated Unpaid Claims

Insurance Year	Head & Quad Claims				Other Claims				All Claims			
	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2004 & Prior	30	4,385,051	3,780,209	3,620,507	18	1,642,878	1,436,284	1,380,295	48	6,027,929	5,216,493	5,000,802
2005	0	-	-	-	4	419,769	358,299	342,572	4	419,769	358,299	342,572
2006	3	626,423	520,001	493,528	7	779,641	641,475	608,030	10	1,406,064	1,161,476	1,101,558
2007	4	813,719	661,109	626,007	3	331,891	275,032	261,167	7	1,145,610	936,142	887,174
2008	4	550,396	479,167	460,062	2	264,222	218,620	207,642	6	814,618	697,787	667,704
2009	3	526,842	464,245	446,838	2	152,190	140,695	136,958	5	679,032	604,940	583,797
2010	2	83,941	82,455	81,668	4	592,806	477,761	451,191	6	676,747	560,216	532,859
2011	2	204,333	188,843	183,739	1	129,605	104,898	99,019	3	333,937	293,741	282,758
2012	3	497,699	388,157	364,746	1	154,097	124,801	117,879	4	651,797	512,958	482,625
2013	0	-	-	-	0	-	-	-	0	-	-	-
2014	3	419,678	347,663	329,892	2	175,796	153,753	147,878	5	595,474	501,417	477,770
2015	1	-	-	-	2	222,953	187,265	178,196	3	222,953	187,265	178,196
2016	3	774,333	610,622	573,755	4	505,281	407,606	385,280	7	1,279,615	1,018,228	959,035
2017	3	664,386	575,505	551,456	3	350,867	306,606	294,167	6	1,015,253	882,111	845,623
2018	3	600,000	541,110	522,154	3	412,104	344,111	326,695	6	1,012,104	885,221	848,849
2019	3	798,782	628,875	591,560	3	378,372	319,862	304,744	6	1,177,154	948,737	896,303
2020	3	682,001	583,985	558,526	3	418,624	351,601	334,250	6	1,100,625	935,586	892,776
2021	3	626,457	553,290	532,092	3	427,500	372,076	356,173	6	1,053,957	925,365	888,266
2022	3	600,000	541,110	522,154	3	427,500	372,076	356,173	6	1,027,500	913,186	878,328
Total	76	12,854,041	10,946,347	10,458,685	68	7,786,097	6,592,822	6,288,308	144	20,640,138	17,539,168	16,746,993

Notes:

Head & Quad Claimants have higher average entitlement due to greater severity of injury

The maximum of this benefit will be indexed annually effective April 1, 2023.

PE Appendix F

PIPP Enhancement: Death Benefits

Estimated IBNR

Insurance Year	CAT Claims = Yes				CAT Claims = Potential				All CAT Claims			
	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2004 & Prior	82	8,267,906	6,981,271	6,650,338	3	312,300	258,600	245,400	85	8,580,206	7,239,871	6,895,738
2005	9	986,862	826,335	785,888	0	-	-	-	9	986,862	826,335	785,888
2006	13	1,513,038	1,215,033	1,146,075	0	-	-	-	13	1,513,038	1,215,033	1,146,075
2007	12	1,332,100	1,066,591	1,006,093	0	-	-	-	12	1,332,100	1,066,591	1,006,093
2008	8	801,106	668,486	634,663	0	-	-	-	8	801,106	668,486	634,663
2009	6	573,087	482,138	458,502	3	312,300	258,600	245,400	9	885,387	740,738	703,902
2010	6	694,777	544,553	511,014	1	104,100	86,200	81,800	7	798,877	630,753	592,814
2011	8	841,638	673,903	634,684	1	104,100	86,200	81,800	9	945,738	760,103	716,484
2012	5	541,687	425,062	399,950	1	104,100	86,200	81,800	6	645,787	511,262	481,750
2013	6	589,814	475,790	449,204	1	104,100	86,200	81,800	7	693,914	561,990	531,004
2014	4	643,677	524,684	496,103	2	221,200	179,200	169,400	6	864,877	703,884	665,503
2015	6	664,292	564,876	538,870	2	221,400	179,400	169,600	8	885,692	744,276	708,470
2016	9	858,271	667,782	626,633	3	323,100	261,300	246,600	12	1,181,371	929,082	873,233
2017	9	924,964	742,262	700,637	2	213,000	172,200	162,600	11	1,137,964	914,462	863,237
2018	6	664,154	538,907	510,511	1	107,600	86,800	81,900	7	771,754	625,707	592,411
2019	4	609,737	452,006	418,752	2	223,200	178,000	167,800	6	832,937	630,006	586,552
2020	6	729,725	543,260	504,355	3	336,600	267,000	251,400	9	1,066,325	810,260	755,755
2021	4	437,329	354,250	335,069	6	677,400	537,600	506,400	10	1,114,729	891,850	841,469
2022	1	129,020	108,585	103,453	10	1,137,000	904,000	852,000	11	1,266,020	1,012,585	955,453
Total	204	21,803,186	17,855,772	16,910,795	41	4,501,500	3,627,500	3,425,700	245	26,304,686	21,483,272	20,336,495

Notes:

(7) to (9): Column (6) * F where F as follows:

2013 & Prior: F = Weighted average for 2012 & Prior for CAT Claims = Yes

2014 & After: F = 10-year weighted rolling average for CAT Claims = Yes

PE Appendix G
PIPP Enhancement: Annual Spending Allowance

Estimated Unpaid Claims - Undiscounted

Insurance Year	Mild		Moderate		Severe		Catastrophic		Total Allowance
	Count	Allowance	Count	Allowance	Count	Allowance	Count	Allowance	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004 & Prior	195	681,506	82	690,446	66	1,047,160	85	3,225,703	1,733,807
2005	17	59,947	13	76,020	1	25,115	7	287,153	151,630
2006	27	89,705	13	87,150	5	69,187	15	745,208	384,906
2007	29	108,360	6	51,164	3	38,956	12	585,014	302,431
2008	25	98,567	8	50,432	3	69,808	8	314,243	168,062
2009	34	120,169	6	47,922	6	124,406	9	371,514	200,382
2010	33	145,627	14	138,635	5	80,257	7	346,267	191,360
2011	44	189,072	11	73,836	5	94,112	9	413,276	224,489
2012	33	128,323	11	132,354	5	56,982	6	296,467	164,117
2013	38	152,176	11	92,978	1	27,675	7	293,422	160,352
2014	42	181,727	7	62,370	0	-	6	264,260	144,335
2015	52	242,202	11	101,694	6	134,885	8	310,939	179,408
2016	41	179,919	16	165,359	9	147,457	12	556,547	302,910
2017	58	252,919	13	146,846	0	-	11	516,828	278,402
2018	57	290,785	12	123,726	4	72,227	8	309,747	179,211
2019	52	227,227	12	118,336	4	95,667	6	342,579	193,351
2020	52	258,111	12	120,075	4	67,836	9	516,215	280,409
2021	52	229,944	12	106,116	4	67,836	11	494,552	267,471
2022	52	229,944	12	106,116	4	67,836	11	508,005	274,198
Total	933	3,866,230	282	2,491,576	135	2,287,401	247	10,697,940	5,781,230

Notes:

- Mild - Permanent Impairment 20% or greater but less than 50%; Maximum allowance = \$265/Year
- Moderate - Permanent Impairment 50% or greater but less than 70%; Maximum allowance = \$530/Year
- Severe - Permanent Impairment 70% or greater; Maximum allowance = \$1,060/Year
- Catastrophic - Special category; Maximum allowance = \$2,120/Year
- (3), (5), (7), & (9): Based on assumption that claimants will use up the maximum allowance
- (10): Based on expected uptake of 5% for Mild, Moderate and Severe, and 50% for Catastrophic
- The maximum allowance will be indexed annually effective April 1, 2023

PE Appendix G
PIPP Enhancement: Annual Spending Allowance
Estimated Unpaid Claims - Discounted with Margin

Insurance Year	Mild		Moderate		Severe		Catastrophic		Total Allowance
	Count	Allowance	Count	Allowance	Count	Allowance	Count	Allowance	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004 & Prior	195	609,557	82	605,654	66	925,458	85	2,777,733	1,495,900
2005	17	52,954	13	69,504	1	21,077	7	245,085	129,719
2006	27	80,063	13	76,844	5	62,702	15	615,391	318,676
2007	29	95,783	6	44,645	3	35,803	12	475,256	246,440
2008	25	87,166	8	45,534	3	58,396	8	267,593	143,351
2009	34	106,322	6	41,267	6	102,729	9	316,062	170,547
2010	33	125,584	14	116,346	5	70,759	7	280,566	155,917
2011	44	162,662	11	64,926	5	81,274	9	341,551	186,219
2012	33	111,401	11	109,584	5	52,013	6	236,610	131,955
2013	38	133,694	11	80,094	1	22,438	7	241,893	132,758
2014	42	158,000	7	53,194	0	-	6	220,221	120,670
2015	52	205,790	11	85,416	6	112,341	8	264,808	152,581
2016	41	153,466	16	139,734	9	128,683	12	450,581	246,385
2017	58	216,482	13	123,618	0	-	11	420,802	227,406
2018	57	243,600	12	102,100	4	60,876	8	254,806	147,732
2019	52	194,212	12	101,069	4	47,403	6	269,115	151,692
2020	52	216,828	12	101,978	4	58,008	9	410,813	224,247
2021	52	197,028	12	91,320	4	58,008	11	403,784	219,210
2022	52	197,028	12	91,320	4	58,008	11	415,169	224,902
Total	933	3,347,617	282	2,144,145	135	1,955,976	247	8,907,839	4,826,306

Notes:

Mild - Permanent Impairment 20% or greater but less than 50%; Maximum allowance = \$265/Year

Moderate - Permanent Impairment 50% or greater but less than 70%; Maximum allowance = \$530/Year

Severe - Permanent Impairment 70% or greater; Maximum allowance = \$1,060/Year

Catastrophic - Special category; Maximum allowance = \$2,120/Year

(3), (5), (7), & (9): Based on assumption that claimants will use up the maximum allowance

(10): Based on expected uptake of 5% for Mild, Moderate and Severe, and 50% for Catastrophic

The maximum allowance will be indexed annually effective April 1,2023

PE Appendix G
PIPP Enhancement: Annual Spending Allowance
Estimated Unpaid Claims - Discounted without Margin

Insurance Year	Mild		Moderate		Severe		Catastrophic		Total Allowance
	Count	Allowance	Count	Allowance	Count	Allowance	Count	Allowance	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2004 & Prior	195	586,763	82	580,431	66	888,429	85	2,651,644	1,428,603
2005	17	50,861	13	67,229	1	19,996	7	233,482	123,645
2006	27	77,064	13	73,792	5	60,511	15	582,144	301,640
2007	29	91,986	6	42,740	3	34,651	12	448,414	232,676
2008	25	83,708	8	43,926	3	55,396	8	254,913	136,608
2009	34	102,139	6	39,414	6	97,297	9	300,970	162,427
2010	33	119,976	14	110,525	5	67,913	7	264,569	147,205
2011	44	155,349	11	62,307	5	77,632	9	323,417	176,473
2012	33	106,616	11	103,774	5	50,307	6	222,584	124,327
2013	38	128,203	11	76,521	1	21,143	7	229,046	125,816
2014	42	151,160	7	50,708	0	-	6	208,813	114,500
2015	52	196,043	11	81,196	6	106,499	8	252,202	145,288
2016	41	146,339	16	132,917	9	123,261	12	424,920	232,586
2017	58	206,591	13	117,433	0	-	11	397,310	214,856
2018	57	231,387	12	96,661	4	58,393	8	241,124	139,884
2019	52	185,233	12	96,329	4	70,658	6	252,284	143,753
2020	52	206,047	12	97,088	4	56,384	9	385,804	210,878
2021	52	187,980	12	87,204	4	56,384	11	381,462	207,309
2022	52	187,980	12	87,204	4	56,384	11	392,226	212,692
Total	933	3,201,425	282	2,047,398	135	1,901,238	247	8,447,325	4,581,166

Notes:

Mild - Permanent Impairment 20% or greater but less than 50%; Maximum allowance = \$265/Year

Moderate - Permanent Impairment 50% or greater but less than 70%; Maximum allowance = \$530/Year

Severe - Permanent Impairment 70% or greater; Maximum allowance = \$1,060/Year

Catastrophic - Special category; Maximum allowance = \$2,120/Year

(3), (5), (7), & (9): Based on assumption that claimants will use up the maximum allowance

(10): Based on expected uptake of 5% for Mild, Moderate and Severe, and 50% for Catastrophic

The maximum allowance will be indexed annually effective April 1,2023

PE Appendix H

PIPP Enhancement: Caregiver Death Benefit

Estimated Unpaid Claims

Insurance Year	Known Claims				Potential Claims				All Claims			
	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin	Count	Undisc	Disc with Margin	Disc w/out Margin
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2004 & Prior	0	-	-	-	0	-	-	-	0	-	-	-
2005	0	-	-	-	0	-	-	-	0	-	-	-
2006	0	-	-	-	0	-	-	-	0	-	-	-
2007	0	-	-	-	0	-	-	-	0	-	-	-
2008	0	-	-	-	0	-	-	-	0	-	-	-
2009	0	-	-	-	0	-	-	-	0	-	-	-
2010	0	-	-	-	0	-	-	-	0	-	-	-
2011	0	-	-	-	0	-	-	-	0	-	-	-
2012	0	-	-	-	0	-	-	-	0	-	-	-
2013	0	-	-	-	0	-	-	-	0	-	-	-
2014	0	-	-	-	0	-	-	-	0	-	-	-
2015	5	749,441	757,153	748,104	0	-	-	-	5	749,441	757,153	748,104
2016	0	-	-	-	0	-	-	-	0	-	-	-
2017	4	861,048	860,970	847,471	0	-	-	-	4	861,048	860,970	847,471
2018	2	472,998	464,500	456,199	0	-	-	-	2	472,998	464,500	456,199
2019	1	48,314	49,165	48,973	0	-	-	-	1	48,314	49,165	48,973
2020	3	754,869	749,421	735,647	0	-	-	-	3	754,869	749,421	735,647
2021	2	477,962	470,605	459,662	2	435,800	432,400	424,600	4	913,762	903,005	884,262
2022	0	-	-	-	5	1,089,500	1,081,000	1,061,500	5	1,089,500	1,081,000	1,061,500
Total	17	3,364,632	3,351,813	3,296,055	7	1,525,300	1,513,400	1,486,100	24	4,889,932	4,865,213	4,782,155

Notes:

(6) = (10) - (2)

(7) to (9): Column (6) * F where F = Weighted average for 2016 to 2022 for Known Claims

(10) for 2019 & After: Judgmentally selected per the more recent maximum observed weighted by year - 2019, 2020, 2021, 2022 at 25%, 50%, 75%, & 100% respectivel



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Manitoba Public Insurance Corporation
2022 Appointed Actuary's Report

Appendix H
Margins for Adverse Deviations

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Basic Interest Rate
As of March 31, 2023

Appendix H
Page 1

Major Valuation Variables	Low Margin	High Margin	Considerations	Evaluation	Indicated MfAD	Selected MfAD
Interest rate	0.25%	2.00%	Investment portfolio Investment climate Method of valuing assets Matching of investments to claims payments patterns	0 1 0 0	0.35%	0.40%

Weight	Maximum score
3	2
1	2
1	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Bodily Injury - Basic
As of March 31, 2023

Appendix H
Page 2

Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	15.00%	15.00%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	2		
				Changes in volume of business over last 5 to 7 years	2		
				Changes in mix of business over last 5 to 7 years	2		
				Homogeneity of data grouping	2		
				Stability of historical development	2		
				Potential impact of large individual claims	2		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	0.00%	0.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
2	2
1	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Bodily Injury Pre-PIPP- Basic
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	12.50%	12.50%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	2		
				Changes in volume of business over last 5 to 7 years	0		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	2		
				Stability of historical development	2		
				Potential impact of large individual claims	2		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	0.00%	0.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
1	2
2	2
2	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Weekly Indemnity 2021 and After
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	15.00%	15.00%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	2		
				Changes in volume of business over last 5 to 7 years	2		
				Changes in mix of business over last 5 to 7 years	2		
				Homogeneity of data grouping	2		
				Stability of historical development	2		
				Potential impact of large individual claims	2		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	5.00%	5.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	2			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
2	2
1	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Weekly Indemnity Prior to 2021
As of March 31, 2023

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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	10.00%	10.00%
				System changes	0		
				Changes in case reserve estimation	1		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	1		
				Changes in volume of business over last 5 to 7 years	0		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	2		
				Stability of historical development	1		
				Potential impact of large individual claims	1		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	5.00%	5.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	2			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
1	2
2	2
2	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Weekly Indemnity Pre-PIPP
As of March 31, 2023

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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	5.00%	5.00%
				System changes	0		
				Changes in case reserve estimation	0		
			Data	Number of years of past experience on which exp. dvpmt. is based	0		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	1		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	0		
				Stability of historical development	1		
				Potential impact of large individual claims	0		
			Line of business	Length of time over which potential development might take place from reporting of new losses	0		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	0		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	0.00%	0.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
1	2
1	2
1	2
1	2
0	2
2	2
1	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Other (Indexed) 2013 and After
As of March 31, 2023

Appendix H
Page 7

Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	15.00%	15.00%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	2		
				Changes in volume of business over last 5 to 7 years	2		
				Changes in mix of business over last 5 to 7 years	2		
				Homogeneity of data grouping	2		
				Stability of historical development	2		
				Potential impact of large individual claims	2		
				Line of business	Length of time over which potential development might take place from reporting of new losses		
			Likelihood of external changes which may significantly affect claims development		2		
			Net retention of company for the line of business		2		
			Change in policy form		0		
Ceded claims ratio	0						
Reinsurance recovery	0.00%	15.00%	Potential problem reinsurers	0	5.00%	5.00%	
			Balance sheet exposure	2			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
2	2
1	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Other (Indexed) Prior to 2013
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	10.00%	10.00%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	0		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	2		
				Stability of historical development	1		
				Potential impact of large individual claims	1		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
				Ceded claims ratio	0		
Reinsurance recovery	0.00%	15.00%	Potential problem reinsurers	0	5.00%	5.00%	
			Balance sheet exposure	2			
				2			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
1	2
2	2
2	2
2	2
2	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Other (Non-Indexed)
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	10.00%	10.00%
				System changes	0		
				Changes in case reserve estimation	2		
			Data	Number of years of past experience on which exp. dvpmt. is based	2		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	0		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	2		
				Stability of historical development	1		
				Potential impact of large individual claims	1		
			Line of business	Length of time over which potential development might take place from reporting of new losses	2		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	2		
				Change in policy form	0		
Ceded claims ratio	0						
Reinsurance recovery	0.00%	15.00%	Potential problem reinsurers	0	0.00%	0.00%	
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
2	2
1	2
2	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Accident Benefits - Other (Non-Indexed) Pre-PIPP
As of March 31, 2023

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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	5.00%	5.00%
				System changes	0		
				Changes in case reserve estimation	1		
			Data	Number of years of past experience on which exp. dvpmt. is based	0		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	0		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	0		
				Stability of historical development	1		
				Potential impact of large individual claims	0		
			Line of business	Length of time over which potential development might take place from reporting of new losses	0		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	0		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	0.00%	0.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
2	2
1	2
1	2
1	2
0	2
1	2
2	2
0	2
0	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Collision - Basic
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	5.00%	5.00%
				System changes	0		
				Changes in case reserve estimation	0		
			Data	Number of years of past experience on which exp. dvpmt. is based	0		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	1		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	0		
				Stability of historical development	1		
				Potential impact of large individual claims	0		
			Line of business	Length of time over which potential development might take place from reporting of new losses	0		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	0		
				Change in policy form	0		

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
1	2
1	2
1	2
1	2
0	2
2	2
1	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Comprehensive - Basic
As of March 31, 2023

Appendix H
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Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	5.00%	5.00%
				System changes	0		
				Changes in case reserve estimation	0		
			Data	Number of years of past experience on which exp. dvpmt. is based	0		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	1		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	0		
				Stability of historical development	1		
				Potential impact of large individual claims	0		
			Line of business	Length of time over which potential development might take place from reporting of new losses	0		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	0		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	2.50%	2.50%	
			Potential problem reinsurers	0			
			Balance sheet exposure	1			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
1	2
1	2
1	2
0	2
2	2
1	2
0	2
3	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

Manitoba Public Insurance
Automobile Insurance Division
Selection of Margin for Adverse Deviation Property Damage - Basic
As of March 31, 2023

Appendix H
Page 13

Major Valuation Variables	Low Margin	High Margin	Considerations		Evaluation	Indicated MfAD	Selected MfAD
Claims development	2.50%	20.00%	Company practices	Consistency in claims handling procedures and personnel	0	5.00%	5.00%
				System changes	0		
				Changes in case reserve estimation	0		
			Data	Number of years of past experience on which exp. dvpmt. is based	0		
				Volume of business in each year	0		
				Changes in volume of business over last 5 to 7 years	1		
				Changes in mix of business over last 5 to 7 years	0		
				Homogeneity of data grouping	0		
				Stability of historical development	1		
				Potential impact of large individual claims	0		
			Line of business	Length of time over which potential development might take place from reporting of new losses	0		
				Likelihood of external changes which may significantly affect claims development	2		
				Net retention of company for the line of business	0		
				Change in policy form	0		
Reinsurance recovery	0.00%	15.00%	Ceded claims ratio	0	0.00%	0.00%	
			Potential problem reinsurers	0			
			Balance sheet exposure	0			

Weight	Maximum score
2	2
1	2
2	2
1	2
2	2
1	2
1	2
1	2
0	2
1	2
2	2
0	2
0	2
2	2
0	2
0	2
2	2
2	2
2	2

Evaluation of considerations : Low margin situation : 0 | Medium margin situation : 1 | High margin situation : 2

July 13, 2023



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Manitoba Public Insurance Corporation

2022 Appointed Actuary's Report

Appendix I
Reconciliation

Manitoba Public Insurance
Appendix I: Reconciliation of Paid and Outstanding Claim Amounts (\$000) - Basic
As of March 31, 2023

Gross Basis		Bodily Injury	Property Damage	Collision	Comprehensive	Accident Benefits		
						Weekly Indemnity	Other	Total
1.	Mar 2023 Cumulative Paid	57,840	677,218	5,711,992	1,521,818	715,061	1,179,433	9,863,361
2.	March 2022 Cumulative Paid	52,976	633,275	5,258,981	1,415,736	653,083	1,105,528	9,119,578
3.	Calendar Year Paid in Database [(1)-(2)]	4,865	43,943	453,011	106,081	61,978	73,905	743,783
4.	Calendar Year Adjustments	-	-	-	-	-	-	-
5.	Prior Years Not in Database	-	(12)	(21)	(17)	12,794	8,443	21,187
6.	Per Financial Controls	4,865	43,931	452,990	106,064	74,772	82,349	764,970
7.	Difference [(3)+(4)+(5)-(6)]	-	-	-	-	-	(0)	(0)
8.	March 2022 O/S Claims in Database	13,673	17,237	103,243	22,747	758,406	566,980	1,482,286
9.	Prior Years Not in Database	-	-	-	-	-	-	-
10.	Per Financial Controls	13,673	17,237	103,243	22,747	769,322	568,151	1,494,373
11.	Difference [(8)+(9)-(10)]	-	-	-	-	(10,916)	(1,171)	(12,087)

Net Basis		Bodily Injury	Property Damage	Collision	Comprehensive	Accident Benefits		
						Weekly Indemnity	Other	Total
1.	Mar 2023 Cumulative Paid	57,840	677,218	5,711,992	1,453,485	714,481	1,178,936	9,793,951
2.	March 2022 Cumulative Paid	52,976	633,275	5,258,981	1,347,474	652,491	1,105,046	9,050,242
3.	Calendar Year Paid in Database [(1)-(2)]	4,865	43,943	453,011	106,010	61,990	73,890	743,709
4.	Calendar Year Adjustments	-	-	-	-	-	-	-
5.	Prior Years Not in Database	-	(12)	(21)	(17)	13,271	7,966	21,187
6.	Per Financial Controls	4,865	43,931	452,990	105,993	75,261	81,857	764,896
7.	Difference [(3)+(4)+(5)-(6)]	-	-	-	(0)	-	(0)	(0)
8.	March 2022 O/S Claims in Database	13,673	17,237	103,243	21,477	756,157	565,732	1,477,519
9.	Prior Years Not in Database	-	-	-	-	-	-	-
10.	Per Financial Controls	13,673	17,237	103,243	21,477	767,073	566,903	1,489,606
11.	Difference [(8)+(9)-(10)]	-	-	-	-	(10,916)	(1,171)	(12,087)