CAC (MPI)

## CAC (MPI) 1-1

## Reference: Value to Manitobans SM. 1 page 16.

Preamble: "In fiscal year 2013-2014, based on the office of the Auditor General recommendation, Manitoba Public Insurance studied the four previously non-indexed PIPP benefits for reasonableness and fairness and we have made recommendations to index these benefits going forward."
a) Please describe the four non-indexed PIPP benefits.
b) By indexing these four benefits, please provide the estimated annual claims incurred increase by fiscal year for 2013/14 through to 2017/18.
c) Has legislation passed to index the four non-indexed PIPP benefits, if not, when is legislation expected to pass.

## RESPONSE:

a) The four non-indexed benefits are:

1. Grief Counselling for eligible survivors of the deceased (this became an indexed benefit effective June 3, 2013).
2. Critical Care Attendance - expenses up to $\$ 3,700$ for a maximum of two people are covered for up to 21 days after the accident for attending to a close relative in hospital who requires critical care because of an automobile injury.
3. Medical reports - ordered in support of review or appeal (reimbursement to a maximum $\$ 250$ per report/up to three reports)
4. Clothing Allowance - an annual allowance (maximum \$900 annually) for excess wear or alteration of clothing directly resulting from an accident, to a victim who is either confined permanently to a wheelchair or required to wear a prosthesis or orthotic device.
b) The indexation for all four benefits equates to approximately $\$ 50,000$ per annum.
c) Grief Counseling became an indexed benefit effective June 3, 2013. Recommendations for other indexations are forthcoming.

## CAC (MPI) 1-2

## Reference: Value to Manitobans SM. 1 page 19.

Preamble: Service Centre Model. "As this initiative matures, the Corporation expects to remove, in a substantial way, seasonal backlogs in claims."
a) Please provide a claims volume backlog history by quarter for the last two fiscal years:

| Fiscal Year <br> 2012/13: | Claims Volume Backlog |
| :--- | :--- |
| Nov- Jan |  |
| Feb-Apr |  |
| May - Jul |  |
| Aug - Oct |  |
| Fiscal Year <br> 2013/14: |  |
| Nov - Jan |  |
| Feb - Apr |  |
| May - Jul |  |
| Aug - Oct |  |

b) Please elaborate on the procedures and processes put in place to overcome claims volume backlogs.
c) Please explain, in general terms, the impact (financial and otherwise) of claims volume backlogs on policy liability valuations and claims incurred forecasting.
d) Please provide a detailed analysis of how claims incurred reserves were booked at year-end for the claims volume backlog.

## RESPONSE:

a) and b)

Basic insurance rates are set prospectively based on pro forma financial projections of expenses and revenues and actuarial modeling. This information request has no bearing on the reasonableness of the financial projections or actuarial modeling used to determine rates effective March 1, 2015. This is consistent with the Corporation's understanding of the PUB's mandate as stated in The Crown Corporations Public Review and Accountability Act and by the Court of Appeal. Considerable information of an operational nature was provided in the filing, though rate setting does not entail an operational review or audit of Manitoba Public Insurance. For these reasons, the Corporation declines to incur the additional staff effort and operating expenses associated with responding to this information request.
c) See PUB (MPI) 1-39 (b).
d) See PUB (MPI) 1-39 (b).

## CAC (MPI) 1-3

Reference: SM. 4 2015/16
Comparative Statement page 14.

Preamble: Increase in claims incurred by $\$ 2,630,000$ due to higher costs from Collaborative Estimating Initiative.
a) Please explain, in detail, the justification and benefits of implementing the Collaborative Estimating Initiative.
b) Please provide the detailed Collaborative Estimating Initiative project costs, by fiscal year.

## RESPONSE:

a) Collaborative Estimating will bring the Corporation and the repair shops onto a common supported platform. The focus of this initiative is online estimate sharing, including collaborative estimating for electronic supplement processing. It includes the automatic maintenance of a "gold copy" estimate which eliminates the need for manual reconciliation between repair shops and Manitoba Public Insurance, enabling the automation of payments to repair shops. In the shortterm, there is an incremental increase in expenses due to software licensing. These expenses are part of the base architecture required for the entire PDR program and will reduce as business changes are implemented during the program roll-out. Refer to PUB (MPI) 1-75 for further details on projected program benefits.
b) Please refer to PUB (MPI) 1-75.

## CAC (MPI) 1-4

Reference: SM. 5 Rate Setting
Framework page 6.

Preamble: "Complementing this is the use of underlying statistical data. The Corporation uses the data as reported in its claims database in a structured, consistent manner each year."
a) Please elaborate on the reliability of the claims database. Please itemize the procedures MPI has in place to ensure the accuracy of the claims database.
b) Please elaborate on and itemize the changes made to the claims system impacting the claims database during the last year.

## RESPONSE:

a) There are controls in place to validate the claims database on a regular basis that consist of technical checkpoints throughout the various online and batch processes as well as post batch activities by multiple user groups to validate the activity against other systems of record. As a result of these controls, if a system defect is discovered, then the defect resolution process (Unified Production Support Process) is initiated to resolve the defect and maintain the integrity of the database.
b) Changes to the claims system that impact the claims database are not permitted by the vendor of the bodily injury system. Only vendor initiated changes are implemented via controlled system upgrades. During the last year changes were made to the physical damage database, primarily to accommodate the PDReengineering initiative by adding new tables to support new information requirements.

## CAC (MPI) 1-5

## Reference: CAC (MPI) 1-91 (a) and (b) and PUB (MPI) 1-36 (a) to (f) of the 2014 GRA.

Please prepare and file similar schedules as filed in CAC (MPI) 1-91 (a) and PUB (MPI) 1-36 (a) to (f) in the 2014 GRA for Basic Insurance; namely, Six Year Claims Frequency Comparison, Six Year Claims Severity Comparison, and Six Year Claims Incurred Comparison and comparing Original Projected, Revised Projected and Actual Basic Insurance; namely, Schedule 1 Ten Year Claims Frequency Comparison, Schedule 2 Ten Year Claims Severity Comparison, Schedule 3 Ten Year Claims Incurred Comparison, Schedule 4 Ten Year Comprehensive - Theft Claims Frequency Comparison, Schedule 5 Ten Year Comprehensive - Theft Claims Severity Comparison and Schedule 6 Ten Year Comprehensive - theft Claims Incurred Comparison.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-6

Reference: Volume III 2013 Annual Report AI. 6 Part 1B page 14.

Preamble: "..we are enhancing our collaborative relationship with the repair industry and working to address the challenges of increasingly complex vehicle design and construction. This is aided by the extension of our agreement with the Automotive Trades Association and the Manitoba Motors Dealers Association, during which a cooperative approach will allow us to develop solutions to common issues".
a) Please file a copy of the extended agreements with the Automotive Trades Association and the Manitoba Dealers Association.
b) Please elaborate on the changes made to the extended agreements.
c) Please elaborate on the "cooperative approach" which will allow developing solutions to common issues.

## RESPONSE:

a) to c)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-7

## Reference: Volume III 2013 Annual Report AI. 6 Part 1B

 page 14.Preamble: "An update to the Manitoba Collision Repair Industry Study which will be used to determine the effectiveness of initiatives undertaken to date and set the foundation for future process improvements".
a) Please file a copy of the updated Manitoba Collision Repair Industry Study.
b) Please elaborate on the recent updates made to the study.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b)

## CAC (MPI) 1-8

Reference: Volume III 2013 Annual Report AI. 6 Part 1B page 23.

Preamble: "Salvage vehicles were sold to automobile recyclers and the public to be rebuilt or used for replacement parts" amounting to $\$ 27,355,000$.
a) Please calculate and provide the amount of salvage vehicle sales allocated to Basic Insurance.
b) Please provide a detailed operating statement for salvage vehicle sales for the fiscal years 2013/14 and forecasted for 2014/15 and 2015/16.

## RESPONSE:

a) Please refer to part b) for the amount of salvage vehicle sales allocated to Basic as it is included in the operating statement provided. Please note that the reference to $\$ 27,355,000$ is an incorrect interpretation of the information in the 2013 Annual Report. The Annual Report shows 27,355 as the number of salvage vehicles sold and does not reflect an amount of sales.
b)

Actual 2013-14

| VEHICLE AUCTION SALES |  |  |  |
| :--- | ---: | ---: | :---: |
| Vehicles -Winnipeg | $\$ 26,658,778$ |  |  |
| Vehicles - Rural | $1,091,495$ |  |  |
| Vehicles -Tender | $5,926,080$ |  |  |
| Retained input tax credits | $1,394,946$ |  |  |
| Vehicle Auction Sales | $\$ 35,071,299$ |  |  |
| Expenses | $2,730,419$ |  |  |
| Net recovery on Operations |  |  |  |

Salvage is a reduction in Basic claims incurred expenses as it is a recovery on the vehicles that have transferred ownership to the Corporation subsequent to a claim being made. Basic claims incurred are forecasted based on historical experience and growth factors as part of the actuarial forecast and the past history of salvage is taken into consideration on a historical average perspective. No specific budget exists for salvage as it is variable depending on claims history and the market demand.

## CAC (MPI) 1-9

## Reference: Annual Audited Financial Statement for the fiscal year ended February 28, 2014 (Report).

Preamble: The Actuary's Report indicates the following "...I have valued the policy liabilities of Manitoba Public Insurance Corporation..." In the Basis of Reporting Statement of Compliance section of the Report it states "...the external actuary is required to carry out a valuation of the insurance contract liabilities..."

Please elaborate on the difference(s) between 'policy liabilities' and 'insurance contract liabilities'.

## RESPONSE:

Per Canadian Actuarial Standards of Practice 1100.27.2 and 1100.35 respectively:

Insurance contract liabilities in an insurer's statement of financial position are the liabilities at the date of the statement of financial position on account of the insurer's insurance contracts, including commitments, which are in force at that date or which were in force before that date.

Policy liabilities in an insurer's statement of financial position are the liabilities at the date of the statement of financial position on account of the insurer's policies, including commitments, which are in force at that date or which were in force before that date. Policy liabilities consist of insurance contract liabilities and liabilities for policy contracts other than insurance contracts.

## CAC (MPI) $\mathbf{1 - 1 0}$

## Reference: Annual Audited Financial Statement for the fiscal year ended February 28, 2014 (Report) page 31.

Preamble: "Adjustment to the Selected IBNR for Claims Reporting Backlog
The Corporation experienced a significant increase in the number of collision claims for the most recent accident year due to a worse than normal winter season. As a result, there were significant delays in the claims reporting process...The change in the selected IBNR increased the discounted net claim liabilities by $\$ 18.8$ million and ILAE provision by $\$ 3.8$ million.
a) Please elaborate on the status of the claims backlog.
b) Please elaborate on how the updated information technology infrastructure aided in the managing of the claims volume backlog, if any.
c) Please elaborate as to when the special backlog IBNR of $\$ 18.8$ million and ILAE provision of $\$ 3.8$ million will be released back into operational results.

## RESPONSE:

a) There is no claims backlog from the winter of $2013 / 14$ at this time.
b) Please refer to CAC (MPI) 1-2 a) and b).
c) The majority of the IBNR and ILAE will be released back into operations in the first two quarters of 2014/15 as these claims are processed. The projected release of the IBNR and ILAE is included as part of the Corporation's claims forecasts. Exhibit 5, Table 8, of Volume II Claims Incurred, shows the expected changes in collision IBNR by fiscal year.

## CAC (MPI) 1-11

## Reference: CAC (MPI) 1-95 of the 2014 GRA-Physical Damage Growth Rates

Preamble: In the 2014 GRA the physical damage growth rate factors were found as part of Exhibit 5 and 6 in Volume II Claims Incurred.
a) Please file a copy of the detailed Repair Rates Growth Factors similar to the tables in Exhibit 5, Table 5 and Exhibit 6, Table 5 Volume II Claims Incurred of the 2014 GRA.
b) Please comment on any significant changes, in the Repair Rates Growth Factors, from the 2014 GRA compared to the 2015 GRA.

## RESPONSE:

a) The Repair Rates Growth Factors analysis was not used to create this year's Collision or Comprehensive forecasts. The methodology used is outlined in Volume II Claims Incurred (CI).
b) See part (a).

## CAC (MPI) 1-12

## Reference: CAC (MPI) 1-94 from the 2014 GRA - Statistical Measures of the Efficacy of Forecasting Methodology

a) Please extend the tables provided in the referenced response from last year's GRA to include the 2013/14 insurance year.
b) Please elaborate on improvements achieved and made in the Forecasting Methodology from the 2014 GRA to the 2015 GRA.

## RESPONSE:

a) Please see attachment. Note: Prior to the 2014 GRA (i.e. prior to the 2012/13 and 2013/14 Original Projected forecasts), the Corporation's claims incurred forecasts did not include the impact of projected changes in interest rates (i.e. the Corporation's forecast assumed a fixed claims liability discount rate over the entire forecast period).
b) The most significant change in the forecasting methodology in the current GRA is forecasting both claim severity and claim frequency for PIPP claims. Previously, only the ultimate incurred from the Appointed Actuary's Report were used to make this forecast. For the 2015 GRA, ultimate severity and ultimate frequency are now forecasted separately by coverage to determine the ultimate incurred for the forecasted year. A more detailed explanation of this process can be found in Volume II Claims Incurred, section CI.3.1.

Manitoba

| Claims Incurred (\$000) |  |  |  |
| :---: | :---: | :---: | :---: |
| Ins Year | Actual | Original <br> Projected | Revised Forecast |
| 2001/02 | 433,873 | 388,495 | 433,214 |
| 2002/03 | 467,715 | 440,836 | 446,043 |
| 2003/04 | 513,548 | 468,320 | 494,107 |
| 2004/05 | 457,222 | 513,305 | 513,305 |
| 2005/06 | 520,962 | 539,534 | 531,397 |
| 2006/07 | 534,860 | 555,985 | 557,462 |
| 2007/08 | 525,287 | 582,419 | 589,463 |
| 2008/09 | 519,541 | 615,877 | 603,431 |
| 2009/10 | 515,787 | 624,873 | 595,705 |
| 2010/11 | 333,071 | 627,293 | 619,176 |
| 2011/12 | 612,037 | 647,389 | 585,436 |
| 2012/13 | 661,287 | 610,344 | 612,334 |
| 2013/14 | 747,435 | 638,142 | 647,199 |
| Average | 526,356 | 557,909 | 556,021 |
| Standard Deviation (SD) | 99,606 | 80,008 | 64,880 |


| Statistical Measures: Original Projected |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Square <br> Predication <br> Error (\$Bil) | Absolute <br> Percentage Predication Error | Percentage Predication Error | Prediction <br> Error (\$000) | Prediction Variance (\$Bil) |
| 2059.163 | 11.680 | 11.680 | 45,378 | 28700.973 |
| 722.481 | 6.097 | 6.097 | 26,879 | 13705.997 |
| 2045.572 | 9.657 | 9.657 | 45,228 | 8026.120 |
| 3145.303 | 10.926 | -10.926 | -56,083 | 1989.483 |
| 344.919 | 3.442 | -3.442 | -18,572 | 337.626 |
| 446.266 | 3.800 | -3.800 | -21,125 | 3.700 |
| 3264.065 | 9.809 | -9.809 | -57,132 | 600.759 |
| 9280.625 | 15.642 | -15.642 | -96,336 | 3360.334 |
| 11899.755 | 17.457 | -17.457 | -109,086 | 4484.229 |
| 86566.585 | 46.903 | -46.903 | -294,222 | 4814.193 |
| 1249.764 | 5.461 | -5.461 | -35,352 | 8006.739 |
| 2595.189 | 8.347 | 8.347 | 50,943 | 2749.470 |
| 11944.960 | 17.127 | 17.127 | 109,293 | 6437.396 |
| Root Mean Square Error (RMSE, \$000) | Mean <br> Absolute Percentage Error (MAPE) | Mean <br> Percentage <br> Error (MPE) | Bias <br> Frequency <br> Ratio (BFR) | Standard Deviation (SD, \$000) |
| 102,118 | 12.796 | -4.656 | 0.625 | 80,008 |


| Statistical Measures: Revised Forecast |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Square <br> Predication <br> Error (\$Bil) | Absolute Percentage Predication Error | Percentage Predication Error | Prediction <br> Error (\$000) | Prediction Variance (\$Bil) |
| 0.434 | 0.152 | 0.152 | 659 | 15081.540 |
| 469.676 | 4.859 | 4.859 | 21,672 | 12095.144 |
| 377.952 | 3.935 | 3.935 | 19,441 | 3833.334 |
| 3145.303 | 10.926 | -10.926 | -56,083 | 1824.650 |
| 108.889 | 1.964 | -1.964 | -10,435 | 606.338 |
| 510.850 | 4.054 | -4.054 | -22,602 | 2.077 |
| 4118.559 | 10.887 | -10.887 | -64,176 | 1118.373 |
| 7037.532 | 13.902 | -13.902 | -83,890 | 2247.715 |
| 6386.887 | 13.416 | -13.416 | -79,918 | 1574.826 |
| 81856.071 | 46.207 | -46.207 | -286,105 | 3988.564 |
| 707.613 | 4.544 | 4.544 | 26,601 | 865.247 |
| 2396.396 | 7.994 | 7.994 | 48,953 | 3171.163 |
| 10047.256 | 15.488 | 15.488 | 100,236 | 8313.442 |
| Root Mean Square Error (RMSE, \$000) | Mean <br> Absolute <br> Percentage <br> Error (MAPE) | Mean <br> Percentage <br> Error (MPE) | Bias <br> Frequency Ratio (BFR) | $\begin{aligned} & \text { Standard } \\ & \text { Deviation (SD, } \\ & \$ 000) \end{aligned}$ |
| 94,935 | 10.641 | -4.953 | 0.857 | 64,880 |

Bias frequency ratio (BFR) is calculated using the number of years with positive projection errors divided by the number of years with negative projection errors.

## CAC (MPI) 1-13

## Reference: Claims Incurred Forecasting

a) Please provide an update of the Claims Forecasting Committee membership. If there have been any changes in the membership since the 2014 GRA, please explain the changes in membership.
b) Please describe the expertise brought to the table by the current Claims Forecasting Committee members.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-14

Reference: Volume II Claims Incurred CI. 1 page 5

Preamble: "For coverages where claim payments occurs over a longer period (e.g. PIPP accident benefits), the Corporation starts by forecasting the accident year ultimate incurred losses and then uses the development assumptions to project 'backwards' the paid and incurred losses from ultimate to 12 months."

Please compare the current year forecasting methodology for PIPP claims incurred to previous years, explain and rationalize the differences, if any.

## RESPONSE:

Please see response for CAC (MPI) 1-12(b). The Corporation is able to forecast claims more reliably by looking at both claim severity and claim frequency as opposed to only forecasting based on total incurred. This new process will allow the Corporation to more accurately predict future trends in claim frequency and claim severity. A more detailed explanation of this process can be found in Volume II Claims Incurred, section CI.3.1.

## CAC (MPI) $\mathbf{1 - 1 5}$

Reference: Volume II Claims Incurred CI. 2 page 7

Preamble: Development Assumptions. For Collision negative development occurs from year 4 to 8 and for Property Damage negative development occurs from year 4 to 9.
a) Please explain the cause of the negative development for Collision and Property Damage.
b) Please quantify the negative development by year and coverage.

## RESPONSE:

a) Negative development is a result of the amounts received from the salvage of vehicles.
b) Refer to the attached table.

## Impact of Negative Development on Collision and Property Damage

| Insurance | Collision |  |  | Property Damage |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual | Expected | Total | Actual | Expected | Total |
| Year | Devt | Devt | Devt | Devt | Devt | Devt |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 04/05 | -483,399 | 0 | -483,399 | -93,760 | 0 | -93,760 |
| 05/06 | -508,357 | 0 | -508,357 | -134,285 | 0 | -134,285 |
| 06/07 | -252,133 | 0 | -252,133 | -96,260 | -16,793 | -113,054 |
| 07/08 | 7,419 | -116,586 | -109,167 | -205,903 | -34,299 | -240,203 |
| 08/09 | -96,184 | -241,668 | -337,852 | -118,463 | -54,053 | -172,516 |
| 09/10 | -4,565 | -363,569 | -368,134 | 12,737 | -70,271 | -57,534 |
| 10/11 | 0 | -541,348 | -541,348 | 0 | -111,919 | -111,919 |
| 11/12 | 0 | -544,193 | -544,193 | 0 | -111,896 | -111,896 |
| 12/13 | 0 | -617,905 | -617,905 | 0 | -124,095 | -124,095 |
| 13/14 | 0 | -669,080 | -669,080 | 0 | -124,945 | -124,945 |

Notes:
(2): Actual reported from 48 months to 96 months
(3): Expected additional reported from 48 months to 96 months based on selected reported loss development factors
(5): Actual reported from 48 months to 108 months
(6): Expected additional reported from 48 months to 108 months based on selected reported loss development factors

## CAC (MPI) 1-16

## Reference: Volume II Claims Incurred

 CI. 2 page 9Preamble: Assumed Claim Liability Duration (Years)

a) Please elaborate on the claim duration of 10.30 years for 2013/14 compared to other years.
b) Please file a claim liability duration chart, by coverage, for fiscal years ended February 29, 2013 and February 28, 2014.

## RESPONSE:

a) The figure referenced should be 10.16 instead of 10.30, and it represents the Corporation's overall claims duration including all actuarial provisions (i.e. the provisions for adverse deviation) as of February 28, 2014. The duration decreases in future years because of the projected increases in the interest rate of the Corporation's fixed income portfolio as presented in CI.2, Page 8.
b) Refer to the attached table.

## Duration of the Corporation's Overall Claim Liabilities

| Coverage | As at February 28, 2013 [a] Ex cl Actuarial Provisions |  | As at February 28, 2014 [b] Ex cl Actuarial Provisions |  | As at February 28, 2014 [b] Incl Actuarial Provisions |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Direct | Net | Direct | Net | Direct | Net |
| Accident Benefits - Pre-PIPP |  |  |  |  |  |  |
| Weekly Indemnity [c] | 6.75 | 6.75 | 8.56 | 8.56 | 8.85 | 8.85 |
| Other - Non-Index ed | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Total | 6.03 | 6.03 | 7.60 | 7.60 | 7.92 | 7.92 |
| Accident Benefits - PIPP |  |  |  |  |  |  |
| Weekly Indemnity [c] | 10.73 | 10.73 | 12.44 | 12.40 | 13.44 | 13.44 |
| Other - Index ed [c] | 11.45 | 11.45 | 11.15 | 11.12 | 11.77 | 11.76 |
| Other - Non-Index ed | 2.21 | 2.21 | 2.15 | 2.15 | 2.20 | 2.20 |
| PIPP Enhancement [d] | 12.80 | 12.80 | 14.40 | 14.40 | 15.36 | 15.36 |
| Total | 10.84 | 10.84 | 11.58 | 11.54 | 12.43 | 12.41 |
| Public Liability - Bodily Injury |  |  |  |  |  |  |
| Pre-PIPP | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| PIPP | 2.36 | 2.36 | 2.37 | 2.37 | 2.40 | 2.40 |
| Total | 2.31 | 2.31 | 2.37 | 2.37 | 2.40 | 2.40 |
| Property Damage | 0.68 | 0.68 | 0.67 | 0.67 | 0.67 | 0.67 |
| Collision | 0.47 | 0.47 | 0.48 | 0.48 | 0.48 | 0.48 |
| Comprehensive | 0.64 | 0.64 | 0.64 | 0.64 | 0.65 | 0.65 |
| Total Bodily Injury [e] | 10.12 | 10.12 | 10.78 | 10.76 | 11.62 | 11.62 |
| Total Physical Damage [f] | 0.54 | 0.54 | 0.54 | 0.54 | 0.53 | 0.53 |
| Total Division | 8.94 | 8.92 | 9.31 | 9.26 | 10.23 | 10.20 |
| ILAE | 8.84 | 8.84 | 8.95 | 8.95 | 9.77 | 9.77 |
| Total Division + ILAE | 8.93 | 8.91 | 9.27 | 9.23 | 10.18 | 10.16 |

Notes:
[a] Interest Rate - $3.53 \%$ all years
[b] Interest Rate - $3.68 \%$ all years
[c] Index ation at ex pected inflation of 2.00\%
[d] Index ation at ex pected inflation of $2.00 \%$ for applicable coverage
[e] Total Accident Benefits and Public Liability - Bodily Injury
[f] Total Property Damage, Collision and Comprehensive

## CAC (MPI) 1-17

Reference: Volume II Claims Incurred CI. 3 page 11 and Appendix C

Preamble: "Prior accident year's Weekly Indemnity ultimate loss estimates were increased significantly in the October 2013 Appointed Actuary's report. The increase was caused mainly from a March 2014 review of all existing PIPP claims reserves,..."
a) Please file a copy of the March 2014 PIPP review report.
b) Please elaborate on the significant increase in Income Replacement ( $\$ 107,539,000$ for 2014 compared to $\$ 69,581,000$ for 2013) and Expenses ( $\$ 46,026,000$ for 2014 compared to $\$ 17,316,000$ for 2013) as shown in Appendix C.
c) Please elaborate on the cause of what necessitated the March 2014 PIPP review.
d) Please elaborate on the changes to the Reserving Calculator caused by the March 2014 PIPP review, if any.
e) Please elaborate on how the March 2014 PIPP review could have affected the October 2013 Appointed Actuary's report which would have been completed before March 2014 (released January 17, 2014).

## RESPONSE:

a) Note that the text referenced should read "March 2013 review". The purpose of the review was to ensure compliance with existing reserving guidelines and that case reserves were adequate to reflect the loss exposure. Given the purpose of the review, it did not require/include a formal report.
b) The significant increase in Income Replacement is noted in page 1 of Appendix $C$ - "2014 reported incurred was higher than in previous years as a result of a 2013/14 internal review of case reserves on all open PIPP claim."

The increase in Expenses is because of a change implemented in the 2013 year which significantly lowered the 2013 incurred. Per page 25 of the Actuarial Report as at October 28, 2013, as presented in Volume III, AI.7, "The new claims management system was improperly handling the auto-reserving and autoclosing of new claims, resulting in excess reserves for certain benefits. The Corporation confirms that this issue was rectified as of November 2012."
c) Refer to the response to (a) above.
d) No changes were made to the Reserving Calculator as it was not within the purpose of the review.
e) Refer to the response to (a) above.

## CAC (MPI) 1-18

# Reference: Volume II Claims Incurred Appendix C and 

 Appendix DPreamble: Differences in total claims incurred.

Please reconcile and explain the difference in claims incurred between Appendix C and D. (For example, the claims incurred for 2014 on Appendix $C$ is $\$ 225,768,000$ and on Appendix D the amount is $\$ 99,797,833$ ).

## RESPONSE:

Appendix C shows yearly reported incurred by fiscal year for all accident years. Appendix $D$ shows yearly reported incurred by accident year as of 12 months, or end of year. Therefore, the amount shown in Appendix C will always be at least as much as Appendix D.

## CAC (MPI) 1-19

Reference: Volume II Claims Incurred CI. 3.4 page 24

Preamble: PIPP Enhancements. In 2013/14 the claims incurred are negative by $\$ 3,292,000$, a decrease from the 2014 GRA of $\$ 13,510,000$. In $2014 / 15$ the reported claims incurred are forecasted to be $\$ 13,975,000$. The rationale given is as follows: "The reported incurred forecast in 2014/15 increases significantly as the development assumptions assume that a large percentage of the current IBNR for PIPP enhancements will be reported."

Please elaborate on this assumption in light of the significant decrease in IBNR in the previous year (a decrease from forecast of $\$ 14$ million).

## RESPONSE:

Note that the decrease in IBNR in 2013/14 is $\$ 8.9$ million. The $\$ 13.5$ million represents the variance from last year's forecast.

The decrease in claims incurred of $\$ 3,292,000$ in 2013/14 is more appropriately compared with the increase in 2014/15 of \$6,212,000, a shift of \$9,504,000. However, the decrease in 2013/14 includes a change in the expected utilization for certain PIPP Enhancement coverages. As stated in page 29 of the Annual Financial Statement (AI.6, Part 1A), "The expected utilization for certain PIPP Enhancement coverages were reduced to reflect the actual utilization and cost. The reduction results in a decrease in the discounted net claim liabilities by $\$ 6.6$ million." Excluding the reduction, the shift is $\$ 2.9$ million.

The rationale for the forecasted reported of $\$ 13,975,000$ for $2014 / 15$ is as provided.

## CAC (MPI) 1-20

Reference: Volume II Claims Incurred CI. 5 page 25 and CI. 1 page 5

Preamble: Collision, Comprehensive and Property Damage

Please provide the 'at-12-month' claims incurred data, used to develop the claims incurred forecasts, by peril for collision, comprehensive and property damage by accident year for the previous five fiscal years and for the forecasting period by fiscal year.

## RESPONSE:

Please see attachment.

## Physical Damage at 12 months (\$000)

|  | Actual 2009/10 | Actual 2010/11 | Actual 2011/12 | $\begin{gathered} \text { Actual } \\ \text { 2012/13 } \end{gathered}$ | Actual 2013/14 | Forecast $2014 / 15$ | Forecast $2015 / 16$ | Forecast 2016/17 | Forecast $2017 / 18$ | Forecast 2018/19 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Collision |  |  |  |  |  |  |  |  |  |  |
| Collision with Wild life | \$25,288 | \$27,360 | \$26,787 | \$29,257 | \$28,261 | \$29,880 | \$31,728 | \$33,690 | \$35,773 | \$37,986 |
| Collision | \$212,488 | \$233,110 | \$239,204 | \$265,710 | \$296,529 | \$311,334 | \$330,369 | \$350,570 | \$372,008 | \$394,759 |
| Total Collision | \$237,776 | \$260,470 | \$265,991 | \$294,967 | \$324,790 | \$341,214 | \$362,097 | \$384,260 | \$407,781 | \$432,745 |
| Comprehensive |  |  |  |  |  |  |  |  |  |  |
| Fire | \$5,636 | \$5,474 | \$5,241 | \$5,970 | \$6,116 | \$6,274 | \$6,387 | \$6,491 | \$6,604 | \$6,722 |
| Attempted Theft | \$3,579 | \$2,543 | \$1,513 | \$1,352 | \$1,403 | \$1,409 | \$1,466 | \$1,524 | \$1,585 | \$1,650 |
| Total Theft | \$10,368 | \$8,365 | \$6,572 | \$7,415 | \$7,725 | \$7,940 | \$8,257 | \$8,588 | \$8,932 | \$9,291 |
| Partial Theft | \$1,066 | \$869 | \$658 | \$599 | \$576 | \$597 | \$624 | \$650 | \$678 | \$708 |
| Glass | \$3,906 | \$4,490 | \$5,635 | \$6,369 | \$6,733 | \$7,250 | \$7,709 | \$8,197 | \$8,715 | \$9,267 |
| Vandalism | \$9,611 | \$9,468 | \$9,256 | \$9,797 | \$8,700 | \$9,086 | \$8,861 | \$8,642 | \$8,428 | \$8,219 |
| Hail | \$31,297 | \$22,816 | \$27,724 | \$20,916 | \$21,285 | \$21,636 | \$22,976 | \$24,396 | \$25,905 | \$27,507 |
| Non-Catastrophe | \$8,537 | \$14,610 | \$12,331 | \$14,466 | \$15,987 | \$17,262 | \$18,320 | \$19,447 | \$20,640 | \$21,910 |
| All Other Comprehensive | \$495 | \$392 | \$348 | \$620 | \$515 | \$493 | \$518 | \$545 | \$573 | \$602 |
| Total Comprehensive | \$74,495 | \$69,027 | \$69,278 | \$67,504 | \$69,040 | \$71,947 | \$75,118 | \$78,480 | \$82,060 | \$85,876 |
| Property Damage |  |  |  |  |  |  |  |  |  |  |
| Third Party Deductible Transf | \$16,552 | \$18,362 | \$17,293 | \$19,489 | \$19,832 | \$20,153 | \$20,506 | \$20,865 | \$21,230 | \$21,602 |
| Third Party Loss of Use | \$5,393 | \$5,151 | \$5,570 | \$5,933 | \$6,672 | \$6,802 | \$7,301 | \$7,838 | \$8,413 | \$9,031 |
| Other Property Damage | \$9,472 | \$8,406 | \$9,856 | \$10,132 | \$9,551 | \$10,371 | \$10,925 | \$11,507 | \$12,122 | \$12,771 |
| Total Property Damage | \$31,417 | \$31,919 | \$32,719 | \$35,554 | \$36,055 | \$37,326 | \$38,732 | \$40,210 | \$41,765 | \$43,404 |

## CAC (MPI) 1-21 <br> Reference: Volume II Claims Incurred CI. 5 page 31

Preamble: Collision Claims Incurred. "...there were several factors that led to the 2013/14 severity increase that were not contemplated in last year's forecast. - 1\% higher severity due to a change in reserving practices. The higher reserves do not reflect a change in the cost of collisions, but rather a change in the timing of when reserves are recorded and removed."
a) Please elaborate on the impact on severity as a result of the change in timing of when reserves are recorded and removed.
b) Please elaborate on the process of how reserves are removed as a result of full payments and partial payments for claims and expense reserves.
c) By way of an example, please demonstrate how severity rises by $1 \%$ but claims incurred to do not increase.
d) Please explain and detail the "change in reserving practices" that has been implemented.

## RESPONSE:

a) See PUB (MPI) 1-52 part (a). There was no impact on ultimate severity, but there was an impact on reported-to-date severity.
b) The reserve is decreased by the amount of any loss payment. Expense payments do not decrease reserves. There is a 'full payment' checkbox in the system that can be selected when setting up a payment on a claim. If selected, all outstanding reserves for that cover will be removed regardless of the payment amount.
c) See part (a).
d) See part (a).

## CAC (MPI) 1-22 Reference: CAC (MPI) 1-91(a)

Preamble: Collision Trend
a) Please prepare a comparison analysis of the Collision, Comprehensive, and Property Damage claims frequency, claims severity and claims incurred by fiscal year quarter, in formats similar to 2014 CAC (MPI) 1-91(a), for the fiscal years 2012/13A through to 2013/14A and annually for fiscal years 2015/16P through to 2017/18P. (A - Actual, P - Projected)
b) For claims incurred, for the same periods and coverages as in (a) above, please provide a spreadsheet detailing the claims incurred amount into its components (paid, salvage recoveries, change in reported reserves, change in IBNR and ILAE, unallocated expenses and other).

## RESPONSE:

a) See the Volume II, Claims Incurred (CI) in the Rate Application for details on the Corporation's historical and projected claims experience. The Corporation's forecasts are based on annual data.
b) See part (a) above, and CAC (MPI) 1-8 (b).

## CAC (MPI) 1-23 Reference: Volume II Claims Incurred CI. 5 pages 32 and 33

Preamble: Collision Claims Incurred Total Losses. "the most significant factor impacting the total loss severity was an increase in average vehicle value produced by the Corporation's valuation tool - Blackbook."
a) Please elaborate and list the various valuation tools MPI uses to set total loss reserves.
b) Please describe and list the source(s) of the data contained in the Blackbook.
c) Please elaborate on the relevance of the average Blackbook values to the values of the MPI fleet of insured vehicles.
d) Please explain and provide an analysis comparing the higher MPI average claim settlement value to the average Blackbook value.
e) Please explain whether the total loss vehicle salvage recovery value is included in the calculation of the MPI average claim settlement value.
f) Please prepare an analysis comparing ICBC and SGI average total loss settlement values to MPI's total loss settlement values for the last three fiscal years.

## RESPONSE:

a) The Corporation uses a combination of Blackbook, Bluebook, ADP/Audatex and online sources such as Auto Trader.
b) Blackbook is a proprietary document/valuation tool. Manitoba Public Insurance is not privy to all sources of data contained in the Blackbook.
c) Blackbook values are only used when a particular vehicle has been damaged and is deemed a total loss. Blackbook values are not compared to existing, nondamaged vehicles in the MPI fleet of insured vehicles.
d) Where appropriate, the Corporation will use actual values contained in the Blackbook. Prices may vary up or down slightly due to actual vehicle condition.

|  | Average of BB <br> Values | Average comparison <br> Paid ACV | ACV paid over BB <br> Average |
| :--- | :--- | :--- | :--- |
| 2009 | $\$ 5687$ | $\$ 6247$ | $10 \%$ |
| 2010 | $\$ 5809$ | $\$ 6385$ | $10 \%$ |
| 2011 | $\$ 6360$ | $\$ 6792$ | $7 \%$ |
| 2012 | $\$ 6716$ | $\$ 6931$ | $3 \%$ |
| 2013 | $\$ 7191$ | $\$ 7405$ | $3 \%$ |

e) Salvage recovery amounts are not used in the calculation of the MPI average claim settlement value. Claim settlement values are based on Actual Cash Value of the vehicle immediately prior to the loss.
f) Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-24

Reference: Volume II Claims Incurred CI.8.5 pages 54

Preamble: Change in Premium Deficiency or DPAC Write-Down
a) With a proposed $3.4 \%$ rate change effective March 1, 2015, please elaborate as to whether the Corporation is forecasting to be premium sufficient as of March 1, 2015. If not, please elaborate as to when the Basic Insurance will no longer be reporting a premium deficiency.
b) Please elaborate on the rate change required to eliminate the premium deficiency by February 28, 2016.

## RESPONSE:

a) The Corporation is proposing a $2.4 \%$ rate change effective March 1,2015 . The proposed $1.0 \%$ RSR rebuilding fee was not considered in the premium deficiency calculation.

As per Exhibit 1f of the DCAT report (Volume II RSR.2), the Corporation's proposed rate change and interest rate assumptions would be expected to eliminate the premium deficiency during fiscal 2015/16.

If however, as indicated in the application, the optimistic interest rate assumptions are not achieved, there will continue to be a shortfall in revenues in 2015/16 of approximately two per cent.
b) See part (a).

## CAC (MPI) 1-25

## Reference: Volume II Claims Incurred CI. 8.4 pages 53, Revenues R. 3 page 25

Preamble: Reinsurance Ceded Claims

Please elaborate as to why MPI is not forecasting reinsurance ceded claims incurred for the years 2014/15 through to 2018/19 but is forecasting reinsurance ceded premiums for the years 2014/15 through to 2018/19.

## RESPONSE:

The Corporation charges the casualty and catastrophe reinsurance premiums to customers as part of its Basic rate calculation. The ceded reinsurance premiums are assumed to be a good approximation of the expected costs for these layers of coverage. As described on Volume II Claims Incurred CI.6, page 43, the Corporation's hail forecast is calculated net of reinsurance recoveries to prevent 'double charging' customers for the same coverage.

## CAC (MPI) 1-26

## Reference: Volume II Claims Incurred Exhibit 8

Preamble: Body Shop Signing Bonus, PIPP out of House Counsel and Miscellaneous Provision
a) Please elaborate on the Body Shop Signing Bonus of $\$ 22,187$ in 2013/14.
b) Please elaborate on the PIPP out of House Counsel expenses of $\$ 66,517$ for 2013/14 and no expenses projected for years 2014/15 through to 2018/19.
c) Please elaborate on the anticipated detailed expenditures for the \$750,000 annual provision for years 2014/15 through to 2018/19, if any.

## RESPONSE:

a) Please refer to CAC (MPI) 1-2 a) and b).
b) The expenses are legal costs for the defense of three claims in the early 2000s. Future costs, if any, are dependent upon the next steps taken by the various plaintiffs.
c) The Corporation is constantly looking to enhance the PIPP product and is currently exploring an initiative related to catastrophically injured claimants. This is expected to commence during 2014/15. The small provision has been forecasted in future years to account for other anticipated project undertakings.

## CAC (MPI) 1-27

## Reference: Volume III Actuarial Reports AI. 7 October 31, 2013 and February 28, 2014

Preamble: Page 6 of the October 31, 2013 Actuarial report states "We revised the loss development factors for Collision to reflect recent experience. Impact: Increase of $\$ 0.2$ million." In the letter dated May 2, 2014 to Ms. Heather Reichert forming part of the February 28, 2014 Actuarial report it states: "Due to the extreme cold weather, there was a backlog of unrecorded vehicle damage claims. A bulk IBNR ( $\$ 16.5$ million before provision for adverse deviations) was added for the February 28, 2014 valuation to reflect the delay in processing." In Volume II Claims Incurred CI. 5 Collision page 35 it states "A special collision IBNR provision of $\$ 13$ million was added to the 2013/14 year to account for the significant lag in claim reporting as a result of the high claims frequency."
a) Please confirm that up to October 31, 2013 there was no indication of a significant change (increase or decrease) to the collision severity and frequency.
b) Please reconcile the $\$ 16.5$ million bulk IBNR to the special collision IBNR provision of $\$ 13$ million.
c) Please file the detailed actuarial analysis supporting the actuary's determination of the requirement for the bulk IBNR of $\$ 16.5$ million.

## RESPONSE:

a) Confirmed. As of October 31, 2013, the actual reported for accident year 2013/14 was $\$ 178 \mathrm{M}$ compared to budget reported of $\$ 177 \mathrm{M}$.
b) Per Exhibit 4 of the Actuarial Report as at February 28, 2014, as presented in Volume III, AI.7, bulk IBNR of $\$ 13.0$ million and $\$ 3.5$ million were added for Collision and Property Damage respectively.
c) Refer to PUB (MPI) 1-39.

## CAC (MPI) 1-28

## Reference: Actuarial Principles and Practices

Please provide an analysis of changes to actuarial principles and practices since the last GRA hearings impacting MPI's Policy and Liability valuations, if any.

## RESPONSE:

The Canadian Institute of Actuaries provides updated Standards of Practice and guidance material on their website http://www.cia-ica.ca/home. The Appointed Actuary has not made any material changes to the Basic Appointed Actuary's report as a result of changes to actuarial principles and practices since the last GRA hearings.

## CAC (MPI) 1-29

## Reference: On page 3 of section SM. 6 the corporation states that a full review of all PIPP claims was completed in the 2013/14 year because of apparent under-reserving of claims.

a) Please specify what led the corporation to believe there was under-reserving of claims.
b) Please give specifics in regards to how the review was done - what reserving guidelines were used, what claims were reviewed, what coverages were impacted and by how much. If a report was created please provide the report.
c) Should the increase in case reserves not coincide with a decrease in expected development on claims in the Actuary's report? If not, why not?

## RESPONSE:

a) As of October 31, 2012, the Chief Actuary identified a discrepancy between the paid development patterns and the incurred development patterns on indexed PIPP benefits (with the most significant discrepancy on Weekly Indemnity benefits). The development patterns indicated that paid losses and open claim counts at each stage of development were trending at higher than expected levels, while incurred losses and case reserves were trending at significantly lower than expected levels. See CAC (MPI) 2-5, part (b) of the 2014 Rate Application.

Given that paid losses and open claim counts were at higher than expected levels, the Chief Actuary did not believe there was a change in the ultimate liability for these loss years (as suggested by the incurred). The Chief Actuary recommended to the Appointed Actuary that more reliance be placed on the paid loss data until the issue was rectified by the Corporation. As a result, the Appointed Actuary changed the IBNR methodology to recognize the 'higher of'
incurred or paid Bornheutter-Ferguson method for the first five years, instead of only three years (see page 24 of the October 2012 Appointed Actuary's report).
b) All open PIPP claims were reviewed to ensure that current reserving guidelines were being followed. There were no changes to reserving guidelines. The attached table shows the reported incurred losses in the month of March 2013 and for the entire 2013/14 fiscal year for Weekly Indemnity and Accident Benefits Other - Indexed benefits, along with a comparison to budget.
c) The question implies that an increase in case reserves should always coincide with a decrease in expected development; however, this is not the case. For example, for Weekly Indemnity coverage the Corporation relies on case estimates to determine IBNR estimates on claims that are three to ten years old (five to ten years old in the 2012/13 Actuarial Reports). The Corporation held relatively small amounts of IBNR in these accident years, as it was assumed that all open PIPP claims more than three years old were adequately case reserved. However, the March 2013 reserve review increased case estimates on these loss years by nearly $\$ 30$ million, which was unexpected relative to the current estimates (which assumed very small amounts of development); and therefore, did not result in an offsetting decrease in expected development.

|  | Losses - Mar 2013 to Feb 2014 |  |  |  |  | Losses - Mar 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Reported Incurred |  |  |  |  | ABWI | Indexed |
|  | Weekly Indemnity | $\begin{gathered} \text { ABO } \\ \text { Indexed } \end{gathered}$ | Total | Budget | Actual Budget | Weekly Indemnity | $\begin{array}{r} \mathrm{ABO} \\ \text { Indexed } \end{array}$ |
| 1994 | \$1,456,974 | -\$338,261 | \$1,118,713 | \$136,039 | \$982,674 | \$215,563 | -\$84,324 |
| 1995 | \$1,607,799 | \$300,053 | \$1,907,852 | \$153,048 | \$1,754,804 | \$8,265 | \$338,332 |
| 1996 | \$202,111 | -\$153,621 | \$48,490 | \$106,943 | -\$58,453 | -\$159,697 | \$79,399 |
| 1997 | \$1,454,284 | \$620,165 | \$2,074,449 | \$112,035 | \$1,962,414 | \$420,813 | \$59,524 |
| 1998 | \$1,062,975 | \$398,352 | \$1,461,327 | \$102,288 | \$1,359,039 | \$84,347 | \$619,211 |
| 1999 | \$483,300 | -\$250,916 | \$232,384 | -\$8,622 | \$241,006 | \$1,401,248 | \$57,528 |
| 2000 | -\$1,168,960 | -\$111,515 | -\$1,280,475 | -\$409,548 | -\$870,927 | -\$22,374 | \$71,394 |
| 2001 | \$1,274,066 | \$661,213 | \$1,935,280 | -\$870,725 | \$2,806,005 | \$41,458 | -\$18,044 |
| 2002 | \$755,126 | \$673,251 | \$1,428,377 | -\$429,145 | \$1,857,522 | \$401,387 | \$69,408 |
| 2003 | \$2,521,398 | \$624,650 | \$3,146,048 | -\$178,918 | \$3,324,966 | \$1,728,471 | \$412,002 |
| 2004 | \$602,861 | \$1,677,201 | \$2,280,062 | \$228,845 | \$2,051,216 | \$1,438,239 | -\$40,414 |
| 2005 | \$1,258,679 | -\$931,897 | \$326,782 | \$477,012 | -\$150,230 | \$2,596,099 | -\$25,273 |
| 2006 | \$6,113,196 | \$2,595,112 | \$8,708,309 | \$632,910 | \$8,075,399 | \$4,004,357 | \$407,001 |
| 2007 | \$3,360,217 | \$2,119,508 | \$5,479,725 | \$914,369 | \$4,565,356 | \$5,614,494 | \$892,118 |
| 2008 | \$8,079,512 | \$2,197,855 | \$10,277,367 | \$3,742,395 | \$6,534,973 | \$7,454,661 | \$1,390,024 |
| 2009 | \$7,556,826 | \$1,039,542 | \$8,596,369 | \$6,627,553 | \$1,968,816 | \$5,539,237 | \$232,024 |
| 2010 | \$15,320,074 | \$1,102,160 | \$16,422,234 | \$10,846,298 | \$5,575,936 | \$12,398,457 | \$1,164,557 |
| 2011 | \$16,445,813 | \$6,430,867 | \$22,876,680 | \$17,752,523 | \$5,124,157 | \$7,315,846 | \$2,264,113 |
| 2012 | \$13,314,128 | \$10,856,663 | \$24,170,791 | \$13,944,358 | \$10,226,433 | \$2,968,343 | \$1,758,196 |
| 2013 | \$24,290,326 | \$53,356,291 | \$77,646,617 | \$79,824,873 | -\$2,178,256 | \$644,500 | \$2,822,086 |
| Total | \$105,990,705 | \$82,866,674 | \$188,857,379 | \$133,704,532 | \$55,152,847 | \$54,093,713 | \$12,468,863 |
| Total (Excluding 2013) | \$81,700,379 | \$29,510,383 | \$111,210,762 | \$53,879,659 | \$57,331,103 | \$53,449,213 | \$9,646,777 |

## CAC (MPI) 1-30 Reference: AI. 10

Preamble: On page 8 of Charter PDR - AI. 10 it states that "The Corporation recently completed an RFP process with the purpose of acquiring and implementing predictive analytics software. This software will primarily be leveraged to predict claims fraud cases with the anticipation of increasing claim recoveries associated with claims fraud."

Please give further details on how this software will be used. Specifically, what variables will be used as input to the models, will it be used to scan claims for potential fraud and will it be used prior to claims being made or only after the claim is made.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

CAC (MPI) 1-31
Reference: Claims Incurred section page 11

Please provide all of the figures used in the calculation of the All year Trend for Claim Count Incurred > \$0, Severity and Ultimate.

## RESPONSE:

Weekly Indemnity Ultimate Losses

| Accident Year | Claim Count Incurred >\$0 | Severity | Ultimate (\$000) | Annual \% Change | Last Year's Forecast (\$000) | Variance to Forecast (\$000) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2001/02 | 2,221 | 20,531 | 45,599 | -11.07\% | 44,305 | 1,294 |
| 2002/03 | 2,196 | 23,845 | 52,363 | 14.83\% | 52,078 | 285 |
| 2003/04 | 2,110 | 24,328 | 51,332 | -1.97\% | 48,700 | 2,632 |
| 2004/05 | 2,041 | 21,741 | 44,373 | -13.56\% | 43,158 | 1,215 |
| 2005/06 | 1,943 | 27,610 | 53,646 | 20.90\% | 51,883 | 1,763 |
| 2006/07 | 2,104 | 31,927 | 67,175 | 25.22\% | 60,458 | 6,716 |
| 2007/08 | 2,054 | 31,056 | 63,790 | -5.04\% | 60,012 | 3,778 |
| 2008/09 | 1,884 | 34,166 | 64,369 | 0.91\% | 61,762 | 2,607 |
| 2009/10 | 1,877 | 29,657 | 55,665 | -13.52\% | 59,631 | -3,965 |
| 2010/11 | 1,926 | 31,323 | 60,327 | 8.37\% | 61,014 | -687 |
| 2011/12 | 1,830 | 35,767 | 65,453 | 8.50\% | 54,396 | 11,057 |
| 2012/13 | 2,031 | 31,474 | 63,923 | -2.34\% | 49,034 | 14,889 |
| 2013/14 | 1,893 | 32,064 | 60,698 | -5.05\% | 55,122 | 5,576 |
| 5-year Trend | 1,953 | 33,547 | 65,311 | 2.14\% | 49,540 | 15,772 |
| 10-year Trend | 1,876 | 35,193 | 66,314 | 1.78\% | 57,590 | 8,724 |
| All year Trend | 1,831 | 36,121 | 66,966 | 1.95\% | 60,188 | 6,778 |
| Forecast/Projections |  |  |  |  |  |  |
| 2014/15 | 1,876 | 32,564 | 61,082 | 0.63\% | 55,996 | 5,086 |
| 2015/16 | 1,861 | 33,080 | 61,553 | 0.77\% | 56,871 | 4,681 |
| 2016/17 | 1,846 | 33,604 | 62,023 | 0.76\% | 57,746 | 4,277 |
| 2017/18 | 1,831 | 34,136 | 62,493 | 0.76\% | 58,621 | 3,871 |
| 2018/19 | 1,816 | 34,677 | 62,962 | 0.75\% | - | - |

## CAC (MPI) 1-32

## Reference: With reference to the various trends used to forecast severity, frequency and ultimate incurreds it is normal practice for companies with large amounts of data to fit distributions to their loss history to predict these trends.

Why does the Corporation rely on simple linear trends instead of using more advanced methods to determine these trends?

## RESPONSE:

The Corporation conducts extensive modeling of claims and other financial variables as part of its forecasting, stochastic modeling and DCAT analysis. The Corporation does not rely on 'simple' linear trends for all of its forecasts. The Corporation makes its best estimate claims forecast based on many factors, including:

- Historical information (e.g. raw data)
- Business insight (e.g. system changes, external labour agreements)
- Actuarial information (e.g. changes in reserving patterns)
- External information (e.g. forecasted interest rates)

The Corporation must also make judgments on the relevance of the historical claims trends for predicting future claims trends. Some current examples include:

- Will the recent increases in non-catastrophic hail experience continue?
- Will the recent increases in collision severity continue?
- Will injury claims continue to show flat or decreasing frequency per HTA unit?


## CAC (MPI) 1-33

Reference: Page 55 of the Claims

## Incurred section

Please reconcile the Claims Incurred figures shown for the 2010/11 and 2011/12 years to the figures shown for those years on the table on page 50 .

## RESPONSE:

The correct data for page 55 of the Claims Incurred section is:
Total Basic Net Claims Incurred including Claims Provisions (\$000)

| Fiscal <br> Year | Claims <br> Incurred | ULAE | Change <br> in ILAE | Change in <br> Reinsurance <br> Ceded | Other <br> Financial <br> Adjustments | Change in <br> Premium <br> Deficiency/ <br> DPAC | Total Net <br> Claims <br> Incurred |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2009 / 10$ | 530,583 | 21,703 | 8,111 | $-23,903$ | -484 | $-20,221$ | 515,789 |
| $2010 / 11$ | 303,266 | 31,500 | 2,669 | $-3,151$ | -422 | -792 | 333,070 |
| $2011 / 12$ | 571,977 | 31,108 | 10,342 | $-7,073$ | -377 | 6,061 | 612,038 |
| $2012 / 13$ | 609,012 | 32,003 | 13,801 | $-8,110$ | -263 | 14,844 | 661,287 |
| $2013 / 14$ | 680,205 | 32,316 | 12,579 | $-2,454$ | -414 | 25,203 | 747,435 |

The information has been updated as there was a small error noted between categories, which does not impact the totals.

The correct table for page 50 is:
Total Basic Claims Incurred (\$000)

|  |  | Change in IBNR |  |  |  |  |  |
| :---: | :---: | :---: | :---: | ---: | ---: | ---: | ---: |
| Fiscal <br> Year | Reported | Interest <br> Rate <br> Impact | All Other <br> Changes | Total | Claims <br> Incurred | Last <br> Year's <br> Forecast | Variance <br> Forecast <br> Fore |
| $2009 / 10$ | 523,350 |  |  | 7,233 | 530,583 | 530,536 | 47 |
| $2010 / 11$ | 573,937 |  |  | $-270,671$ | 303,266 | 302,862 | 404 |
| $2011 / 12$ | 556,324 |  |  | 15,653 | 571,977 | 576,106 | $-4,129$ |
| $2012 / 13$ | 581,772 | 4,042 | 23,198 | 27,240 | 609,012 | 608,747 | 265 |
| $2013 / 14$ | 685,374 | $-19,610$ | 14,441 | $-5,169$ | 680,205 | 609,946 | 70,259 |

The claims incurred amounts reconcile.

## CAC (MPI) 1-34

Reference: Page 55 of the Claims Incurred section

Please reconcile the ULAE figures shown for the $2009 / 10$ to $2011 / 12$ years to the figures shown for those years on the table on page 51 .

## RESPONSE:

Refer to CAC (MPI) 1-33 for the correct table for Page 55 of the Claims Incurred Section.

The information has been updated as there was a small error noted between categories, which does not impact the totals.

The correct table for page 51 is:

Unallocated Loss Adjustment Expenses (\$000)

| Fiscal Year | Manitoba <br> Health | All Other | Total | Last Year's <br> Forecast | Variance to <br> Forecast |
| :---: | :---: | :---: | :---: | :---: | ---: |
| $2009 / 10$ | 14,789 | 6,914 | 21,703 | 21,522 | 181 |
| $2010 / 11$ | 20,478 | 11,022 | 31,500 | 28,049 | 3,451 |
| $2011 / 12$ | 23,236 | 7,872 | 31,108 | 31,120 | -12 |
| $2012 / 13$ | 23,538 | 8,465 | 32,003 | 31,667 | 336 |
| $2013 / 14$ | 24,829 | 7,487 | 32,316 | 33,411 | $-1,095$ |

The two tables now reconcile.

## CAC (MPI) 1-35

Reference: Page 55 of the Claims Incurred section

Please reconcile the Change in ILAE figures shown for the 2012/13 year to the figure shown for that year on the table on page 52.

## RESPONSE:

Refer to CAC (MPI) 1-33 for the correct table for Page 55 of the Claims Incurred Section.

The information has been updated as there was a small error noted between categories, which does not impact the totals.

The correct table for page 52 is:
Change in ILAE Provision (\$000)

| Fiscal Year | Change in <br> Unpaid <br> Claims | Change in <br> IBNR | Change in <br> ILAE | Last Year's <br> Forecast | Variance to <br> Forecast |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2012 / 13$ | 67,472 | $-5,756$ | 13,801 | 6,273 | 7,528 |
| $2013 / 14$ | 92,195 | $-5,168$ | 12,579 | 3,217 | 9,362 |

The two tables now reconcile.

# CAC (MPI) 1-36 Reference: Page 55 of the Claims Incurred section 

Please explain what the Other Financial Adjustments are and where in the application these figures are broken down.

## RESPONSE:

The Other Financial Adjustments represents the Allowance for Doubtful Accounts.

## CAC (MPI) 1-37

## Reference: Page 35 of the Claims Incurred section and the February 28, 2014 Actuary's Report

Please explain how the special collision IBNR provision of $\$ 13$ million was calculated.

## RESPONSE:

Refer to CAC (MPI) 1-27.

## CAC (MPI) 1-38 Reference: Pre-Filed Testimony page 13

Preamble: "The Corporation has done many things in the past to ensure that the biggest expense it has - claims costs - is managed with the state-of-the-art systems".

Please explain, in general terms, how the state-of-the-art systems aided the Corporation in controlling claims costs.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-39

Preamble: Direct claims incurred, per Volume III AI. 6 Part 1A page 2 Universal Compulsory Automobile Insurance Annual Financial Statement, increased from $\$ 669,398,000$ in 2013 to $\$ 749,889,000$ in 2014; an increase of $\$ 80,491,000$.

Please explain and, if possible, quantify the financial impact the state-of-the-art systems had in controlling the increased claims incurred of about $\$ 80.5$ million for this period.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-40

Reference: Pre-Filed Testimony page 14 and SM. 1 page 8 Value to Manitobans

Preamble: "...initiatives undertaken by the Corporation have resulted in cost savings or cost avoidance of $\$ 60$ million per year".
a) In general terms, please explain the difference between cost savings and cost avoidance.
b) Please provide a table as follows:

| Name of <br> Initiative | Cost Category <br> (Claims <br> Incurred or <br> Expenses) | Amount of <br> Cost <br> Avoidance <br> $(\$ 000)$ | Amount of <br> Cost Savings <br> $\mathbf{( \$ 0 0 0 )}$ | Total Cost <br> Avoidance <br> and Savings <br> $\mathbf{( \$ 0 0 0 )}$ |
| :--- | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  | $\$ 60,575$ |

c) Please provide the analysis undertaken, by initiative, in estimating the annual savings of approximately $\$ 60$ million.

## RESPONSE:

a) b) and c)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-41 <br> Reference: Pre-Filed Testimony page 14, Volume III AI. 6

Preamble: "Despite the increase in the number of claims this year, total corporate claims and operating expenses are lower than last year".

Per Corporate Annual Audited Financial Statements

| Expense Category | 2014 (\$000) | 2013 (\$000) | Increase <br> (Decrease) <br> $\mathbf{( \$ 0 0 0 )}$ |
| :--- | ---: | ---: | ---: |
| Claims expense | 132,564 | 126,848 | 5,716 |
| Loss prevention/ | 15,558 | 15,881 | $(323)$ |
| Road safety |  |  | $(8,988)$ |
| Operating | 115,840 | 124,828 | 367 |
| Regulatory/Appeal | 3,791 | 3,424 | $\mathbf{( 3 , 2 2 8 )}$ |
| Total | $\mathbf{2 6 7 , 7 5 3}$ | $\mathbf{2 7 0 , 9 8 1}$ |  |

Per Annual Audited Universal Compulsory Automobile Insurance Financial Statements (Basic Insurance)

| Expense Category | $\mathbf{2 0 1 4} \mathbf{( \$ 0 0 0 )}$ | $\mathbf{2 0 1 3} \mathbf{( \$ 0 0 0 )}$ | Increase <br> (Decrease) $\mathbf{( \$ 0 0 0 )}$ |
| :--- | ---: | ---: | ---: |
| Claims expense | 114,552 | 108,587 | 5,965 |
| Loss prevention/ | 12,816 | 13,031 | $(215)$ |
| Road safety |  |  | 4,224 |
| Operating | 67,982 | 63,758 | 374 |
| Regulatory/Appeal | 3,766 | 3,392 | $\mathbf{1 0 , 3 4 8}$ |
| Total | $\mathbf{1 9 9 , 1 1 6}$ | $\mathbf{1 8 8 , 7 6 8}$ |  |

a) Please confirm that the Corporate expenses decreased from 2013 to 2014 by $\$ 3,228,000$ and Basic Insurance expenses for the same years increased by \$10,348,000.
b) Please explain and provide a detailed analysis for the opposite financial impact between Corporate and Basic Insurance relating to operational efficiency from 2013 to 2014.

## RESPONSE:

a) Confirmed. See attached schedule for breakdown between normal operations, initiatives and ongoing expenses, 2012/13 versus 2013/14.
b) There are two components that impact the amounts allocated to Basic between years; the change in the Basic percentage allocated and the change in the total corporate expense to be allocated.

With respect to normal operations (see attached): (in \$000's)

Corporate normal operating expenses increased from \$249,390 in 2012/13 to $\$ 252,708$ in 2013/14, an increase of $\$ 3,318$. If the allocation percentage had not changed between 2012/13 and 2013/14, this would have resulted in an increase to Basic expenses of $\$ 2,500$ ( $\$ 3,318$ * 2013/14 allocation of $74.5 \%$ ). However, not only did the total expense to be allocated increase, the percentage to be allocated to Basic also increased from an overall $72.0 \%$ to $74.5 \%$ or $2.5 \%$. This increase in allocation percentage accounts for an additional \$6,400 (\$249,390 * $2.5 \%$ (rounded)). The total impact to Basic normal operations is $\$ 8,900$.

With respect to Initiatives there is an even larger change in the percentage allocated to Basic. As has been explained, the allocation for initiatives is project specific, so as projects in any given year are related to one line of business more than another it can significantly impact the overall \% allocated. This was the case in 2012/13 when there was a significant project unrelated to Basic. Then in 2013/14 when the projects were more evenly distributed, appropriately, a higher \% was allocated to Basic. As can be seen on the attached schedule, even though total corporate initiatives spending decreased from 2012/13 to 2013/14 by more than $\$ 10$ million, the amount allocated to Basic only decreased by $\$ 1.3$ million.

Specific allocation drivers:

The primary allocator used during the allocation process is the proportion of claims incurred costs as they relate to each line of business. The claims incurred percentage was greater in 2013/14 as compared to 2012/13 (85.5\% vs. $84.2 \%$ ).

There are various other factors that impact the allocation of expenses to Basic including direct expenses, allocated occupancy expenses, as well as building expenses (closure of two buildings in 2012/13 relating to other lines of business increased the amount of building expenses allocated to Basic in $2013 / 14$ by $14.3 \%$ or approximately $\$ 1.7$ million).

The above explains why even though total corporate expenses decrease between 2012/13 and 2013/14, the allocated expenses to Basic legitimately increased.

2015 GRA Compare 2013/14 Expenses to 2012/13 Expenses

| CORPORATE (000's) | Normal Ops |  |  | Initiatives |  |  | Initiatives Ongoing |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change |
| Compensation - Salaries | 118,277 | 119,695 | 1,418 | 1,201 | 848 | (353) | - | - | - | 119,478 | 120,543 | 1,065 |
| Compensation - Overtime | 2,317 | 3,030 | 713 | 126 | 132 | 6 | - | - | - | 2,443 | 3,162 | 719 |
| Compensation - Benefits | 27,820 | 27,533 | (287) | 98 | - | (98) | - | - | - | 27,918 | 27,533 | (385) |
| Compensation- H \& ETax | 2,526 | 2,503 | (23) | 24 | - | (24) | - | - | - | 2,550 | 2,503 | (47) |
| Subtotal | 150,940 | 152,761 | 1,821 | 1,449 | 980 | (469) | - | - | - | 152,389 | 153,741 | 1,352 |
| Data Processing | 17,449 | 18,089 | 640 | 12,673 | 4,965 | $(7,708)$ | 3,671 | 7,170 | 3,499 | 33,793 | 30,224 | $(3,569)$ |
| Special Servios | 7,026 | 6,916 | (110) | 880 | 486 | (394) | - | - | - | 7,906 | 7,402 | (504) |
| Building Expenses | 12,509 | 12,434 | (75) | - | - | - | - | - | - | 12,509 | 12,434 | (75) |
| Loss Yrev/Satety Hrogram | 4,188 | 4,489 | (29y) | 881 | 939 | 52 | - | - | - | ऽ,6/¢ | 5,428 | (24) |
| Telephone/Telecommunications | 3,122 | 3,050 | (72) | 6 | 224 | 218 | - | - | - | 3,128 | 3,274 | 146 |
| Advertising \& Public Info | 3,202 | 3,307 | 105 | (1) | 23 | 24 | - | - | - | 3,201 | 3,330 | 129 |
| Printing, Stationery \& Supplies | 3,910 | 4,464 | 554 | 16 | 37 | 21 | - | - | - | 3,926 | 4,501 | 575 |
| Postage | 4,007 | 4,157 | 150 | 1 | 1 | - | - | - | - | 4,008 | 4,158 | 150 |
| Regulatory/Appeal Expenses | 3,441 | 3,707 | 266 | - | - | - | - | - | - | 3,441 | 3,707 | 266 |
| Travel \& Vehide Expense | 1,519 | 1,619 | 100 | 8 | 40 | 32 | - | - | - | 1,527 | 1,659 | 132 |
| Driver Education Program | 3,685 | 3,743 | 58 | - | - | - | - | - | - | 3,685 | 3,743 | 58 |
| Grantin Lieu of Taxes | 1,761 | 1,783 | 22 | - | - | - | - | - | - | 1,761 | 1,783 | 22 |
| Furniture \& EquipmentDPEquip | 991 | 1,335 | 344 | 1,849 | 50 | $(1,799)$ | - | - | - | 2,840 | 1,385 | $(1,455)$ |
| MerchantFees | 8,571 | 9,176 | 605 | - | - | - | - | - | - | 8,571 | 9,176 | 605 |
| Other | 6,880 | 6,279 | (599) | 152 | 130 | (22) | - | - | - | 7,032 | 6,409 | (623) |
| Subtotal | 82,861 | 84,548 | 1,689 | 16,471 | 6,895 | $(9,576)$ | 3,671 | 7,170 | 3,499 | 103,001 | 98,613 | $(4,390)$ |
| Amorization of Capital Investments | 6,742 | 6,552 | (190) | - | - | - | - | - | - | 6,742 | 6,552 | (190) |
| Amortzaton otDeterred Development | 8,841 | 8,841 | - | - | - | - | - | - | - | 8,841 | 8,841 | - |
| TOTAL | 249,390 | 252,708 | 3,318 | 17,920 | 7,875 | $(10,045)$ | 3,671 | 7,170 | 3,499 | 270,981 | 267,753 | $(3,228)$ |
|  | Normal Ops |  |  | Initiatives |  |  | Ongoing |  |  | Total |  |  |
| BASIC (000's) | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change |
| Compensation-Salaries | 84,658 | 87,897 | 3,239 | 827 | 705 | (122) | - | - | - | 85,485 | 88,602 | 3,117 |
| Compensaton - Uvertme | 1,/35 | 2,343 | 608 | 92 | 106 | 14 | - | - | - | 1,821 | 2,449 | 622 |
| Compensation - Benefits | 19,798 | 20,174 | 376 | 70 | - | (70) | - | - | - | 19,868 | 20,174 | 306 |
| Compensation- H\&ETax | 1,810 | 1,834 | 24 | 17 | - | (17) | - | - | - | 1,827 | 1,834 | 7 |
| Subtotal | 108,001 | 112,248 | 4,247 | 1,006 | 811 | (195) | - | - | - | 109,007 | 113,059 | 4,052 |
| Data Processing | 13,132 | 14,188 | 1,056 | 3,320 | 2,638 | (682) | 2,840 | 5,650 | 2,810 | 19,292 | 22,476 | 3,184 |
| Special Servios | 4,160 | 4,683 | 523 | 697 | 481 | (216) | - | - | - | 4,857 | 5,164 | 307 |
| Building Expenses | 7,316 | 9,049 | 1,733 | - | - | - | - | - | - | 7,316 | 9,049 | 1,733 |
| Loss Prev/Safety Program | 4,429 | 4,160 | (269) | 746 | 803 | 57 | - | - | - | 5,175 | 4,963 | (212) |
| Telephone/Telecommunications | 2,280 | 2,411 | 131 | 6 | 177 | 171 | - | - | - | 2,286 | 2,588 | 302 |
| Advertsing \& Public into | 2,302 | 2,466 | 164 | - | 18 | 18 | - | - | - | 2,302 | 2,484 | 182 |
| Printing, Stationery \& Supplies | 1,483 | 1,780 | 297 | 11 | 18 | 7 | - | - | - | 1,494 | 1,798 | 304 |
| Postage | 2,515 | 2,659 | 144 | 1 | 1 | - | - | - | - | 2,516 | 2,660 | 144 |
| Kegulatory/Appeal Expenses | 3,392 | 3,66/ | 215 | - | - | - | - | - | - | 3,392 | 3,66/ | 215 |
| Travel \& Vehide Expense | 1,047 | 1,148 | 101 | 6 | 33 | 27 | - | - | - | 1,053 | 1,181 | 128 |
| Driver Education Program | 3,103 | 3,200 | 97 | - | - | - | - | - | - | 3,103 | 3,200 | 97 |
| Grantin Lieu of Taxes | 1,282 | 1,346 | 64 | - | - | - | - | - | - | 1,282 | 1,346 | 64 |
| Furniture \& EquipmentDPEquip | 734 | 1,043 | 309 | 538 | 25 | (513) | - | - | - | 1,272 | 1,068 | (204) |
| MerchantFees | 6,320 | 6,671 | 351 | - | - | - | - | - | - | 6,320 | 6,671 | 351 |
| Other | 5,175 | 4,823 | (354) | 118 | 103 | (15) | - | - | - | 5,293 | 4,926 | (368) |
| Subtotal | 58,670 | 63,294 | 4,622 | 5,443 | 4,297 | $(1,146)$ | 2,840 | 5,650 | 2,810 | 66,953 | 73,241 | 6,287 |
| Amorization of Capital Investments | 5,012 | 4,998 | (14) | - | - | - | - | - | - | 5,012 | 4,998 | (14) |
| Amortization ofDeferred Development | 7,796 | 7,818 | 22 | - | - | - | - | - | - | 7,796 | 7,818 | 22 |
| TOTAL | 179,479 | 188,358 | 8,877 | 6,449 | 5,108 | $(1,341)$ | 2,840 | 5,650 | 2,810 | 188,768 | 199,116 | 10,348 |
|  | NormalOps |  |  | Initiatives |  |  | Ongoing |  |  | Total |  |  |
| BASIC ALLOCATION \% | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change | 2012/13 | 2013/14 | Change |
| Compensation-Salaries | 71.6\% | 73.4\% | 1.9\% | 68.9\% | 83.1\% | 14.3\% | 77.4\% | 78.8\% |  | 71.5\% | 73.5\% | 2.0\% |
| Compensation - Overtime | 74.9\% | 77.3\% | 2.4\% | 73.0\% | 80.3\% | 7.3\% |  |  |  | 74.8\% | 77.5\% | 2.7\% |
| Compensation - Benefits | 71.2\% | 73.3\% | 2.1\% | 71.4\% |  | -71.4\% |  |  |  | 71.2\% | 73.3\% | 2.1\% |
| Compensation- H \& L lax | 11.1\% | 13.3\% | 1.6\% | 10.8\% |  | -10.8\% |  |  |  | 11.6\% | 13.3\% | 1.6\% |
| Data Processing | 75.3\% | 78.4\% | 3.2\% | 26.2\% | 53.1\% | 26.9\% |  |  | 1.4\% | 57.1\% | 74.4\% | 17.3\% |
| Special Serviœs | 59.2\% | 67.7\% | 8.5\% | 79.2\% | 99.0\% | 19.8\% |  |  |  | 61.4\% | 69.8\% | 8.3\% |
| Building Expenses | 58.5\% | 72.8\% | 14.3\% |  |  | 0.0\% |  |  |  | 58.5\% | 72.8\% | 14.3\% |
| Loss Prev/SafetyProgram | 92.5\% | 92.7\% | 0.2\% | 84.1\% | 85.5\% | 1.4\% |  |  |  | 91.2\% | 91.4\% | 0.2\% |
| Telephone/Telecommunications | 73.0\% | 79.0\% | 6.0\% | 100.0\% | 79.0\% | -21.0\% |  |  |  | 73.1\% | 79.0\% | 6.0\% |
| Advertising \& Public Info | 71.9\% | 74.6\% | 2.7\% | 0.0\% | 78.3\% | 78.3\% |  |  |  | 71.9\% | 74.6\% | 2.7\% |
| Printing, Stationery \& Supplies | 37.9\% | 39.9\% | 1.9\% | 68.8\% | 48.6\% | -20.1\% |  |  |  | 38.1\% | 39.9\% | 1.9\% |
| Postage | 62.8\% | 64.0\% | 1.2\% | 100.0\% | 100.0\% | 0.0\% |  |  |  | 62.8\% | 64.0\% | 1.2\% |
| Regulatory/Appeal Expenses | 98.6\% | 98.9\% | 0.3\% |  |  | 0.0\% |  |  |  | 98.6\% | 98.9\% | 0.3\% |
| Travel \& Vehide Expense | 68.9\% | 70.9\% | 2.0\% | 75.0\% | 82.5\% | 7.5\% |  |  |  | 69.0\% | 71.2\% | 2.2\% |
| Driver Education Program | 84.2\% | 85.5\% | 1.3\% |  |  | 0.0\% |  |  |  | 84.2\% | 85.5\% | 1.3\% |
| Grantin Lieu of Taxes | 72.8\% | 75.5\% | 2.7\% |  |  | 0.0\% |  |  |  | 72.8\% | 75.5\% | 2.7\% |
| -urniture $\&$ EquipmentuP Equip | 14.1\% | 18.1\% | 4.1\% | 29.1\% | 50.0\% | 20.9\% |  |  |  | 44.8\% | 11.1\% | 32.3\% |
| MerchantFees | 73.7\% | 72.7\% | -1.0\% |  |  | 0.0\% |  |  |  | 73.7\% | 72.7\% | -1.0\% |
| Other | 75.3\% | 76.8\% | 1.5\% | 77.6\% | 79.2\% | 1.6\% |  |  |  | 75.3\% | 76.8\% | 1.5\% |
| Subtotal | 70.8\% | 74.9\% | 4.1\% | 33.0\% | 62.3\% | 29.3\% | 77.4\% | 78.8\% | 1.4\% | 65.0\% | 74.3\% | 9.3\% |
| Amorization of Capital Investments | 74.3\% | 76.3\% | 1.9\% |  |  | 0.0\% |  |  | 0.0\% | 74.3\% | 76.3\% | 1.9\% |
| Amortization ofDeferred Development TOTAL | 88.1\% | 88.4\% | 0.2\% |  |  | 0.0\% |  |  |  | 88.1\% | 88.4\% | 0.2\% |
|  | 72.0\% | 74.5\% | 2.6\% | 36.0\% | 64.9\% | 28.9\% | 77.4\% | 78.8\% | 1.4\% | 69.7\% | 74.4\% | 4.7\% |

## CAC (MPI) 1-42

Reference: Pre-Filed Testimony page 14

Preamble: "...the Corporation acknowledges the impact of a second year of a significant financial loss and has taken the following serious management actions in implementing cost containment strategies".

Please provide the anticipated annual cost savings for fiscal year 2015/16 for each cost containment strategy in the following table relating to Basic Insurance:

| Cost Containment Strategy | Estimated Savings <br> $\mathbf{( \$ 0 0 0 )}$ |
| :--- | :--- |
| Hiring Freeze |  |
| Out-of-Province Travel |  |
| Expenses for Meetings |  |
| Total |  |

## RESPONSE:

The amounts are not available at this time.

# CAC (MPI) 1-43 <br> Reference: Pre-Filed Testimony page 15 

Preamble: "...a committee of senior managers has been formed to identify, investigate and implement operating cost reduction initiatives..."

Please file a copy of the Terms of Reference relating to this committee.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-44

Reference: Pre-Filed Testimony PowerPoint Presentation page 2

Preamble: "...Address physical damage claims cost ...Offer customer service delivery options at lower operational costs..."
a) In general terms, please elaborate on the anticipated types of service delivery options at a lower operational cost to be offered to customers.
b) Please elaborate on the actions required in preparing the organization for the digital economy and in preparing the organization to adapt to meet new operational realities.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-45

## Reference: Corporate Strategic Plan 2014-2018

## AI. 6 Part 2 Page 12

Preamble: A strategy relating to Goal 2 states "To maintain claims expense per reported claim at a maximum of 50 per cent of industry average".
a) Please confirm claims expense per reported claim for fiscal years 2012/13 and 2013/14 were maintained within 50 per cent of the industry average.
b) Please file a copy of the detailed calculations, assumptions, data sources and analyses which support that claims expense per reported claim for Basic Insurance were maintained at 50 per cent of industry average. If the calculation is only performed at a corporate level, please file a copy of the corporate calculation and analyses.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-46 Reference: Corporate Budget

a) Please provide the approved corporate budget for ongoing operations and for new projects and initiatives for the 2013/14 fiscal year for Basic Insurance and the Corporation.
b) Please indicate when the 2013/14 budget was approved and file a copy of the Budget and Operations Committee of the Board of Directors Minute approving the Budget.
c) Please show variances between the approved budget and actual results and explain any significant variances.
d) Please provide the budgetary guideline for ongoing operations in 2013/14 and indicate whether this guideline was met.
e) Please provide the approved budget for ongoing operations and for new projects and initiatives for the 2014/15 fiscal year for Basic Insurance and the Corporation.
f) Please indicate when the 2014/15 budget was approved and file a copy of the Budget and Operations Committee of the Board of Directors Minute approving the Budget.
g) Please provide the budgetary guideline for ongoing operations in 2014/15 and indicate whether this guideline was met.

## RESPONSE:

a) to g)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-47 <br> Reference: SM. 1 Value to Manitobans page 19

Preamble: Service Centre Model. "Flexible staffing opportunities, where staff crosstrain in more than one role, resulting in higher service availability without adding staff.."
a) Please describe the professional and other training required for an individual to be an expert service centre employee.
b) Please file a sample job description a qualified service centre employee would follow.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-48 Reference: SM. 2 Benchmarking

Preamble: "As indicated previously, based on the Corporation's business model a higher FTE per $\$ 100$ million of GPW is expected." Currently, as reported, the FTE's per $\$ 100$ million of GPW for MPI is 153.54 compared to, for example, the Canadian Personal Auto Group of 103.07.

In general terms, please elaborate and describe the required adjustment to the MPI value to be comparable to the Canadian Personal Auto Group.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-49

## Reference: SM. 4 Projected Financial

 Results Page 11Preamble: 2014/15 Comparative Statement

The comparative statement presented represents the 2013/14 comparative multiyear statement and not the 2014/15. For the record, please file the correct comparative multi-year statement.

## RESPONSE:

Please see attachment with 2014/15 comparative multi-year statement.

## Pro Forma Finanancial Statements Manitoba Public Insurance <br> Multi-year Statement - 2014/15 Comparative

PF. 5
BASIC


## Explanation of Significant Variances

| Ref. | Category | (C\$ 000s) | Explanation |
| :---: | :---: | :---: | :---: |
|  | Motor Vehicles - written | 805,344 | 2014 GRA Forecast |
|  |  | 700 | Upgrade Factor |
|  |  | $(6,821)$ | Rate change Difference (1.80\% vs 0.90\%) |
|  |  | 900 | Fleet Rebate differences |
|  |  | (900) | Immobilizer discounts |
|  |  | $(3,990)$ | Actual Premium Written from 2013/14 less than expected |
|  |  | 795,233 | 2015 GRA Forecast |
|  | Motor Vehicles - earned | 783,511 | 2014 GRA Forecast |
|  |  | $(10,000)$ | Premium Written less than expected compared to 2014 GRA per above |
|  |  | $(3,639)$ | Unearned premium rate slightly higher in 2015 GRA |
|  |  | 769,872 | 2015 GRA Forecast |
| (3) | Claims Incurred | 644,705 | 2014 GRA Forecast |
|  |  | 14,526 | Increase in collision claims based on change of historical trends |
|  |  | $(27,927)$ | Decrease in PIPP case reserves due to expected increase in interest rates |
|  |  | 2,182 | Increase in comprehensive claims based on change of historical trends |
|  |  | 3,532 | Increase in unallocated loss adjustment expenses |
|  |  |  | due to higher costs from Collaborative Estimating Initiative |
|  |  | $(11,738)$ | Decrease in Internal Loss Adjustment Expenses due to |
|  |  |  | expected increase in interest rate forecast |
|  |  | (503) | Change in bodily injury claims, property claims, Other. |
|  |  |  | Refer to Claims Incurred section in Volume II for a detailed explanation |
|  |  | 624,777 | 2015 GRA Forecast |
| (4) | Commissions | 32,430 | 2014 GRA Forecast |
|  |  | 600 | Greater than expected unearned premium carry forward from prior year |
|  |  | 466 | Slightly greater than expected forecasted effective commission rates |
|  |  | 33,496 | 2015 GRA Forecast |
| (5) | Investment Income | 63,027 | 2014 GRA Forecast |
|  |  | $(24,027)$ | Higher fixed income loss due to higher interest rates in 2015 GRA for 2014/15 |
|  |  | $(6,376)$ | Rebalancing occurs in 2014/15 in 2014 GRA but not until 2016/17 in 2015 GRA so fewer gains are relized in 2014/15 |
|  |  | $(2,925)$ | Decrease in Real Estate and Infrastructure gain due to different market values used to calculate return. |
|  |  | (892) | Change in assumptions of writedown and allocation to Basic |
|  |  |  | Refer to Investment Income section in, Table 11.3, Vol II for a detailed explanation |
|  |  | 28,807 | 2015 GRA Forecast |


| (6) Normal Operations Expense |  | 188,400 | 2014 GRA Forecast |
| :---: | :---: | :---: | :---: |
|  |  | 991 | Salaries increase includes the new Downtown Allowance and Health and Wellbeing Flexible Spending Plan, as well as higher salaries allocated to Basic due to updated WCCCR and Claims Incurred allocators. |
|  |  | 3,875 | Data Processing increase due to IBM Data Centre costs moved from ongoing to normal operations, offset by a decrease in software, maintenance and computer costs |
|  |  | $(1,879)$ | Amortization of Capital mainly due to 2014 GRA error in Data Processing amortization |
|  |  | 4,625 | Increase due to the movement of amortization of Deferred Development for Disaster Recovery and HRMS from Initiatives Ongoing (2014 GRA) to Normal Operations (2015 GRA) |
|  |  | 236 | Various miscellaneous expense changes |
|  |  | 196,248 | 2015 GRA Forecast (\$1.8 million higher due to 0.7\% higher allocation to Basic) |
| (6) | Initiative Implementation Expense | 2,276 | 2014 GRA Forecast |
|  |  | 1,428 | Salaries increase due to updated resource requirements related to various projects |
|  |  | 1,356 | Data processing increase mainly due to expected costs for the Security Strategy |
|  |  | 400 | Various miscellaneous expense changes |
|  |  | 5,460 | 2015 GRA Forecast |
| (6) | Initiative Ongoing Expense | 12,579 | 2014 GRA Forecast |
|  |  | $(4,741)$ | Data processing mainly due to transfer of 80\% IBM Data Centre to Normal Operations |
|  |  | $(5,277)$ | Decrease due to the movement of amortization of Deferred Development for Disaster Recovery and HRMS from Initiatives Ongoing (2014 GRA) to Normal Operations (2015 GRA) |
|  |  |  | Amortization of BI3/Fineos and Legal Management projects delayed |
|  |  | (140) | Various miscellaneous expense changes |
|  |  | 2,421 | 2015 GRA Forecast |

# CAC (MPI) 1-50 <br> Reference: SM. 4 Projected Financial Results 2015/16 Page 14 

Preamble: Downtown Allowance and Health and Wellbeing Flexible Spending Plan.
The normal operating expenses increased by $\$ 2,127,000$ due to the new Downtown Allowance and Health and Wellbeing Flexible Spending Plan.

Please provide a detailed explanation and the benefits achieved by the new Downtown Allowance and Health and Wellbeing Flexible Spending Plan.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-51

# Reference: Operating Historical Statistics - CAC (MPI) 1-5 of 2014 GRA 

Please prepare and file Operational and Claims Cost History statistics similar to the attachment to CAC (MPI) 1-5 of the 2014 GRA.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-52

## Reference: Summary of Basic Expenses and Compensation Increases Basic Share - CAC (MPI) 1-6 and PUB (MPI) 1-74 ( $a, b$ and c) and PUB (MPI) 1-78 of 2014 GRA

Please prepare and file Basic Expenses and Compensation Increases in a format similar to CAC (MPI) 1-6 attachment, PUB (MPI) 1-74 a, b and cattachments and PUB (MPI) 1-78 attachment of the 2014 GRA.

## RESPONSE:

In the current year application, the Corporation took a much more in-depth approach to discussing and explaining the compensation increases. Information is provided in various locations throughout the application, predominately Volume II Expenses.

Specifically, CAC (MPI) 1-6, PUB (MPI) 1-74 a both request the old TI. 8 schedule. Please find the relevant information in Volume II Expenses, sections E.2.1.1 and E.2.1.3.

PUB (MPI) 1-74 b) and c) please refer to Volume II Expenses Appendix 1 for the breakdown of the components of compensation expense.

PUB (MPI) 1-78 please refer to Volume II Expenses Appendix 2.

## CAC (MPI) 1-53

## Reference: Compensation Reports

Please file a copy of the public compensation report as of December 31, 2013 prepared in accordance with the Compensation Disclosure Act together with the Auditor's report.

## RESPONSE:

In accordance with the Public Sector Compensation Disclosure Act, the report is attached.

SCHEDULE OF COMPENSATION IN ACCORDANCE WITH<br>THE PUBLIC SECTOR COMPENSATION DISCLOSURE ACT TOGETHER WITH AUDITOR'S REPORT<br>FOR THE CALENDAR YEAR ENDED DECEMBER 31, 2013

## COMPENSATION DISCLOSURE FOR 2013

The Public Sector Compensation Disclosure Act requires Crown Corporations to disclose to the public the total compensation of the Chairperson of the Board, officers and employees who earned $\$ 50,000$ or more in a year as well as the aggregate compensation received by the Board of Directors. In compliance with the Act, Manitoba Public Insurance has prepared this disclosure schedule for the year ended December 31, 2013.

For the 2013 income tax year, Manitoba Public Insurance issued 2,215 T4 slips to full-time, part-time and temporary employees and officers. Manitoba Public Insurance had a monthly average of 1,909 employees during 2013. This schedule lists the compensation paid to 1,273 officers and employees in managerial, technical and professional support positions.

The schedule lists the employees and officers in alphabetical order, along with their position and total compensation. In each case, the most recent position that the employee or officer held during 2013 is given. Total compensation includes the officer's and employee's regular salary, taxable benefits, retiring allowances, retroactive pay, vacation pay and severance pay.

This schedule is available to the public upon request. For additional information, contact our Human Resources Department at 204-985-8770 ext. 7653.

May 2, 2014

## Independent Auditor's Report

## To the Directors of Manitoba Public Insurance Corporation

We have audited the accompanying schedule of the 2013 compensation over $\$ 50,000$ as well as the compensation in aggregate to Manitoba Public Insurance Corporation (MPI) for the year ended December 31, 2013 (the "financial information") in accordance with The Public Sector Disclosure Act of Manitoba. The financial information has been prepared by MPI management and our responsibility is to express an opinion on this financial information based on our audit.

## Management's responsibility for the financial information

Management is responsible for the preparation and fair presentation of the financial information in accordance with The Public Sector Compensation Disclosure Act, and for such internal control as management of MPI determines is necessary to enable the preparation of the financial information that is free from material misstatement, whether due to fraud or error.

## Auditor's responsibility

Our responsibility is to express an opinion on the financial information based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial information is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial information. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial information, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial information in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial information.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the financial information for the year ended December 31, 2013 is prepared, in all material respects, in accordance with The Public Sector Compensation Disclosure Act.

## PricewaterhouseCoopers LLP

One Lombard Place, Suite 2300, Winnipeg, Manitoba, Canada R3B oX6
T: +1 204926 2400, F: +1 2049441020


## Basis of presentation

Without modifying our opinion, we draw attention to the basis of presentation described in the note to the schedule. The financial information is prepared to assist MPI to comply with the financial reporting requirements of The Public Sector Compensation Disclosure Act of Manitoba. As a result, the financial information may not be suitable for another purpose.

## Pricenaterhouseloopers $\angle L P$

## Chartered Accountants

Total Compensation

| Abbott, D | Broker Services Administrator | 54,717.43 |
| :---: | :---: | :---: |
| Abrey, W | Manager, Service Centre Operational Analytics | 95,128.14 |
| Abs, L | Adjuster | 54,904.98 |
| Adams, B | Reviewing Officer | 59,539.27 |
| Addison, I | Adjuster | 58,050.69 |
| Addison, K | Manager, Special Accounts \& Subrogation | 122,458.74 |
| Adolphe, L | Senior Collection Officer | 54,228.07 |
| Agland-O'Connor, B | Fleets Administrator | 55,857.12 |
| Agnew, R | Manager, Service Centre | 107,100.78 |
| Aguilar-Manalo, A | Accountant 1 | 56,611.58 |
| Ahlbaum, C | Project Manager | 101,327.97 |
| Ahmad, A | Senior Analyst | 84,914.52 |
| Akong, R | Contact Centre Supervisor | 60,119.28 |
| Alarie, M | Business Analyst | 72,531.19 |
| Alarie, R | Adjuster | 56,525.16 |
| Alexander, R | Senior Case Manager | 62,534.26 |
| Ali, H | Senior IT Support Analyst | 66,608.22 |
| Ali, S | Claims Cost Controller | 67,873.85 |
| Alkana, J | Communications Officer 2 | 59,627.61 |
| Allan, J | Supervisor, Customer Service Centre | 63,778.28 |
| Allard, L | Senior Adjuster | 59,859.25 |
| Allardyce, D | Service Centre Representative | 52,095.85 |
| Allarie, G | Estimator-City | 67,050.88 |
| Allen, R | Driver Testing Regional Coordinator | 73,250.44 |
| Amante, C | Customer Care Lead | 53,529.04 |
| Ambalina, F | Analyst | 93,580.63 |
| Amiotte, M | Associate Underwriter | 81,224.27 |
| Andersen, G | Manager, Rehabilitation Management | 115,885.59 |
| Anderson, L | Analyst | 73,208.36 |
| Anderson, L | Associate Case Manager | 51,265.02 |
| Anderson, M | Training \& Research Tech - Mech/Auto | 69,546.51 |
| Anderson, M | Broker Services Administrator | 63,674.05 |
| Andres, R | Supervisor, Rural Service Centre | 76,727.02 |
| Angus, C | Senior Case Manager | 75,966.34 |
| Antle, J | Adjuster | 58,125.95 |
| Apostolopoulos, K | Senior Instructional Designer | 69,241.54 |
| Appelt, B | Reviewing Officer | 56,867.39 |
| Apperley, K | Buyer | 53,024.15 |
| Arabsky, H | Manager, Service Centre | 90,483.52 |
| Arendt, E | Senior Analyst | 96,864.34 |
| Armour, T | Driver Examiner Lead | 64,045.84 |
| Armstrong, J | Senior Case Manager | 75,686.17 |
| Arnason, D | Manager, Fair Practices \& Customer Relations | 106,124.44 |
| Arnold, J | Customer Relations Officer | 61,675.27 |

## Name

Total Compensation

Arvidson, B
Ashley, M
Asselstine, C
Au, P
$A u, R$
$A u, T$
Babiuk, D
Backstrom, J
Bailer, K
Bailey, S
Bailey, S
Bailey, W
Baker, I
Baker, L
Banwait, P
Baran, T
Barbour, G
Barchyn, J
Barker, D
Barnett, P
Barr, B
Barrault, S
Barron, M
Barske, B
Beaudoin, G
Beaulieu, G
Beaulieu, R
Beaumont, R
Beck, C
Bees, J
Bell, R
Bell, R
Bell, S
Bender, D
Bernardin, M
Bernhardt, D
Bernier, M
Berriault, L
Berthelette, T
Best, C
Betker, J
Betker, S
Beyer, A
Bezte, D
Bielinski, J

| Customer Relations Officer | 59,584.52 |
| :---: | :---: |
| Special Investigator | 77,214.56 |
| Supervisor, Salvage Yard | 70,115.40 |
| Business Analyst | 69,543.35 |
| Road Safety Issues Specialist | 67,656.32 |
| Manager, Basic Autopac Special Services | 113,407.09 |
| Special Investigator | 82,309.68 |
| Estimating Coordinator | 81,942.95 |
| HR Advisor | 88,038.85 |
| Executive Director, Product \& Policy Management | 161,717.85 |
| Manager, Service Centre | 108,862.30 |
| Driver Examiner | 55,953.53 |
| Business Analyst | 71,274.27 |
| Subrogation Specialist | 59,546.19 |
| Analyst | 78,372.29 |
| Driver Examiner Lead | 60,504.06 |
| Senior Case Manager | 76,506.47 |
| Claims Supervisor | 75,926.38 |
| Manager, Contact Centre Operations | 85,056.60 |
| Manager, Product Support Insurance, Licensing \& Identity | 111,000.51 |
| Estimator-Rural | 66,178.43 |
| Accountant 2 | 74,745.02 |
| Adjuster | 55,620.18 |
| Driver Examiner | 56,259.36 |
| Senior Case Manager | 67,659.79 |
| Legal Processor 2 | 71,603.16 |
| Customer Care Lead | 55,047.67 |
| Business Analyst | 78,337.02 |
| Manager, Medical Compliance \& Assessments | 96,715.63 |
| Accountant 2 | 83,956.03 |
| Fair Practices Analyst | 72,813.86 |
| Clerk 3 | 52,224.34 |
| Community Program Coordinator | 60,266.77 |
| Adjuster | 57,243.48 |
| Associate Adjuster/Driver Examiner 2 | 68,337.79 |
| Reviewing Officer | 59,626.41 |
| Training \& Research Tech - Mech/Auto | 68,668.55 |
| Estimator-City | 69,753.20 |
| Payroll Coordinator | 127,623.54 |
| Estimator-City | 73,904.85 |
| Programmer/Analyst | 57,116.02 |
| Senior Staff Development Consultant | 80,588.28 |
| Solicitor 2 | 78,538.37 |
| Executive Director, Business Transformation Office | 115,004.91 |
| Quality Control Inspector | 75,121.50 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Bileski, J | Staff Development Consultant | 69,510.26 |
| Billard, D | Systems User Analyst | 54,455.33 |
| Birch, G | Manager, Service Centre | 96,188.90 |
| Birss, S | Facilities/Premises Administrator | 84,507.98 |
| Bittner, S | Service Centre Representative | 51,274.47 |
| Bjore, L | Senior Case Manager | 78,194.20 |
| Bjornson, V | Premises Coordinator | 54,751.74 |
| Black, C | Vehicle Standards Officer | 63,881.52 |
| Blackman, B | Reviewing Officer | 58,997.38 |
| Blackmon, W | Administrative Officer | 50,909.47 |
| Blain, S | Contact Centre Supervisor | 56,665.32 |
| Blain, V | Senior Organizational Change Management Consultant | 59,624.97 |
| Blake, R | Senior IT Analyst | 65,053.22 |
| Blerot, G | Case Manager 2 | 62,236.43 |
| Blue, $B$ | Commercial Registrations Representative | 52,625.90 |
| Bobbie, J | Senior IT Analyst | 121,249.90 |
| Boblinski, T | Knowledge Management Service Delivery Manager | 102,435.69 |
| Bodanski, M | Payroll Administrator | 51,976.52 |
| Bodnarchuk, G | Estimator-City | 60,816.73 |
| Bodz, V | Injury Management Coordinator | 83,167.84 |
| Bohm, K | Associate Adjuster/Driver Examiner 2 | 50,489.20 |
| Bohonos, M | Supervisor, Customer Service Centre | 62,418.77 |
| Boisjoli, J | IT Analyst | 82,305.25 |
| Boiteau, R | Senior Security Advisor | 77,336.52 |
| Boivin, B | Contact Centre Supervisor | 73,259.12 |
| Bonan, S | Executive Assistant | 65,834.24 |
| Bonazew, K | Manager, Estimating Services | 98,340.73 |
| Bonney, B | Quality Control Inspector | 94,655.71 |
| Boroditsky, A | Accounts Payable Clerk | 66,668.08 |
| Borowski, P | IT Support Analyst | 60,480.37 |
| Bouchard, J | Instructional Designer | 55,733.70 |
| Bouchard, K | Adjuster | 55,227.29 |
| Bouchard, R | Case Manager 2 | 71,700.29 |
| Bouchard, R | Estimator-Rural | 70,878.52 |
| Bourgeois, S | Estimator-City | 66,110.41 |
| Bourgouin, C | Senior IT Analyst | 78,490.78 |
| Bourrier, M | Subrogation Adjuster | 50,512.16 |
| Bouvier, S | Underwriter 1 | 53,897.03 |
| Bowering, J | Claims Controller - Physical Damage | 70,324.36 |
| Bowman, D | Business Analyst | 65,387.26 |
| Boyd, G | Business Analyst | 72,320.24 |
| Bozek, R | Internal Review Officer | 77,879.71 |
| Bradford, K | Assistant Manager, Administrative Services | 73,432.55 |
| Brand, S | Senior Business Analyst | 53,830.02 |
| Brannan, S | Tech Communications Lead | 52,548.81 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Braun, J | Customer Care Agent 2 | 50,474.11 |
| Breault, C | Adjuster | 57,735.40 |
| Breault, L | Manager, Human Resource Services | 98,131.14 |
| Breedon, E | Supervisor, Rural Service Centre | 75,314.86 |
| Breland, L | Adjuster | 59,810.96 |
| Brennan, T | Injury Management Coordinator | 80,722.91 |
| Brezden, W | Vehicle Standards Officer | 66,636.28 |
| Brin, W | Adjuster | 55,378.35 |
| Briscoe, A | Case Manager 2 | 68,208.31 |
| Broder, M | Senior Business Analyst | 82,972.91 |
| Brooker, D | Training \& Research Tech - Mech/Auto | 68,954.32 |
| Broughton, D | Estimator-City | 67,185.57 |
| Brown, A | Senior Case Manager | 71,947.29 |
| Brown, A | Claims Supervisor | 59,709.21 |
| Brown, D | Service Centre Representative | 51,417.21 |
| Brown, J | Accountant 1 | 54,675.06 |
| Brown, T | Solicitor 2 | 109,054.97 |
| Brownlee, A | Manager, IT Service Management | 99,708.73 |
| Bruce, G | Associate Adjuster/Driver Examiner 2 | 59,354.39 |
| Brugger, B | Driver Examiner | 56,104.73 |
| Bruzell, B | Driver Examiner | 57,058.67 |
| Bryden, S | Senior IT Analyst | 90,193.78 |
| Buchan, L | Technical Communications Lead | 59,284.94 |
| Buchanan, B | Injury Claims Adjuster | 78,003.97 |
| Buchberger, K | Senior Case Manager | 73,146.00 |
| Budgell, D | Customer Relations Officer | 67,538.10 |
| Bueckert, K | Customer Care Lead | 51,498.72 |
| Buendia, M | Legal Processor | 60,705.45 |
| Buie, C | Identity Interview Coordinator | 58,806.56 |
| Buisson, J | Case Manager 2 | 59,064.38 |
| Buizer, K | Special Investigator | 83,933.66 |
| Buller, E | Senior Analyst | 97,137.50 |
| Bunko, B | Executive Director, Information Technology | 151,184.16 |
| Bunston, G | Manager, Investments (Secondment) | 110,949.19 |
| Burbella, D | Assistant Manager, Service Centre | 75,949.27 |
| Burdz, M | Senior Business Analyst | 62,161.73 |
| Burke, J | Corporate Application Architect | 114,455.87 |
| Burns, D | Manager, Licensing Services | 94,955.86 |
| Burns, K | IRI Analyst | 68,906.73 |
| Burt, J | Manager, Special Risk Extension | 107,143.03 |
| Burtniak, S | Fleets Administrator | 51,452.67 |
| Burzuik, G | Estimator-City | 80,397.89 |
| Cabral, L | Case Manager 2 | 63,485.69 |
| Cairns, B | Special Investigator | 78,803.05 |
| Cairns, K | Instructional Designer | 55,763.54 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Calas, P | Auditor 1 | 55,437.35 |
| Caligiuri, C | Systems User Analyst | 58,819.01 |
| Cameron, K | Manager, Vehicle Standards \& Inspections | 79,189.89 |
| Campbell, C | Executive Director, Finance \& Corporate Controller | 156,631.76 |
| Campbell, P | Customer Service Representative | 52,234.97 |
| Campbell, S | Estimator-City | 64,511.74 |
| Campbell, T | Driver Examiner | 56,567.59 |
| Carbotte, C | Customer Care Lead | 55,666.82 |
| Cardillo, M | Senior Investment Analyst | 78,398.26 |
| Carter, T | Customer Care Agent 2 | 52,253.13 |
| Carton, V | Underwriting Supervisor | 83,128.90 |
| Castles-Shinnimin, M | Senior Case Manager | 76,112.60 |
| Cavanagh, W | Vehicle Standards Officer | 58,695.55 |
| Celones, E | Adjuster | 55,002.49 |
| Chalmers, C | Senior Adjuster | 65,910.94 |
| Chalmers, J | Service Centre Representative | 50,268.69 |
| Chamberlain, C | Quality Control Inspector | 76,596.51 |
| Champagne, S | Service Centre Representative | 51,136.96 |
| Charles, D | Commercial Specialist | 74,699.49 |
| Chartier, N | Service Centre Representative | 51,305.44 |
| Chartrand, B | Estimator-Rural | 68,904.69 |
| Chartrand, M | Case Manager 2 | 65,217.34 |
| Chastko, D | Knowledge Management Portfolio Manager | 82,900.32 |
| Chaudhuri, A | Business Analyst | 64,732.42 |
| Cheadle, A | Business Analyst | 69,515.89 |
| Chestley, D | Senior Case Manager | 77,451.11 |
| Chicoine, C | Senior IT Analyst | 101,611.07 |
| Chimuk, D | Manager, PDC Claims Operations | 108,930.70 |
| Cholod, D | Injury Management Coordinator | 84,984.94 |
| Chomski, A | Senior Investment Analyst | 82,073.69 |
| Chorney, J | Service Centre Representative | 52,304.79 |
| Chubaty, D | Case Manager 2 | 68,002.89 |
| Cielen, B | Adjuster | 54,910.13 |
| Claridge, D | Service Centre Representative | 51,536.81 |
| Clark, C | Senior Project Manager | 94,583.35 |
| Clark, K | Case Manager 2 | 58,816.39 |
| Clark, L | Case Manager 2 | 58,456.80 |
| Clearwater, T | Actuarial Analyst | 72,015.73 |
| Clemens, D | IT Analyst | 89,840.51 |
| Cole, K | Supervisor, Rural Service Centre | 69,782.92 |
| Coleman, C | Adjuster | 58,161.92 |
| Collins, D | Case Manager 2 | 61,405.02 |
| Copp, K | Business Analyst | 70,912.52 |
| Cordeiro, S | Clerk Typist 2 | 50,847.99 |
| Cordova, E | Service Centre Representative | 54,581.37 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Corley, J | Adjuster | 54,374.71 |
| Corley, J | Commercial Specialist | 53,175.45 |
| Cormier, C | Manager, Special Investigation Unit | 108,601.81 |
| Correia, K | Service Centre Representative | 53,835.01 |
| Costa, M | Claims Processor | 54,069.33 |
| Cosyns, P | Analyst | 67,527.66 |
| Coulson, C | Quality Control Inspector | 77,148.86 |
| Courchene, S | Accountant 1 | 59,139.59 |
| Court, T | Special Investigator | 79,053.51 |
| Craig, C | Driver Examiner | 59,454.96 |
| Crittenden, R | Manager, IT Support \& Operations | 122,286.43 |
| Crocker, W | Estimating Coordinator | 73,557.23 |
| Crowston, E | Assistant Manager, Customer Service | 91,093.25 |
| Cudden, F | IRI Analyst | 63,608.64 |
| Cueto, M | Clerk 3 | 65,349.41 |
| Cullen, C | Manager, Service Centre | 80,608.42 |
| Cumming, L | Director, Special Risk Extension | 119,638.89 |
| Cupples, J | Case Manager 2 | 67,504.99 |
| Currie, L | Communications Officer 2 | 55,275.23 |
| Curtaz, J | Business Analyst | 74,265.09 |
| Curtis, D | Clerk Typist 2 | 52,327.43 |
| Cyrenne, R | Reviewing Officer | 61,166.51 |
| Daeninck, A | Corporate Application Architect | 57,592.10 |
| Daley, D | Reviewing Officer | 59,461.94 |
| Damasco, M | Business Analyst | 67,440.83 |
| Danais, A | Senior Analyst | 86,309.42 |
| D'Andrea, C | Medical Fitness Administrator | 73,375.37 |
| Darragh, E | Adjuster | 55,101.57 |
| Dattero, G | Senior Adjuster | 55,599.41 |
| Davey, P | Fleet Vehicle Administrator | 61,606.37 |
| Davidson, K | Assistant Manager, Rehabilitation Management | 96,626.12 |
| Dayman, C | Adjuster | 52,453.24 |
| Dayman, R | Vehicle Standards Supervisor | 67,436.21 |
| Dayne, J | Adjuster | 57,388.02 |
| De Cruyenaere, A | Clerical Supervisor | 55,139.58 |
| De Jesus, E | IT Analyst | 96,490.70 |
| Debeuckelaere, T | Senior Case Manager | 77,859.29 |
| Decock, T | Adjuster | 61,005.60 |
| Defolter, A | Manager, Salvage \& Holding Compound | 107,071.85 |
| Delamater, N | Quality Control Inspector | 73,635.80 |
| Deluca, C | Systems User Analyst | 57,920.42 |
| Deluna, D | Customer Relations Officer | 67,697.83 |
| Denby, W | Clerk Typist 2 | 63,342.49 |
| Deogun, A | Analyst | 74,193.06 |
| Desautels, A | Driver Examiner | 51,711.37 |


| Name | Position Title | Total Compensation |  |
| :---: | :---: | :---: | :---: |
| Desmond, T | Special Investigator | 114,518.33 | * |
| Deveau, Y | HR Advisor | 60,834.96 |  |
| Devlin, S | Claims Controller - Injury | 88,143.68 |  |
| Devodder, J | Senior IT Analyst | 111,246.86 |  |
| Diduch, C | Senior Case Manager | 67,591.39 |  |
| Dion, D | Estimator-City | 69,641.20 |  |
| Dirks, P | Manager, Service Operations Policy \& Control | 94,371.50 |  |
| Dittmar, W | Injury Management Coordinator | 86,730.20 |  |
| Dixon, N | Autopac Program Coordinator | 62,017.53 |  |
| Doherty, V | Senior Case Manager | 77,945.33 |  |
| Dohler, M | Medical Assessment Supervisor | 66,789.30 |  |
| Dola, J | Senior Adjuster | 67,555.15 |  |
| Dolski, D | Customer Care Agent 2 | 53,432.12 |  |
| Dominguez, F | Business Analyst | 55,056.39 |  |
| Domish, C | Senior Case Manager | 78,174.07 |  |
| Donaldson, D | Buyer | 51,519.76 |  |
| Donay, M | Customer Care Lead | 55,651.88 |  |
| Doskoch, M | Accountant 1 | 50,171.19 |  |
| Douglas, A | Claims Supervisor | 103,008.15 | ** |
| Douglas, M | HRMS Coordinator | 99,332.90 |  |
| Douglass, T | Senior Instructional Designer | 68,713.53 |  |
| Downie, K | Adjuster | 60,050.74 |  |
| Drummond, R | Senior IT Support Analyst | 71,486.11 |  |
| Dubowits, J | Estimator-City | 73,246.01 |  |
| Duckett, K | Special Investigator | 81,942.99 |  |
| Duda, R | Customer Account Representative | 59,236.84 |  |
| Dufault, J | Driver Ed Liaison Officer | 58,103.15 |  |
| Dufault, L | Case Manager 1 | 55,357.37 |  |
| Dundas, I | Corporate Application Architect | 105,432.02 |  |
| Dunlop, D | Vehicle Registrations Coordinator | 63,872.22 |  |
| Dunstone, D | Assistant Manager, Risk Control \& Financial Forecasting | 89,346.96 |  |
| Dunstone, D | Knowledge Management Portfolio Manager | 77,824.40 |  |
| Dutchyszen, P | Systems User Analyst | 59,886.86 |  |
| Duval, J | Supervisor, Salvage Administration | 63,466.38 |  |
| Dvorak, J | Manager, Product Support BI, PD \& Supporting Applications | 106,142.56 |  |
| Dyck, J | Investigator | 83,556.51 |  |
| Dyck, L | Case Manager 1 | 50,666.00 |  |
| Dyer, G | Analyst - COTS Applications | 81,482.42 |  |
| Eckberg, B | Commercial Registrations Representative | 52,454.58 |  |
| Eden, C | Project Manager | 90,325.97 |  |
| Edginton, G | Corporate Application Architect | 99,659.05 |  |
| Edwards, A | Reinspection Estimator | 69,248.43 |  |
| Egan, D | Senior Case Manager | 77,884.11 |  |
| Eger, R | Estimator-City | 60,035.43 |  |
| Eisener, D | PIPP Benefits Administrator | 53,491.29 |  |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Eisner, R | Senior Case Manager | 74,473.24 |
| Ekdahl, S | Senior Business Analyst | 77,649.72 |
| Embury, M | HR Diversity Coordinator | 82,535.44 |
| Emes-Macklin, B | Manager, Legislation Management | 96,588.88 |
| Empey, G | Service Centre Representative | 53,187.08 |
| Engbrecht, A | Senior Instructional Designer | 68,237.84 |
| Enns, C | Knowledge Management Portfolio Manager | 97,621.13 |
| Enns, L | Medical Fitness Administrator | 54,265.24 |
| Esak, M | Customer Care Lead | 51,933.03 |
| Esau, G | Driver Examiner | 55,056.00 |
| Estares, J | Senior Business Analyst | 67,449.28 |
| Eyres, D | Supervisor, Rural Service Centre | 90,718.68 |
| Fahrenschon, T | Adjuster | 55,518.36 |
| Faria, P | Vehicle Registrations Coordinator | 67,588.94 |
| Farnsworth, P | Special Investigator | 76,308.90 |
| Fast, C | Underwriter 1 | 56,758.21 |
| Fast, K | Senior Adjuster | 66,814.90 |
| Fecyk, K | Customer Care Agent 2 | 54,136.90 |
| Felbel, A | Special Investigator | 77,214.62 |
| Fender, J | Service Centre Representative | 51,437.23 |
| Feng, Y | IT Support Analyst | 60,631.61 |
| Fenske, K | Manager, Advertising | 77,689.62 |
| Fernando, S | Programmer/Analyst | 53,761.21 |
| Ferreira, R | Estimating Supervisor | 72,961.44 |
| Fiks, M | Manager, Basic Autopac Special Services | 88,369.76 |
| Fillion, K | Senior Case Manager | 76,304.98 |
| Findlay, D | Manager, Glass Audit and Specialty Valuations | 90,306.04 |
| Firman, S | Service Centre Representative | 51,263.11 |
| Fish, D | Broker Services Administrator | 58,535.35 |
| Fisher, D | Analyst | 83,232.09 |
| Fisher, L | Supervisor, Customer Service Centre | 52,385.93 |
| Fitzmaurice, T | Senior Test Administrator | 59,771.91 |
| Fleming, D | Tow Truck Operator | 56,125.65 |
| Flikweert, K | Senior Adjuster | 62,124.14 |
| Foley, R | Senior Adjuster | 58,975.19 |
| Fomgbami, Z | Adjuster | 58,002.78 |
| Fontaine, D | Driver Examiner Lead | 66,569.00 |
| Forrest, J | Supervisor, Customer Service Centre | 58,827.66 |
| Forrest, J | Adjuster | 54,640.25 |
| Fosty, B | Manager, Driver Testing Policy \& Evaluation | 86,163.44 |
| Fosty, P | Driver Training Permit Officer | 58,824.11 |
| Fotheringham, B | Identity Verification Supervisor | 50,588.93 |
| Foulkes, G | Case Manager 2 | 58,149.35 |
| Frazer, D | Accountant 2 | 63,929.21 |
| Frechette, F | Reviewing Officer | 51,737.06 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Frederickson, F | Senior Instructional Designer | 69,577.25 |
| Friesen, J | Senior Case Manager | 61,629.59 |
| Friesen, K | Senior Business Continuity Coordinator | 74,188.84 |
| Froese, G | Quality Control Coordinator | 81,950.36 |
| Froese, W | Senior Case Manager | 90,944.62 |
| Fujiwara, T | Estimator-City | 66,396.83 |
| Funk, K | Employee \& Labour Relations Specialist | 82,384.31 |
| Fuz, J | Assistant Manager, Commercial Claims | 90,563.75 |
| Gagne, J | Director, Corporate Services \& Salvage Operations | 122,402.32 |
| Gagne, P | Analyst | 84,688.96 |
| Galezowski, L | Driver Examiner Lead | 65,859.62 |
| Galka, R | Purchasing Agent | 59,427.62 |
| Gallant, N | Claims Supervisor | 69,421.71 |
| Garn, P | Senior Analyst | 100,260.81 |
| Garofoli, D | Senior Business Analyst | 63,118.89 |
| Garwood, M | Senior Case Manager | 77,740.38 |
| Gaskin, H | Senior Case Manager | 81,143.74 |
| Gatherum, J | Claims Supervisor | 80,873.84 |
| Gaucher, M | Knowledge Management Portfolio Manager | 69,383.39 |
| Gaudry, G | Assistant Manager, Financial Reporting | 85,925.21 |
| Geake, D | Accountant 1 | 51,670.02 |
| Geiger, C | Service Centre Representative | 51,937.50 |
| Gendreau, L | HR Advisor | 72,604.55 |
| General, E | Programmer | 50,208.43 |
| Germain, D | Manager, Service Centre | 102,975.91 |
| German, M | Quality Control Coordinator | 80,207.54 |
| Gerullis, G | Community Program Coordinator | 57,915.03 |
| Getty, J | Service Centre Representative | 50,667.49 |
| Giannico, M | Customer Relations Officer | 67,517.96 |
| Giasson, C | Yardman | 57,415.64 |
| Gibbs, N | Service Centre Representative | 50,267.21 |
| Gibson, K | Underwriter 1 | 55,073.16 |
| Gibson, T | Business Analyst | 52,693.81 |
| Giesbrecht, B | Claims Cost Controller | 90,884.54 |
| Giesbrecht, W | Adjuster | 56,932.59 |
| Gilbert, S | Business Analyst | 50,587.47 |
| Gilmore, C | Driver Examiner | 54,537.07 |
| Gingras, M | Adjuster | 57,228.60 |
| Glenday, C | Contact Centre Supervisor | 59,469.11 |
| Glowa, R | Subrogation Specialist 2 | 65,094.72 |
| Gobeil, L | Customer Care Agent 2 | 50,089.34 |
| Goddard, S | Senior Case Manager | 75,527.20 |
| Goertzen, C | Internal Review Officer | 60,368.57 |
| Goertzen, I | Claims Cost Controller | 84,820.56 |
| Golinski, B | Records Management Supervisor | 55,066.86 |


| Name | Position Title | Total Compensation |  |
| :---: | :---: | :---: | :---: |
| Gompf, V | Subrogation Adjuster | 52,791.93 |  |
| Gonzales, D | Clerk Typist 3 | 51,256.32 | * |
| Gonzales, T | Associate Business Analyst | 51,232.12 |  |
| Goos, A | Strategic Communications Coordinator | 71,925.20 |  |
| Gosnell, M | Associate Adjuster/Driver Examiner 2 | 50,322.18 |  |
| Gospodyn, L | Systems User Analyst | 59,017.58 |  |
| Gowen, T | Commercial Estimator | 63,487.55 |  |
| Graham, C | Case Manager 2 | 64,895.98 |  |
| Graham, S | Test Administrator | 55,592.64 |  |
| Graham, T | Service Centre Representative | 50,587.51 |  |
| Granger, B | Senior Case Manager | 68,309.93 |  |
| Grantham, D | Analyst | 58,487.82 |  |
| Gray, B | Manager, Driver Improvement \& Control | 93,024.36 |  |
| Gray, D | Manager, Contact Centre Operations | 114,743.16 | ** |
| Greco, F | Heavy Vehicle Service Representative | 55,139.45 |  |
| Green, B | Driver Examiner | 59,288.63 |  |
| Greenberg, N | Claims Controller - Injury | 90,339.14 |  |
| Greig, R | Vehicle Standards Officer | 65,192.55 |  |
| Grenier, R | Adjuster | 57,663.15 |  |
| Griffith-Parker, B | Senior Graphic Designer | 62,045.41 |  |
| Griffith-Parker, J | Senior IT Analyst | 64,525.12 |  |
| Griffiths, D | Reviewing Officer | 82,008.43 | ** |
| Grose, T | Driver Examiner | 56,617.00 |  |
| Grossman, P | Assistant Manager, Customer Service | 82,342.11 |  |
| Gudz, T | Systems User Analyst | 55,425.00 |  |
| Guick, A | Estimator-Rural | 67,832.54 |  |
| Guimond, D | Vice President, Strategy \& Innovation and CIO | 234,612.54 |  |
| Gunn, C | Assistant Manager, Service Centre | 90,319.16 |  |
| Haaksma, J | Assistant Manager, IT Service Desk | 74,264.23 |  |
| Hagan, B | Manager, Risk Control \& Financial Forecasting | 64,730.82 |  |
| Haire, S | Tech Communications Lead | 60,469.78 |  |
| Haithwaite, R | Executive Director, Injury Claims Management | 168,889.86 |  |
| Halabiski, J | Senior IT Support Analyst | 91,481.96 |  |
| Hall, L | Systems User Analyst | 59,099.31 |  |
| Hallock, J | Purchasing Agent | 59,263.19 |  |
| Hallonquist, J | Director, Insurance \& Licensing Operations | 144,867.61 |  |
| Hanlan, E | Estimator-City | 63,987.00 |  |
| Hannah, H | Senior Injury Claims Adjuster | 74,489.80 |  |
| Harasym, C | Adjuster | 58,822.87 |  |
| Harmacy, S | Estimating Supervisor | 65,546.06 |  |
| Harron, P | Senior Underwriter | 73,124.62 |  |
| Hartwich, S | Medical Fitness Administrator | 71,897.24 |  |
| Harvey, L | Director, Service Operations Control \& Compliance | 107,241.23 |  |
| Harvey, M | Underwriting Supervisor | 77,739.14 |  |
| Hastings, M | Supervisor, Customer Service Centre | 56,557.56 |  |

## Name

Position Title

## Total Compensation

| Hauser, T | Senior Case Manager | 68,162.00 |
| :---: | :---: | :---: |
| Haywood, T | Customer Care Agent 2 | 51,187.74 |
| Hazelwood, B | Systems User Analyst | 57,686.41 |
| Heinrichs, C | Supervisor, IT Services | 100,188.82 |
| Heintz, D | Estimating Supervisor | 74,665.25 |
| Heise, H | Estimating Supervisor | 84,973.90 |
| Helgason, N | Adjuster | 50,131.74 |
| Henderson, J | Adjuster | 57,264.14 |
| Henderson, K | Senior Case Manager | 70,019.81 |
| Hendricks, C | Senior Business Analyst | 76,774.73 |
| Henry, C | Adjuster | 56,737.14 |
| Hermary, M | Vehicle Standards Officer | 59,318.25 |
| Higgins, D | Systems User Analyst | 53,084.91 |
| Higgs, D | Supervisor, Rural Service Centre | 72,447.70 |
| Higham, R | Senior Case Manager | 77,496.13 |
| Hildawa, R | Business Analyst | 70,199.27 |
| Hildebrand, K | Estimating Supervisor | 73,641.51 |
| Hill, P | Respectful Workplace Advisor | 78,908.31 |
| Hindmarsh, C | Supervisor, Customer Service Centre | 60,053.46 |
| Hlady, S | Adjuster | 54,995.38 |
| Hlatkey, R | Adjuster | 57,518.44 |
| Hnatiuk, C | Adjuster | 57,117.93 |
| Hoadley, C | Auditor 2 | 70,242.70 |
| Hoban, J | HR Benefits Administrator | 51,232.91 |
| Hobson, K | Claims Controller - Physical Damage | 69,043.63 |
| Hocken, C | Director, Knowledge Management Services | 119,477.01 |
| Hoffman, M | Senior Solicitor | 122,155.72 |
| Hoggan, B | Salvage Supervisor | 63,451.83 |
| Hogue, I | Estimating Systems Administrator | 80,236.34 |
| Holgate, R | Accountant 1 | 57,691.72 |
| Holm, D | Manager, Autopac Extension | 188,522.75 |
| Holmes, K | Driver Examiner | 60,803.99 |
| Holowick, D | Payroll Administrator | 59,889.34 |
| Holter, K | Executive Director, Information Technology | 100,664.62 |
| Hook, C | Accounting Clerk 2 | 51,452.66 |
| Hooper, S | Estimator-City | 63,008.11 |
| Hopkins, D | Manager, Financial Reporting \& Budgeting | 111,336.89 |
| Hoppe, D | Estimator-Rural | 65,475.69 |
| Hora, C | Director, Urban Service Centre Operations | 105,958.72 |
| Houston, D | Disability Management Specialist | 102,897.23 |
| Howdle, H | Manager, Health Care Services | 104,294.53 |
| Howe, D | Senior Adjuster | 59,012.83 |
| Hoy, K | Analyst | 87,051.40 |
| Hrabliuk, C | Senior Case Manager | 77,613.03 |
| Huang, L | Actuarial Analyst | 72,032.29 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Hudey, J | Supervisor, PIPP Benefits Administration | 56,834.83 |
| Hudey, S | Research \& Training Coordinator | 82,784.04 |
| Hudson, J | Commercial Specialist | 67,598.22 |
| Humble, J | Senior Business Analyst | 76,698.02 |
| Humphries, E | Special Investigator | 80,365.16 |
| Hunt, T | Community Program Coordinator | 54,558.87 |
| Huppe, G | Fair Practices Analyst | 69,119.75 |
| Hutsal, F | Customer Care Agent 2 | 52,251.81 |
| Huzel, J | Business Analyst | 72,545.71 |
| Hykawy, R | Vehicle Standards Officer | 63,870.25 |
| Ingram, J | Emergency Preparedness \& Safety Coordinator | 74,462.99 |
| Innes, M | Senior IT Support Analyst | 54,413.15 |
| Insch, K | Contact Centre Supervisor | 52,124.53 |
| Irving, C | Systems User Analyst | 62,603.94 |
| Irwin, C | Service Centre Representative | 52,627.92 |
| Isaak, J | Service Centre Representative | 50,943.71 |
| Isaak, N | Analyst | 70,049.41 |
| Isfjord, S | HR Administrator | 85,129.64 |
| Isfjord, T | Senior Business Analyst | 85,061.47 |
| Isidro, M | Organizational Change Management Consultant | 77,390.90 |
| Ismail, M | Assistant Manager, Financial Applications | 83,932.91 |
| Izzard, R | Accountant 2 | 76,228.38 |
| Jackson, W | Commercial Specialist | 63,919.19 |
| Jacob-Azevedo, K | Senior Graphic Designer | 52,782.84 |
| Jagger, H | Senior Case Manager | 80,627.47 |
| Jamieson, S | Systems User Analyst | 59,768.52 |
| Janisse, J | Manager, IT Managed Services | 103,390.84 |
| Jansen, S | Commercial Registrations Supervisor | 55,009.62 |
| Jantz, F | Driver Examiner | 54,992.35 |
| Jassal, G | Accountant 2 | 61,326.60 |
| Jay, R | Programmer/Analyst | 59,234.86 |
| Jeanes, G | Driver Examiner | 57,799.22 |
| Jeanson, R | Commercial Specialist | 58,606.67 |
| Jeffrey, K | Assistant Manager, Claims Services | 88,875.86 |
| Jenkyns, M | Adjuster | 53,876.66 |
| Jia, H | Senior IT Analyst | 96,770.67 |
| Johns, R | Systems User Analyst | 59,875.07 |
| Johnson, D | Staff Development Consultant | 77,682.97 |
| Johnson, D | Programmer/Analyst | 58,013.85 |
| Johnson, J | Clerk 2 | 50,970.97 |
| Johnson, K | Estimator-City | 68,438.80 |
| Johnson, K | Senior Systems User Analyst | 64,305.55 |
| Johnston, G | Executive Director, Business Transformation Office | 103,692.24 |
| Johnston, L | Executive Director, Pricing \& Economics and Chief Actuary | 161,540.45 |
| Jones, G | Adjuster | 57,759.73 |

## Name

Position Title

Jones, L
Jovanovic, M
Jubinville, D
Juhnke, M
Jurkowski, L
Jurkowski, R
Kacher, M
Kalinowsky, K
Kalomiris, H
Karpenko, S
Kashuba, L
Kaspersion, D
Kaspick, J
Kaushal, M
Kaushal, R
Kazubek, S
Keating, D
Kee, A
Kehler, R
Keith, M
Keith, W
Keller, D
Kelly, M
Kempe, M
Kernaghan, B
Keszi, M
Ketola, D
Kibsey, G
Kindrat, D
Kintop, K
Kirby, K
Kirkwood, M
Kjartanson, M
Klassen, A
Klassen, C
Klassen, D
Klassen, H
Klassen, K
Klingbell, S
Klohn, K
Kluner, R
Kneeshaw, B
Kobylinski, M
Kocis, M
Koehl, H

Special Activities Services Officer
Assistant Manager, Accounting Services
Senior IT Administrator - Operations
Case Manager 2
Business Analyst
Driver Improvement Supervisor
Director, Service Operations Control and Compliance
General Counsel \& Corporate Secretary
Analyst - COTS Applications
Assistant Manager, Special Investigations Unit
Assistant Manager, Special Investigation Unit
Accountant 2
Estimating Supervisor
HR Advisor \& Supervisor, HR Support
Driver Examiner
Customer Service Representative
Adjuster
Adjuster
Supervisor, Rural Service Centre
Supervisor, PIPP Benefits Administration
Executive Director, Driver Safety \& Regulatory Control
Estimator-Rural
Policy/Procedure Manual Analyst
Vice President, Community \& Corporate Relations
Contact Centre Supervisor
Multimedia App Developer
Estimator-Rural
Manager, Organizational \& Leadership Development
Adjuster
Business Analyst
Solicitor 2
Adjuster
Systems User Analyst
Adjuster
Analyst
Systems User Analyst
Estimator-City
Team Leader, Broker Services Administration
Analyst
Contact Centre Operations Resource Coordinator
Administrative Officer 2
Supervisor, Customer Service Centre
Assistant Manager, Licencing Services
Estimator-City
Senior Analyst

Total Compensation

58,575.84
89,389.05
55,412.67
55,006.98
56,301.58
58,986.13
117,939.83
204,324.00
81,990.92
87,794.71
88,567.15
72,395.53
67,474.87
80,717.49
56,623.73
52,404.44
53,839.65
56,712.55
86,874.75
58,106.06
161,151.53
68,942.94
56,401.84
244,775.11
60,318.16
58,819.01
76,151.84
100,757.14
55,168.62
64,308.30
78,618.88
55,491.23
59,666.69
50,641.89
56,813.80
57,986.54
92,286.72 **
63,519.46
73,461.42
55,697.91
64,348.70
61,813.79
60,196.55
67,562.45
83,856.34

| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Kokan, D | Analyst | 79,031.14 |
| Kolly, L | Director, Enterprise Project Management Office | 116,775.60 |
| Komadowski, S | Executive Assistant | 66,888.12 |
| Kominowski, P | Adjuster | 56,948.50 |
| Kooiker, C | Analyst | 68,781.99 |
| Koolage, L | Senior Case Manager | 72,778.69 |
| Koots, K | Project Manager | 89,748.66 |
| Kopec, C | Supervisor, Customer Service Centre | 58,741.15 |
| Kopp, D | Fleet Safety Service Representative | 54,904.97 |
| Koroscil, D | Manager, PIPP Support Services | 114,104.07 |
| Korozsi, B | Estimator-City | 68,287.29 |
| Koscielny, K | Underwriter 2 | 61,824.49 |
| Kosowan, R | Supervisor, Commercial Claims | 81,276.30 |
| Kowalchuk, M | Case Manager 2 | 67,704.82 |
| Krahn, M | Injury Claims Adjuster | 56,606.16 |
| Kramer, L | Estimator-City | 67,945.24 |
| Krasnowski, G | Senior Analyst | 100,289.44 |
| Krawchuk, M | Senior IT Analyst | 83,096.22 |
| Kroeger, W | Special Investigator | 78,792.45 |
| Kroeker, C | Adjuster | 54,162.81 |
| Kroll, R | Director, Physical Damage | 100,385.71 |
| Krueger, K | Director, Compulsory Insurance \& Strategic Standards | 121,961.30 |
| Krueger, K | Associate Adjuster/Driver Examiner 2 | 61,312.47 |
| Krupinski, J | Director, Enterprise Portfolio Management Services | 116,208.60 |
| Ksiazek, K | Supervisor, PIPP Benefits Administration | 54,366.28 |
| Kufley, G | Senior Injury Claims Adjuster | 77,451.14 |
| Kulbaba, M | Project Manager | 136,964.59 |
| Kumka, J | Occupational Therapist | 79,161.98 |
| Kumka, T | Solicitor 2 | 113,317.35 |
| Kupchik, L | Senior Case Manager | 77,451.12 |
| Kushnier, E | Adjuster | 58,184.36 |
| Kushnir, A | Analyst | 64,201.53 |
| Kusie, T | Customer Care Agent 2 | 57,129.57 |
| Kwiatkowski, B | Corporate Application Architect | 110,273.33 |
| Kyliuk, T | Analyst | 82,919.07 |
| La Page, A | Programmer/Analyst | 64,688.29 |
| La Page, J | Broker Services Administrator | 55,892.30 |
| Lachance, K | Subrogation Specialist 2 | 67,365.91 |
| Lacroix, P | Privacy \& Information Officer | 81,942.93 |
| Laferriere, M | Analyst | 83,440.62 |
| Lafortune, C | Supervisor, Customer Service Centre | 58,982.74 |
| Lafreniere, R | Senior Adjuster | 55,570.63 |
| Lagace, C | Senior Adjuster | 56,220.89 |
| Laidlaw, D | Project Coordinator | 91,831.75 |
| Lakhno, A | Senior Adjuster | 64,576.50 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Lamb, D | Driver Records Processing Supervisor | 55,293.50 |
| Lambert, J | Adjuster/Driver Examiner | 61,108.24 |
| Lambert, R | Estimator-City | 63,008.11 |
| Lamboo, A | Claims Supervisor | 82,414.14 |
| Lambrecht, K | Analyst | 70,853.32 |
| Lamont, B | Facilities Service Technician | 77,556.25 |
| Lansard, S | Claims Supervisor | 76,742.40 |
| Lapointe, G | Injury Management Coordinator | 82,986.55 |
| Lapointe, J | IT Managed Services Analyst | 80,800.13 |
| Lapratte, P | Estimator-Rural | 60,216.96 |
| Larson, C | Supervisor, Mail and Warehouse | 61,693.71 |
| Lashewicz, L | Customer Care Agent 2 | 53,108.66 |
| Lasuik, B | Claims Supervisor | 64,166.34 |
| Lau, C | Solicitor 2 | 112,750.05 |
| Lau, R | Information Systems Auditor | 83,345.49 |
| Lavallee, C | Contact Centre Supervisor | 59,352.58 |
| Lawrence, M | Senior IT Support Analyst | 86,404.70 |
| Lawrence, M | Business Analyst | 72,990.56 |
| Lawrence, S | Administrative Officer 2 | 66,888.12 |
| Laxdal, G | Business Analyst | 73,044.52 |
| Lazarko, L | Director, IT Infrastructure | 118,282.73 |
| Lea, M | Supervisor, IT Services | 113,915.30 |
| Leach, K | Collection Supervisor | 73,189.66 |
| Lebedeff, T | Clerk 4 | 52,478.30 |
| Leblanc, N | Supervisor, Rural Service Centre | 61,004.88 |
| Lebleu, I | Estimating Systems Clerk | 53,042.07 |
| Lee, R | Business Analyst | 72,768.59 |
| Lee, S | Disaster Recovery Coordinator | 65,299.55 |
| Lee-Ward, B | Senior IT Analyst | 70,994.59 |
| Leganchuk, D | Service Centre Representative | 50,825.21 |
| Lehmann, S | Manager, IT Security, Compliance \& Risk | 111,117.38 |
| Lemoine, C | Senior Graphic Designer | 56,813.88 |
| Lemoine, P | Senior MultiMedia Application Developer | 57,731.70 |
| Lennartz, M | Estimator-Rural | 66,120.50 |
| Lepki, G | Estimating Supervisor | 71,737.24 |
| Leppky, S | Executive Director, Human Resources \& Staff Development | 121,311.55 |
| Lesage, J | Adjuster | 54,240.51 |
| Letkemann, T | Manager, PDC Claims Operations | 108,651.47 |
| Levy, J | Service Centre Representative | 53,446.46 |
| Lewis, C | Senior IT Administrator - Operations | 58,370.70 |
| Lewis, J | Special Investigator | 80,358.26 |
| Lewis, R | Customer Account Representative | 51,284.78 |
| Leys, E | Commercial Estimator | 63,526.24 |
| Leys, T | Estimator-Rural | 60,120.62 |
| Light, D | Special Investigator | 77,214.58 |

## Name

Position Title

Total Compensation

| Link Adams, S | Senior Case Manager | 63,830.70 |
| :---: | :---: | :---: |
| Link, C | Assistant Manager, Rehabilitation Management | 82,686.37 |
| Litke, D | Accountant 2 | 72,097.61 |
| Lobban, E | Senior Case Manager | 69,857.84 |
| Locke, C | Driver Ed Liaison Officer | 59,896.66 |
| Locke, J | Adjuster | 58,192.46 |
| Loechner, M | Assistant Manager, Service Centre | 81,818.11 |
| Loeppky, G | Injury Management Coordinator | 83,012.28 |
| Loewen, D | Training \& Research Tech - Mech/Auto | 68,892.30 |
| Lofto, D | Assistant Manager, Special Investigation Unit | 85,095.13 |
| Lokke, A | Business Analyst | 66,855.59 |
| Long, R | Adjuster | 59,255.37 |
| Lopushniuk, S | Accounting Clerk 2 | 51,625.40 |
| Lorteau, G | Driver Examiner | 57,970.00 |
| Loster, J | Senior IT Analyst | 131,301.36 |
| Love, D | Driver Examiner Lead | 63,146.01 |
| Lovering, A | Medical Fitness Administrator | 72,482.61 |
| Low, R | Senior Case Manager | 77,457.55 |
| Lueken, C | Accountant 2 | 55,158.13 |
| Luky, C | Glass Audit Supervisor | 56,358.38 |
| Lundy, R | Estimator-City | 64,821.68 |
| Lupky, S | Manager, Serious \& Long Term Case Management | 100,109.42 |
| Lyburn, L | Commercial Specialist | 65,549.15 |
| Lyle, K | Claims Supervisor | 77,595.67 |
| Lyons, J | Strategic Communications Coordinator | 72,301.06 |
| Lysy, C | Analyst | 78,976.91 |
| Lysyk, N | Collection Officer | 51,419.56 |
| Macbeth, R | Analyst | 68,573.41 |
| Maccutcheon, S | Internal Review Officer | 78,343.68 |
| Macdonald, K | Vehicle Standards Officer | 63,870.24 |
| Macdonald, T | Adjuster | 60,468.46 |
| Macdonald, V | Medical Assessment Policy Analyst | 76,560.13 |
| Macfarlane, E | Underwriter 2 | 55,146.07 |
| Machado, N | Contact Centre Quality Analyst | 55,103.57 |
| Mackay, A | Programmer | 50,311.38 |
| Mackay, G | Business Analyst | 72,301.07 |
| Mackeen, M | Assistant Manager, Customer Relations | 73,930.98 |
| Mackeen, T | Senior IT Administrator | 53,924.36 |
| Mackenzie, A | Customer Care Agent 2 | 54,040.44 |
| Macsymach, B | Service Centre Representative | 51,995.67 |
| Madhosingh, T | Business Analyst | 63,104.51 |
| Maeren, D | Driver Records Coordinator | 75,896.52 |
| Maes, D | Estimator-City | 67,062.68 |
| Maharajh, M | Business Analyst | 72,301.06 |
| Maia, E | Driver Ed Liaison Officer | 52,862.69 |



## Position Title

## Total Compensation

| IRI Analyst | 70,934.44 |
| :---: | :---: |
| Business Analyst | 63,588.59 |
| Medical Fitness Administrator | 73,202.96 |
| Premises Coordinator | 63,940.64 |
| Manager, HR Services | 75,871.10 |
| Adjuster | 60,135.13 |
| Service Centre Representative | 51,741.67 |
| Senior Payroll Administrator | 73,352.19 |
| Vice President, Service Operations | 209,773.36 |
| Driver Examiner | 54,904.95 |
| Project Manager | 62,797.86 |
| Solicitor 2 | 96,795.74 |
| Claims Processor | 50,333.35 |
| Subrogation Adjuster | 53,001.96 |
| Customer Care Agent 2 | 52,739.68 |
| Dealer Inspector | 58,833.29 |
| Adjuster | 59,100.56 |
| Senior Project Manager | 96,481.80 |
| Road Safety Issues Specialist | 66,000.76 |
| Policy Research Analyst | 75,886.05 |
| Data Architect | 83,434.57 |
| Senior Subrogation Specialist | 73,582.84 |
| Senior Accounts Receivable Representative | 57,677.69 |
| Estimator-Rural | 66,508.32 |
| Senior MultiMedia Application Developer | 61,976.97 |
| Manager, Quality Control \& Metrics | 97,777.91 |
| Senior Case Manager | 66,390.95 |
| Senior Analyst | 83,182.49 |
| Analyst - Rate Groups | 51,042.03 |
| Adjuster | 57,489.98 |
| Business Analyst | 74,038.37 |
| Estimator-Rural | 70,003.47 |
| Senior Case Manager | 62,393.08 |
| Executive Assistant | 69,959.76 |
| President \& CEO | 304,819.19 |
| Subrogation Adjuster | 56,088.45 |
| Manager, Financial Applications | 111,902.25 |
| Reinspection Estimator | 67,751.14 |
| Adjuster | 52,049.11 |
| Senior IRI Calculator | 53,472.84 |
| Adjuster | 55,583.46 |
| Vehicle Standards Officer | 63,870.21 |
| Senior Adjuster | 60,880.02 |
| Collection Officer | 52,563.58 |
| Accountant 1 | 55,623.58 |

IRI Analyst 70,934.44
Business Analyst 63,588.59
Medical Fitness Administrator 73,202.96
Premises Coordinator 63,940.64
Manager, HR Services 75,871.10
60,135.13
51,741.67
73,352.19
209,773.36
54,904.95
62,797.86 **
96,795.74
50,333.35

52,739.68
58,833.29
59,100.56
96,481.80
66,000.76
75,886.05
83,434.57
73,582.84
57,677.69
66,508.32
61,976.97
97,777.91
66,390.95
83,182.49
51,042.03
57,489.98
74,038.37
70,003.47
62,393.08
69,959.76
304,819.19
56,088.45
111,902.25
67,751.14
52,049.11
53,472.84
55,583.46
63,870.21

52,563.58
55,623.58

| Name | Position Title | Total Compensation |  |
| :---: | :---: | :---: | :---: |
| Melnyk, C | Business Analyst | 79,938.76 |  |
| Melnyk, R | Business Analyst | 70,045.79 |  |
| Melo, L | Injury Management Coordinator | 81,414.41 |  |
| Merchant-Foster, P | Clerical Supervisor | 59,001.05 |  |
| Merke, V | Senior Case Manager | 75,959.72 |  |
| Mestdagh, L | Manager, Service Centre | 103,571.65 |  |
| Meyer, A | Electronic Media Coordinator | 79,627.73 |  |
| Meyer, D | Driver Licensing Liaison Officer | 59,576.44 |  |
| Michie, S | Business Analyst | 69,803.25 |  |
| Middlestead, W | Senior Analyst | 109,234.06 |  |
| Middleton, M | Service Centre Representative | 51,727.15 |  |
| Mikawos, J | Claims Supervisor | 82,859.27 |  |
| Milette, C | Case Manager 2 | 62,702.22 |  |
| Miller, E | Commercial Specialist | 61,461.96 | ** |
| Miller, J | Manager, Service Centre | 105,965.09 |  |
| Millman, ${ }^{\text {T }}$ | Customer Care Lead | 55,500.23 |  |
| Milner, D | Broker Information Coordinator | 51,254.06 |  |
| Minenna, M | Manager, Driver Education \& Training | 96,151.79 |  |
| Mireault, A | Assistant Manager, Internal Audit | 91,209.46 |  |
| Mislan, M | Training \& Research Tech - Mech/Auto | 67,565.83 |  |
| Mitra, S | Director, Physical Damage | 119,091.15 |  |
| Moe, C | Analyst | 70,215.24 |  |
| Mohr, T | Senior Analyst | 101,710.16 |  |
| Moins, M | Estimating Supervisor | 72,588.73 |  |
| Moir, K | Road Safety Issues Specialist | 63,527.32 |  |
| Molinski, D | Estimating Supervisor | 72,700.23 |  |
| Molinski, T | Estimator-City | 70,279.54 |  |
| Molotsky, R | Accounting Clerk 2 | 56,614.56 | * |
| Monchamp, M | Commercial Registrations Representative | 52,742.23 |  |
| Monteith, L | Senior Instructional Designer | 78,504.45 |  |
| Montroy, L | Assistant Manager, Claims Services | 91,080.85 |  |
| Moore, D | Internal Review Officer | 78,443.92 |  |
| Moore, J | Facilities/Premises Administrator | 86,088.10 |  |
| Moore, R | Senior Injury Claims Adjuster | 77,484.22 |  |
| Moorehead, D | Adjuster | 55,243.97 |  |
| Morcos, G | Accountant 1 | 58,864.92 |  |
| Morgan, M | Project Coordinator | 102,428.52 |  |
| Morin, L | Paralegal | 52,143.67 |  |
| Morka, R | Manager, Purchasing | 80,800.52 |  |
| Morley, D | Estimator-City | 54,530.77 |  |
| Moroz, B | Driver Examiner Lead | 69,868.77 |  |
| Morris, R | Estimator-Rural | 65,231.48 |  |
| Morrish, A | Clerk 3 Receiver | 51,336.45 |  |
| Morrison, T | Vehicle Standards Supervisor | 70,550.05 |  |
| Morrissette, R | Administrative Officer 2 | 55,573.39 | * |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Morton, S | Adjuster | 55,221.74 |
| Mosiuk, B | Business Analyst | 69,472.72 |
| Moski, J | Senior Case Manager | 77,665.34 |
| Mowat, B | Senior Analyst | 89,871.65 |
| Mulcahy, S | Accountant 1 | 59,472.70 |
| Mulholland, J | Contact Centre Supervisor | 56,362.51 |
| Murphy, C | Facilities/Premises Administrator | 77,606.12 |
| Murphy, T | Underwriter 1 | 54,912.96 |
| Murray, G | Special Investigator | 80,465.44 |
| Murray, P | Workplace Safety Advisor | 66,449.53 |
| Mutter, J | Accountant 2 | 73,308.54 |
| Mwanza, O | Manager, Strategic Research | 98,295.24 |
| Myshkowsky, S | Executive Assistant | 66,114.44 |
| Naldrett, L | Compensation \& Benefits Analyst | 72,607.51 |
| Naldrett, T | Subrogation Controller | 67,875.18 |
| Napier, B | Special Investigator | 77,217.91 |
| Natt, G | IT Support Analyst | 51,434.68 |
| Nault, J | Estimator-City | 63,008.13 |
| Nault, L | Supervisor, Customer Service Centre | 61,719.83 |
| Navarro, L | Analyst | 64,944.38 |
| Nealin, L | Strategic Communications Coordinator | 71,464.81 |
| Neiser, S | Senior Case Manager | 81,308.59 |
| Neskar, P | Adjuster Driver Examiner | 67,424.48 |
| Neufeld, C | Estimator-City | 59,694.04 |
| Neufeld, J | Adjuster | 56,028.07 |
| Neufeld, K | Estimator-Rural | 68,640.07 |
| Neufeld, P | Senior Systems User Analyst | 70,633.07 |
| Neufeld, R | Commercial Estimator | 63,213.10 |
| Neufeld, S | Clerk Typist 4 | 51,452.68 |
| Newman, D | Manager, Premises | 111,871.90 |
| Newton, K | Injury Management Coordinator | 78,720.93 |
| Newton, ${ }^{\text {T }}$ | Underwriting Supervisor | 70,872.45 |
| Nickel, D | Senior Business Analyst | 73,504.00 |
| Nimmagadda, C | Assistant Manager, Contact Centre Operations | 75,045.69 |
| Nixon, L | Special Investigator | 81,942.94 |
| Nordstrom, D | Senior Case Manager | 79,304.67 |
| Norris, C | Customer Account Representative | 52,339.39 |
| Novak, D | Senior Case Manager | 80,253.27 |
| Nuevo, M | Programmer/Analyst | 55,101.73 |
| Oberholtzer, J | Senior Adjuster | 55,987.24 |
| Odlum, J | Estimator-City | 60,193.92 |
| Oertel, E | Facilities Service Technician | 69,927.01 |
| Okun, J | Estimating Supervisor | 77,529.85 |
| Olijnek, J | Senior Graphic Designer | 60,119.28 |
| Olsen, C | Knowledge Management Portfolio Manager | 88,466.84 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Olson, A | Adjuster | 52,470.22 |
| Onofreychuk, L | Business Analyst | 75,285.35 |
| Oravec, D | Project Manager | 90,306.06 |
| Orlukiewicz, P | Senior IT Administrator | 50,403.37 |
| Orlukiewicz, T | Security Advisor | 83,314.04 |
| Osborne, B | Claims Controller - Injury | 83,490.93 |
| Owen, R | Senior Case Manager | 80,120.80 |
| Owen, S | Legal Processor | 60,082.77 |
| Ozouf, R | Senior IT Support Analyst | 70,434.37 |
| Pacheco Valente, L | Service Centre Representative | 50,661.31 |
| Pagsuyuin, N | Data Entry Supervisor | 73,159.44 |
| Palatino, R | Auditor 2 | 70,058.51 |
| Palmer, D | Vice President, Finance \& CFO | 66,193.64 |
| Palsson, S | Accountant 2 | 72,043.06 |
| Pankratz Wieler, S | Senior Business Analyst | 57,545.89 |
| Pariyasamy, K | Manager, Application Services | 115,047.54 |
| Park, P | Programmer/Analyst | 56,785.56 |
| Partaker, T | Programmer/Analyst | 52,033.46 |
| Paton, B | Claims Supervisor | 74,195.91 |
| Patton, S | Senior Business Analyst | 78,454.80 |
| Paul, B | Case Manager 2 | 65,445.23 |
| Paul, G | Claims System Analyst | 55,087.02 |
| Pauls, $T$ | Systems User Analyst | 57,873.62 |
| Paulus, J | Adjuster | 58,068.61 |
| Pavluk, T | Adjuster | 62,466.80 |
| Pawella, C | Executive Assistant | 66,912.27 |
| Pedrosa, J | Case Manager 2 | 57,727.29 |
| Pellegrino, D | Adjuster | 55,563.89 |
| Peloquin, L | Service Centre Representative | 50,267.18 |
| Pemkowski, D | Manager, Fair Practices \& Customer Relations | 109,150.42 |
| Peniuk, K | Adjuster | 56,954.50 |
| Penner, H | Vehicle Control Supervisor | 71,432.16 |
| Penner, W | Data Architect | 109,508.20 |
| Pereira, D | Senior Case Manager | 80,097.35 |
| Perez, G | Adjuster | 58,196.92 |
| Perkins, D | Supervisor, Rural Service Centre | 83,128.89 |
| Perreault, S | Service Centre Representative | 55,586.51 |
| Peterson, B | Facilities/Premises Administrator | 71,774.54 |
| Peterson, D | Senior Case Manager | 78,540.58 |
| Peterson, R | Supervisor, Broker Services Audit | 51,514.82 |
| Philippot, C | Facilities Service Technician | 79,506.73 |
| Phoa, T | Actuarial Analyst | 70,637.60 |
| Picard, M | Analyst | 73,490.24 |
| Picard, P | Estimator-City | 81,198.55 |
| Piec, M | Claims Supervisor | 67,907.05 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Pilawski, C | Premises Coordinator | 63,590.54 |
| Pinette, D | Manager, Physical Damage Technical Services | 103,476.02 |
| Pitt, A | Estimator-City | 68,878.67 |
| Pitura, L | Manager, Communications | 87,664.85 |
| Pitzel, S | Solicitor 2 | 103,395.68 |
| Place, D | Systems User Analyst | 57,719.62 |
| Plenert, H | Estimator-City | 63,519.59 |
| Polenski, B | Clerk 4 | 51,415.98 |
| Pollock, D | Analyst | 75,136.73 |
| Pollock, N | Underwriter 2 | 63,769.87 |
| Poloway, C | Adjuster | 55,574.90 |
| Porco, K | Assistant Manager, B I Out of Province | 96,626.12 |
| Porter, D | Manager, Regulatory Affairs | 93,743.95 |
| Prasek, W | IT Managed Services Analyst | 103,251.45 |
| Prendergast, C | Contact Centre Supervisor | 58,768.48 |
| Preteau, R | Estimator-City | 53,944.11 |
| Price, R | Manager, Service Centre | 109,207.59 |
| Proctor, T | Road Safety Issues Specialist | 67,597.04 |
| Prozyk, C | Accountant 2 | 69,233.86 |
| Prysizney, G | Senior Graphic Designer | 63,208.67 |
| Puchailo, D | Vehicle Standards Officer | 65,646.68 |
| Pura, J | Assistant Manager, Internal Audit | 91,209.47 |
| Pura, S | Contact Centre Supervisor | 59,372.83 |
| Pursaga, J | Senior Program Delivery Coordinator | 84,098.94 |
| Pye, $T$ | Estimator-Rural | 68,747.10 |
| Quan, $T$ | Customer Care Lead | 53,856.37 |
| Quenelle, G | Estimator-City | 65,259.72 |
| Quenelle, R | Fleet Safety Service Representative | 53,951.16 |
| Radi, J | Systems User Analyst | 61,333.23 |
| Radtke, D | Manager, Application Services | 99,609.15 |
| Radwanski, S | Estimating Supervisor | 77,062.85 |
| Ragasa, C | Accountant 1 | 58,300.86 |
| Raimo, G | Systems User Analyst | 59,244.60 |
| Rak, A | Senior IT Administrator | 51,236.33 |
| Rak, T | Business Analyst | 66,000.79 |
| Ramberran, R | Estimator-City | 66,498.83 |
| Ramkissoon, C | Organizational Change Management Consultant | 73,074.86 |
| Randell, R | Programmer/Analyst | 59,737.80 |
| Rapinchuk, B | Manager, Vehicle Standards \& Inspections | 103,390.84 |
| Redfern, D | Payroll Administrator | 65,486.82 |
| Reeves, B | Manager, Service Centre | 84,650.49 |
| Reeves, S | Adjuster | 54,002.59 |
| Reichert, H | Vice President, Finance \& CFO | 197,087.17 |
| Reid, L | Senior Analyst | 118,309.25 |
| Reilly, C | Corporate Application Architect | 97,607.00 |


| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Reis, D | Senior Case Manager | 76,712.33 |
| Remillard, C | Adjuster | 55,213.38 |
| Remillard, J | Director, Business Strategy | 149,426.73 |
| Rempel, E | Estimator-Rural | 68,269.34 |
| Rempel, S | Clerk Typist 4 | 52,473.80 |
| Revet, G | Underwriter 1 | 54,904.97 |
| Reznik, L | Associate Adjuster\Driver Examiner 1-SCO | 51,762.43 |
| Rhodes, A | Commercial Registrations Representative | 51,461.67 |
| Rhodes, T | Senior Business Analyst | 75,981.67 |
| Richard, W | Service Centre Representative | 55,414.16 |
| Richards, E | Special Investigator | 78,457.37 |
| Riel, J | Manager, Internal Audit | 116,881.59 |
| Rieu, D | Senior Systems User Analyst | 62,898.75 |
| Riffel, T | Supervisor, PIPP Benefits Administration | 62,914.40 |
| Ring, M | Assistant Manager, Customer Service | 78,084.47 |
| Ripak, D | Analyst | 82,101.48 |
| Ritchot, G | Claims Supervisor | 80,759.68 |
| Robelo, R | Clerk 2 | 62,315.82 |
| Robert, R | Clerk 4 | 51,525.28 |
| Robertson, A | Solicitor 1 | 74,933.33 |
| Robertson, R | Senior Business Analyst | 86,244.43 |
| Robidoux, B | Service Centre Representative | 52,599.99 |
| Robins, C | Estimator-Rural | 66,881.04 |
| Robins, D | Vehicle Standards Officer | 64,521.99 |
| Robinson, D | Solicitor 2 | 112,688.53 |
| Robinson, P | Risk Management Specialist | 91,046.42 |
| Robson, C | Manager, Broker Support Services | 138,693.81 |
| Rocan, G | Supervisor, Commercial Claims | 85,011.05 |
| Roed, D | Manager, Road Safety Program | 85,786.79 |
| Rogers, A | Supervisor, Claims Processing | 59,532.66 |
| Romaniuk, S | Commercial Registrations Representative | 55,047.77 |
| Rosche, R | IT Analyst | 84,383.18 |
| Roschuk, K | Customer Account Representative | 52,551.52 |
| Ross, K | Analyst | 77,738.09 |
| Rosso, J | Driver Examiner | 55,210.80 |
| Rousset, L | Clerk 4 | 50,152.63 |
| Rowbotham, P | Court Information Supervisor | 50,917.78 |
| Royal, M | Manager, Safety \& Employee \& Labour Relations | 105,002.43 |
| Ruffeski, D | Manager, Business Services | 89,562.43 |
| Rutter, C | Business Analyst | 68,290.97 |
| Ryan, S | Service Centre Representative | 53,614.17 |
| Rybachuk, K | Strategic Communications Coordinator | 61,027.66 |
| Ryz, C | Injury Management Coordinator | 87,050.62 |
| Sacher, T | Adjuster | 94,868.93 |
| Saffie, D | Quality Control Inspector | 70,905.93 |


| Name | Position Title | Total Compensation |  |
| :---: | :---: | :---: | :---: |
| Safiniuk, B | Senior Business Analyst | 78,594.70 |  |
| Sahar, N | Executive Director, Service Centre Operations | 156,990.97 |  |
| Sahar, S | Senior Policy Analyst | 51,386.16 | ** |
| Salsman, K | Clerk 4 | 51,476.90 |  |
| Saluk, G | Senior Analyst | 123,892.12 |  |
| Sam, S | Project Manager, Policy \& Demand Management | 93,486.97 |  |
| Samphir, A | Staff Development Consultant | 69,822.06 |  |
| Sanan, S | Vehicle Standards Officer | 63,870.24 |  |
| Sarginson, P | Senior Legislation Analyst | 59,757.12 |  |
| Sass, J | Manager, Service Centre | 111,746.23 |  |
| Savard, G | Senior Case Manager | 76,691.19 |  |
| Savard, J | Manager, Budgeting \& Accounting | 117,491.18 | ** |
| Savoie, A | Senior Adjuster | 63,044.82 |  |
| Sawatsky, D | Special Advisor | 107,230.31 |  |
| Sawatzky, F | Driver Training Administrator | 54,912.79 |  |
| Sawatzky, J | Strategic Communications Coordinator | 65,914.67 |  |
| Sawatzky, L | Training \& Research Tech - Mech/Auto | 65,034.72 |  |
| Sawatzky, N | Road Safety Issues Specialist | 58,359.56 |  |
| Sawatzky, P | Specialist, Strategic Research | 111,612.23 |  |
| Scaletta, D | Director, Information \& Litigation | 138,989.52 |  |
| Scarff, N | Senior Adjuster | 54,655.42 |  |
| Scarfone, S | Solicitor 2 | 113,286.69 |  |
| Schesnuk, D | Senior IT Support Analyst | 73,559.36 |  |
| Schlag, J | Associate Adjuster | 54,046.99 |  |
| Schmidt, D | Instructional Designer | 64,147.21 |  |
| Schmidt, R | Claims Controller - Injury | 88,312.34 |  |
| Schneiderat, T | Senior Case Manager | 72,591.54 |  |
| Schroeder, T | Adjuster | 54,624.36 |  |
| Schulz, G | Assistant Manager, Injury Claims Management | 93,525.96 |  |
| Schulz, L | Systems User Analyst | 56,557.58 |  |
| Schwab, D | Senior Business Analyst | 81,981.10 |  |
| Scott, D | Driver Licensing Liaison Officer | 58,832.88 |  |
| Scott, J | Senior Adjuster | 51,509.98 |  |
| Seddon, K | Injury Management Coordinator | 87,931.72 |  |
| Seddon, T | Case Manager 2 | 59,492.00 |  |
| Sekhon, P | Manager, Knowledge Management Governance/Architecture | - 99,663.27 |  |
| Selch, J | Training \& Research Tech - Mech/Auto | 64,984.16 |  |
| Sellar, E | Driver Ed Liaison Officer | 56,572.37 |  |
| Senden, N | Systems User Analyst | 59,883.76 |  |
| Seniuk, M | Estimator-City | 70,254.07 |  |
| Senkowsky, M | Manager, Compulsory Insurance | 96,628.33 |  |
| Sentner, C | Senior Designer - Online Media | 63,431.92 |  |
| Senyk, D | Senior Collection Officer | 50,622.02 |  |
| Serbyniuk, M | Estimator-City | 63,308.96 |  |
| Serceau, M | Estimator-Rural | 66,731.91 |  |

## Name

## Position Title

| Serceau, R | Estimator-City | 62,187.44 |
| :---: | :---: | :---: |
| Sesay, A | Accountant 2 | 53,750.17 |
| Setter, M | Buyer | 59,332.46 |
| Shea, L | Business Analyst | 72,631.89 |
| Shemeliuk, T | Associate Adjuster/Driver Examiner 2 | 59,586.32 |
| Shemeluk, G | Estimator-City | 71,230.92 |
| Sheppard, J | Senior Systems User Analyst | 67,132.03 |
| Shibata, S | Adjuster | 54,638.69 |
| Shields, M | Senior Staff Development Consultant | 80,740.63 |
| Shimoda-Loechner, L | IRI Calculator | 50,572.53 |
| Shokpeka, E | Assistant Manager, Customer Service | 76,860.32 |
| Shostak, M | Instructional Designer | 57,040.57 |
| Shum, E | Case Manager 2 | 57,847.30 |
| Shur, P | Organizational Change Management Consultant | 67,761.00 |
| Siepman, K | Training \& Research Tech - Mech/Auto | 66,914.02 |
| Sigurdson, D | Senior Case Manager | 65,367.60 |
| Simard, T | Injury Claims Adjuster | 67,850.57 |
| Simmons, A | Senior Case Manager | 78,190.71 |
| Single, C | Special Investigator | 83,556.52 |
| Skarpias, S | Senior Case Manager | 73,907.37 |
| Skelton, C | Senior Case Manager | 70,392.69 |
| Skiba, K | IT Analyst | 78,927.06 |
| Skibo, W | Commercial Specialist | 65,834.19 |
| Skitcko, L | Case Manager 2 | 56,564.68 |
| Skovgaard, P | Knowledge Management Portfolio Manager | 83,819.06 |
| Skrupski, D | Clerk 4 | 51,273.65 |
| Sladek, J | Estimator-City | 73,082.54 |
| Sloggett, P | Medical Fitness Administrator | 72,325.93 |
| Smale, P | Customer Account Representative | 50,375.97 |
| Smart, S | Vehicle Standards Officer | 58,475.92 |
| Smeall, A | Manager, Senior Fleet Safety | 69,521.59 |
| Smiley, B | Media Relations Coordinator | 108,438.06 |
| Smit, R | Senior Underwriter | 74,557.91 |
| Smith, B | Supervisor, Commercial Claims | 79,014.49 |
| Smith, C | Claims Supervisor | 75,094.59 |
| Smith, R | Supervisor, Customer Service Centre | 53,469.05 |
| Snider, D | Out of Province Claims Supervisor | 86,138.76 |
| Soares, A | Senior Adjuster | 61,036.15 |
| Solinger, R | Reinspection Estimator | 67,558.82 |
| Soucy, M | Claims Supervisor | 81,075.00 |
| Sparrow, M | Adjuster | 50,098.98 |
| Spence, C | Premises Assistant | 51,436.12 |
| Spence, D | Identity Verification Administrator | 51,542.69 |
| Sprenger, W | Manager, Investments | 89,373.57 |
| Sproule, R | Facilities/Premises Administrator | 77,859.72 |

Sesay, A
Setter, M
Shea, L
Shemeliuk, T
Shemeluk, G
Sheppard, J
Shibata, S
Shields, M
Shimoda-Loechner, L
Shokpeka, E
Shostak, M
Shum, E
Shur, P
Siepman, K
Sigurdson, D
Simard, T
Simmons, A
Single, C
Skarpias, S
Skelton, C
Skiba, K
Skibo, W
Skitcko, L
Skovgaard, P
Skrupski, D
Sladek, J
Sloggett, P
Smale, P
Smart, S
Smeall, A
Smiley, B
Smit, R
Smith, B
Smith, C
Smith, R
Snider, D
Soares, A
Solinger, R
Soucy, M
Sparrow, M
Spence, C
Spence, D
Sprenger, W
Sproule, R

Accountant 2
Buyer
Business Analyst
Associate Adjuster/Driver Examiner 2
Estimator-City
Senior Systems User Analyst
Adjuster
Senior Staff Development Consultant
RI Calculator
Assistant Manager, Customer Service
Case Manager 2
Organizational Change Management Consultant
Training \& Research Tech - Mech/Auto
Senior Case Manager
Injury Claims Adjuster
Senior Case Manager
Special Investigator

Senior Case Manager
IT Analyst
Commercial Specialist
Knowledge Management Portfolio Manager
Clerk 4
Estimator-City
Medical Fitness Administrator
Customer Account Representative

Manager, Senior Fleet Safety
Media Relations Coordinator

Supervisor, Commercial Claims
Claims Supervisor
Supervisor, Customer Service Centre

Senior Adjuster
Reinspection Estimator

Adjuster
Premises Assistant
Identity Verification Administrator
Facilities/Premises Administrator

Total Compensation

53,750.17

72,631.89
59,586.32
71,230.92
67,132.03
54,638.69
0,740.63
50,572.53
76,860.32
57,040.57
57,847.30
67,761.00
66,914.02
65,367.60
67,850.57
78,190.71
83,556.52
73,907.37
70,392.69
78,927.06
65,834.19
56,564.68
83,819.06
51,273.65
73,082.54
72,325.93
50,375.97
58,475.92
69,521.59
08,438.06
74,557.91
79,014.49
75,094.59
53,469.05
86,138.76
61,036.15
67,558.82
81,075.00
50,098.98
51,436.12
51,542.69

77,859.72

| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Spyracopoulos, T | Assistant Manager, Special Accounts \& Subrogation | 108,170.95 |
| St. Germain, P | Data Architect | 139,970.06 |
| St. Godard, C | Injury Management Coordinator | 84,860.61 |
| St. Godard, D | Adjuster | 53,303.70 |
| St. Hilaire, A | Adjuster Driver Examiner | 52,183.75 |
| St. Vincent, K | Case Manager 2 | 68,785.87 |
| Stade, R | Analyst | 80,963.24 |
| Stade, S | Senior Case Manager | 67,576.74 |
| Stallard, T | Estimator-Rural | 68,791.35 |
| Stanke, B | Analyst - Rate Groups | 50,465.80 |
| Steeds, K | Internal Review Officer | 78,047.98 |
| Stelma, K | Service Centre Representative | 55,997.25 |
| Stephens, A | Business Analyst | 64,632.90 |
| Stevenson, J | Special Investigator | 73,219.07 |
| Stewart, D | Manager, Bodily Injury Centre | 110,928.45 |
| Stewart, J | Buyer | 95,271.71 |
| Stock, N | Adjuster | 55,167.11 |
| Stokes, A | Service Centre Representative | 50,040.30 |
| Stoneham, C | Supervisor, Customer Service Centre | 56,356.36 |
| Stonyk, R | Solicitor 2 | 51,324.99 |
| Stow, L | Adjuster | 60,141.02 |
| Stoyka, E | IRI Analyst | 60,849.04 |
| Strand, C | Clerk 3 Receiver | 58,007.67 |
| Streib, C | Associate Driver Examiner | 50,146.44 |
| Striefler, D | Lead IT Security Administrator | 93,807.79 |
| Stuart, D | Estimator-City | 71,348.79 |
| Stubbe, K | Clerk 4 | 51,093.22 |
| Su, Y | Senior Actuarial Analyst | 86,532.49 |
| Subramaniam, T | Senior Business Analyst | 76,262.25 |
| Sullivan, N | Service Centre Representative | 51,987.40 |
| Surgeoner, S | Purchasing Agent | 59,434.62 |
| Sutherland, P | Customer Care Agent 1 | 55,442.37 |
| Swanston, S | Supervisor, Rural Service Centre | 73,884.70 |
| Swayze, C | Service Centre Representative | 51,308.81 |
| Sych, J | Associate Adjuster | 50,371.80 |
| Sykes, R | Estimator-City | 66,643.62 |
| Sylvestre, P | Service Centre Representative | 53,640.84 |
| Syrenne, G | Senior Adjuster | 58,904.11 |
| Sysa, M | Systems User Analyst | 59,719.99 |
| Tabin, $T$ | Assistant Manager, Claims Services | 73,412.20 |
| Tackaberry, W | Injury Management Coordinator | 83,185.05 |
| Tackie Anderson, N | Business Analyst | 64,778.67 |
| Tagliaferri, M | Estimator-City | 64,144.63 |
| Talbot, J | Senior Project Manager | 86,963.93 |
| Tam, S | Executive Assistant | 56,787.97 |

## Name

Total Compensation

Tan, K
Tanchak, P
Tapia, R
Tarr, D
Taylor, B
Taylor, B
Taylor, C
Taylor, J
Taylor, M
Taylor, M
Taylor, S
Tazin, C
Telfer, D
Thiessen, A
Thomassen, R
Thompson, J
Thompson, L
Thompson, P
Thompson, R
Thompson, T
Thomson, J
Thorsteinson, D
Thurston, J
Tibbs, L
Tiltman, R
Timcoe, W
To, C
Toms, A
Trachtenberg, E
Travica, D
Trefiak, J
Triggs, M
Tripp, S
Trivett, D
Trudeau, J
Trudeau, K
Trudel, P
Tualla, V
Tubman, T
Turcan, L
Turnley, C
Ulicki, K
Unger, B
Usman Abdi, S
Vaccaro, A

Business Analyst
Senior Analyst, Web Development
Driver Examiner
Analyst
Assistant Manager, Service Centre
Senior Case Manager
Assistant Manager, Premises
Broker Services Administrator
Injury Management Coordinator
Senior Adjuster
Driver Improvement Supervisor
Adjuster
Business Analyst
Service Centre Representative
Internal Review Officer
Adjuster
Manager, Change Management
Supervisor, Rural Service Centre
Commercial Estimator
Adjuster
Director, Rural Service Centre Operations
Knowledge Management Service Delivery Manager
Injury Claims Adjuster
Adjuster
Adjuster
Senior IT Support Analyst
IRI Supervisor
Estimator-City
Reviewing Officer
Case Manager 1
Clerical Supervisor
Director, Legal Services
Contact Centre Supervisor
Senior Underwriter
Senior Case Manager
Senior Project Manager
Application Services Advisor
Clerk 2
Contact Centre Quality Analyst
Adjuster
Facilities/Premises Administrator
Corporate Training Facilitator
Injury Management Coordinator
Customer Relations Officer
Supervisor, Claims Processing

59,721.57
88,130.65
51,379.85
70,971.53
89,428.08
75,410.56
69,424.29
60,724.25
84,728.89
57,424.62
64,533.80
52,024.28
72,483.11
51,254.06
78,599.15
56,048.18
81,509.40
81,013.21
60,711.04
54,893.31
121,310.50
93,825.15
58,952.58
59,073.53
59,605.22
69,368.78
85,474.40
59,791.45
51,094.10
50,062.42
58,351.36
165,515.80
58,877.17
72,462.96
80,488.76
93,223.12
89,662.08
52,833.72
55,356.06
53,847.16
59,531.10
68,241.07
83,334.88
51,862.57
66,363.65

| Name | Position Title | Total Compensation |
| :---: | :---: | :---: |
| Van Dam, J | Special Investigator | 78,388.30 |
| Van Den Bosch, B | Manager, Business Analytics | 85,095.12 |
| Van Landeghem, D | Case Manager 2 | 60,300.86 |
| Van Oeveren, S | Quality Control Coordinator | 77,475.39 |
| Van Ryckeghem, D | Claims Supervisor | 82,129.04 |
| Vandall, A | HR Advisor | 74,361.27 |
| Vandemosselaer, D | Assistant Manager, IV\&DI | 60,759.25 |
| Vandermeulen, K | Corporate Directives Coordinator | 53,430.25 |
| Vandurme, B | Business Analyst | 65,582.88 |
| Varey, A | Estimator-Rural | 60,734.53 |
| Vassart, M | Analyst | 65,949.33 |
| Vaughan, D | Estimator - City | 66,958.64 |
| Veitch, T | Adjuster | 58,463.55 |
| Venton, B | Business Analyst | 68,674.35 |
| Verghetti, A | IT Security Administrator | 63,435.52 |
| Verghetti, T | Senior Subrogation Specialist | 71,382.20 |
| Vermette, C | Adjuster | 56,016.92 |
| Vermette, D | IT Support Analyst | 61,584.27 |
| Vermette, R | Senior IT Analyst | 93,327.03 |
| Vermette, R | Systems User Analyst | 78,162.84 |
| Vernon, T | Analyst | 76,650.16 |
| Viallet, D | Adjuster | 55,322.65 |
| Vital, A | Business Analyst | 63,009.94 |
| Vnuk, J | Service Centre Representative | 51,270.63 |
| Vogel, S | Executive Director, Communications \& Community Relations | s 133,295.05 |
| Von Dohren, R | Accountant 2 | 74,166.46 |
| Wachal, K | Manager, Compensation \& Benefits | 120,031.08 |
| Waddington, R | IT Analyst | 72,217.08 |
| Wagner, B | Estimating Coordinator | 75,262.36 |
| Wahl, M | Electronic Media Publisher 1 | 52,346.72 |
| Wai, E | Analyst | 83,342.68 |
| Walc, M | Assistant Manager, Financial Applications | 88,770.51 |
| Walchuk, M | Vehicle Standards Supervisor | 72,424.01 |
| Walder, E | Senior IT Administrator - Operations | 64,271.13 |
| Waldner, E | Senior IT Analyst | 95,662.49 |
| Wall, J | Adjuster | 55,809.61 |
| Wang, F | Analyst | 68,918.89 |
| Wang, X | Claims Cost Controller | 68,309.24 |
| Warkentin, L | Service Centre Representative | 51,274.48 |
| Warren, L | Executive Assistant To The President | 70,189.74 |
| Warren, M | Estimator-City | 66,546.05 |
| Waterfield, P | Associate Underwriter | 50,662.67 |
| Watson, D | Community Program Coordinator | 59,154.71 |
| Watson, D | Tech Communications Officer 1 | 54,646.80 |
| Way, C | Senior Business Analyst | 72,891.18 |


| Name | Position Title | Total Compensation |  |
| :---: | :---: | :---: | :---: |
| Webb, H | Identity Verification Administrator | 51,403.01 |  |
| Weger, J | Estimator-Rural | 74,079.99 |  |
| Weitman, H | Service Centre Representative | 72,886.01 | * |
| Wells, H | Case Manager 2 | 52,600.56 |  |
| Welsh, O | Adjuster | 55,805.21 |  |
| Werbicki, K | Supervisor, IT Services | 138,742.97 |  |
| Weselake, S | Manager, Community Relations | 85,024.89 |  |
| Whalen, G | Assistant Manager, Rehabilitation Management | 97,661.42 |  |
| Wheeler, J | Supervisor, Customer Service Centre | 55,755.16 |  |
| Whettell, C | Customer Care Agent 2 | 53,238.95 |  |
| White, C | Injury Claims Adjuster | 67,432.78 |  |
| White, T | Estimator-Rural | 69,280.49 |  |
| Wiebe, B | Manager, Service Centre | 103,768.03 |  |
| Wiebe, N | Subrogation Adjuster | 54,657.12 |  |
| Wiebe, R | Injury Claims Adjuster | 59,341.86 |  |
| Wiedmer, R | Supervisor, Customer Service Centre | 53,724.05 |  |
| Wieler, D | Senior IT Support Analyst | 66,430.80 |  |
| Wilchowy, C | Manager, Web \& Multimedia Development | 75,907.92 |  |
| Wilkinson, M | Security Operations Coordinator | 53,770.76 |  |
| Williams, A | Senior Analyst | 82,740.47 |  |
| Williamson, M | Associate Underwriter | 50,114.11 |  |
| Winter, J | Driver Ed Curr Dev and Trng Support Spec | 66,283.88 |  |
| Wityshyn, W | Programmer | 53,331.08 |  |
| Wojtowicz, M | IT Analyst | 75,229.60 |  |
| Wolch, M | Supervisor, IT Services | 88,920.88 |  |
| Woloshyn, C | Service Centre Representative | 50,743.19 |  |
| Woodhurst, D | Driver Ed Liaison Officer | 52,366.67 |  |
| Woodley, J | Driver Records Coordinator | 55,688.93 | * |
| Worboys, C | Analyst | 62,459.54 |  |
| Wu, R | Estimating Supervisor | 63,061.01 |  |
| Wurtak, C | Estimator-Rural | 74,483.49 |  |
| Wycislak, F | Senior Case Manager | 67,169.66 |  |
| Wynne, R | HRMS Coordinator | 128,308.18 | ** |
| Wyrzykowski, C | Programmer/Analyst | 61,776.45 |  |
| Yakel, J | Manager, Vendor Management | 85,454.78 |  |
| Yanisiw, D | Technical Communications Editor | 63,070.79 |  |
| Yee, Y | Estimator-City | 69,641.83 |  |
| Yewdall, H | Senior Injury Claims Adjuster | 74,846.46 |  |
| Youell, D | Senior Business Analyst | 72,884.93 |  |
| Young, S | Senior Business Analyst | 51,444.99 |  |
| Younger, B | Premises Coordinator | 58,208.30 |  |
| Yu, E | Senior Project Manager | 96,808.18 |  |
| Zacharias, J | Estimator-Rural | 65,716.78 |  |
| Zacharias, L | Customer Account Supervisor | 54,808.64 |  |
| Zadnepreannii, L | Senior IT Support Analyst | 78,948.23 |  |

## Name

Position Title

Adjuster
Zajac, B
Zales-Fiolek, L Supervisor, Rural Service Centre
Senior Business Analyst
Manager, Service Centre Clerk 2
Zarrillo, D
Zeaton, G
Zheng, J

56,384.17

Aggregate Total Board of Directors
94,978.78
** Denotes inclusion of severance pay/retiring allowance

## NOTE TO SCHEDULE


#### Abstract

Basis of presentation The schedule lists employees or individuals affiliated with Manitoba Public Insurance Corporation who received compensation and benefits in excess of $\$ 50,000$ for the year ended December 31, 2013. The amounts reported were calculated in accordance with the definition of compensation provided in Section 1 of The Public Sector Compensation Disclosure Act.


## MANITOBA PUBLIC INSURANCE CORPORATION NOTE TO SCHEDULE OF COMPENSATION IN ACCORDANCE WITH THE PUBLIC SECTOR COMPENSATION DISCLOSURE ACT FOR THE YEAR ENDED DECEMBER 31, 2013

The Public Sector Compensation Disclosure Act requires public sector bodies to disclose:

- the compensation paid to the Chairperson of its Board of Directors, if the Chairperson's compensation is $\$ 50,000$ or more;
- the aggregate of the benefits paid to the members of the Board of Directors;
- the individual compensation paid to its officers and employees whose compensation is $\$ 50,000$ or more.

The compensation amount is calculated in accordance with the requirements of The Public Sector Compensation Disclosure Act.

Compensation includes but is not limited to:

- regular salary;
- all payments for overtime, acting pay, statutory holiday pay, retirement/severance payments, lump sum payments and vacation pay-outs; and
- value of the taxable benefits to board members, officers and employees.


## CAC (MPI) 1-54 <br> Reference: Organization

a) Please file a copy of the current corporate organization chart, detail and explain any changes that have occurred since last year.
b) Please prepare and file an analysis describing the duties and responsibilities of each division/function highlighting any changes from last year.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-55 Reference: Consultants

a) Please complete the following table, by fiscal year, for consultants engaged at MPI:

|  | 2012/13 <br> Actual | 2013/14 <br> Actual | 2014/15 <br> Budget |
| :--- | :--- | :--- | :--- |
| Number of Consultants |  |  |  |
| Consulting fees incurred | $\$$ | $\$$ | $\$$ |
| Divisional Area of Engagement |  |  |  |

b) Please provide a detailed analysis, by project, and area of engagement of the listed consultants.
c) Please advise which firms currently provide IT consulting services to MPI.

## RESPONSE:

a) b) and c)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-56

Reference: External Audit and Actuary fees
a) Please complete the following table by fiscal year:

|  | $\mathbf{2 0 1 2 / 1 3}$ <br> Actual | $\mathbf{2 0 1 3 / 1 4}$ <br> Actual | 2014/15 <br> Budget |
| :---: | :---: | :---: | :---: |
| External Auditor: |  |  |  |
| $\bullet$ Audit fees |  |  |  |
| $\bullet$ Consulting/other fees |  |  |  |
| Appointed Actuary: |  |  |  |
| $\bullet$ Valuation fees |  |  |  |
| $\bullet$ Consulting/other fees |  |  |  |

b) For both the external auditor and the appointed actuary please explain the purpose and reports produced or opinions rendered for their engagement and fees paid for consulting and other services, if any.
c) Please file a copy of the engagement letter (service contract) for both the external auditor and actuary as it relates to their services for 2013/14.
d) Please file a copy of the most recent external auditor search RFP.

## RESPONSE:

a) to d)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-57 <br> Reference: MPI Internal Indicators CAC (MPI) 1-17 of 2014 GRA

Please reproduce the attachment to CAC (MPI) 1-17 from the 2014 GRA, updating it to include 2014 with Loss/Prevention/Road Safety costs removed from Claims Expenses and included with Operating expenses.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-58

Reference: $\quad$ Trend Analysis - CAC (MPI) 1-18, PUB (MPI) 1-32 (c) and PUB (MPI) 1-52 (a) and (b) from the 2014 GRA

Please reproduce Schedules 1, 2 and 3 in response to PUB (MPI) 1-32(c) and PUB (MPI) 1-52 (a) and (b) from the 2014 GRA, updating it to include 2018/19.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-59

## Reference: Secondment

Has the government seconded any of MPI's staff for whom MPI pays their salary and benefits? If yes, please quantify the operating expense relating to basic insurance.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

# CAC (MPI) 1-60 

## Reference: Donations and

 SponsorshipsPlease provide a detailed schedule of donations and sponsorships made by MPI during 2013/14 compared to 2012/13.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

CAC (MPI) 1-61
Reference: 2014 GRA CAC (MPI) 1-20

The following indicators and calculations were confirmed by MPI in information requests CAC (MPI) 1-20 in the 2014 GRA.

| Indicator | $\mathbf{2 0 0 6 / 7}$ | $\mathbf{2 0 0 7 / 8}$ | $\mathbf{2 0 0 8 / 9}$ | $\mathbf{2 0 0 9 / 1 0}$ | $\mathbf{2 0 1 0 / 1 1}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| i. Operating Expense Ratio | $14.2 \%$ | $15.0 \%$ | $15.0 \%$ | $16.0 \%$ | $16.2 \%$ |
| ii. Claims Expense Ratio | $14.1 \%$ | $14.7 \%$ | $14.8 \%$ | $14.8 \%$ | $15.2 \%$ |
| iii. Loss Ratio | $82.8 \%$ | $79.0 \%$ | $74.5 \%$ | $70.9 \%$ | $44.4 \%$ |
| iv. Combined Ratio | $111.1 \%$ | $108.6 \%$ | $104.3 \%$ | $101.8 \%$ | $75.8 \%$ |
| v. Investment Income Ratio | $16.1 \%$ | $16.4 \%$ | $0.5 \%$ | $11.6 \%$ | $11.2 \%$ |
| vi. Investment Yield | $6.3 \%$ | $4.0 \%$ | $(5.8 \%$ | $13.7 \%$ | $8.4 \%$ |
| vii. Operating Expense/Policy | $\$ 48$ | $\$ 50$ | $\$ 48$ | $\$ 54$ | $\$ 65$ |
| viii. Claims Expense/Claims | $\$ 409$ | $\$ 416$ | $\$ 487$ | $\$ 482$ | $\$ 487$ |
| ix. Policies/Support Employee | 2,485 | 2,499 | 2,556 | 2,446 | 2,590 |
| x. Claims/Claims Employee | 253 | 266 | 233 | 234 | 245 |
| xi. Premiums/Policy | $\$ 776$ | $\$ 777$ | $\$ 794$ | $\$ 807$ | $\$ 804$ |
| xii. Insurance Costs/Capita | $\$ 553$ | $\$ 566$ | $\$ 593$ | $\$ 606$ | $\$ 615$ |


| Indicator | $\mathbf{2 0 1 1 / 1 2}$ | $\mathbf{2 0 1 2 / 1 3}$ | $\mathbf{2 0 1 3 / 1 4}$ | $\mathbf{2 0 1 4 / 1 5}$ | $\mathbf{2 0 1 5 / 1 6}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| i. Operating Expense Ratio | $\mathbf{1 6 . 4 \%}$ | $\mathbf{1 7 . 1 \%}$ | $\mathbf{1 6 . 4 \%}$ | $\mathbf{1 6 . 0 \%}$ | $\mathbf{1 5 . 6 \%}$ |
| ii. Claims Expense Ratio | $\mathbf{1 6 . 1 \%}$ | $\mathbf{1 6 . 5 \%}$ | $\mathbf{1 6 . 1 \%}$ | $\mathbf{1 6 . 0 \%}$ | $\mathbf{1 5 . 3 \%}$ |
| iii. Loss Ratio | $80.4 \%$ | $87.4 \%$ | $84.5 \%$ | $\mathbf{7 9 . 2 \%}$ | $76.8 \%$ |
| iv. Combined Ratio | $112.8 \%$ | $121.0 \%$ | $117.0 \%$ | $111.2 \%$ | $107.6 \%$ |
| v. Investment Income Ratio | $13.3 \%$ | $9.0 \%$ | $15.0 \%$ | $7.7 \%$ | $5.3 \%$ |
| vi. Investment Yield | $6.4 \%$ | $6.9 \%$ | $6.2 \%$ | $3.5 \%$ | $2.6 \%$ |
| vii. Operating Expense/Policy | $\$ 61$ | $\$ 67$ | $\$ 67$ | $\$ 69$ | $\$ 68$ |
| viii. Claims Expense/Claims | $\$ 541$ | $\$ 521$ | $\$ 514$ | $\$ 543$ | $\$ 549$ |
| ix. Policies/Support Employee | 2,560 | 2,409 | 2,368 | 2,426 | 2,468 |
| x. Claims/Claims Employee | 241 | 255 | 257 | 259 | 259 |
| xi. Premiums/Policy | $\$ 790$ | $\$ 736$ | $\$ 764$ | $\$ 801$ | $\$ 823$ |
| xii. Insurance Costs/Capita | $\$ 624$ | $\$ 589$ | $\$ 614$ | $\$ 646$ | $\$ 668$ |


| Indicator | $\mathbf{2 0 1 6 / 1 7}$ | $\mathbf{2 0 1 7 / 1 8}$ | $\mathbf{2 0 1 8 / 1 9}$ |
| :--- | :---: | :---: | :---: |
| i. Operating Expense Ratio | $\%$ | $\%$ | $\%$ |
| ii. Claims Expense Ratio | $\%$ | $\%$ | $\%$ |
| iii. Loss Ratio | $\%$ | $\%$ | $\%$ |
| iv. Combined Ratio | $\%$ | $\%$ | $\%$ |
| v. Investment Income Ratio | $\%$ | $\%$ | $\%$ |
| vi. Investment Yield | $\%$ | $\$$ | $\%$ |
| vii. Operating Expense/Policy | $\$$ | $\$$ | $\$$ |
| viii. Claims Expense/Claims | $\$$ |  | $\$$ |
| ix. Policies/Support Employee |  |  |  |
| x. Claims/Claims Employee |  | $\$$ | $\$$ |
| xi. Premiums/Policy | $\$$ | $\$$ | $\$ 614$ |
| xii. Insurance Costs/Capita | $\$$ |  | $\%$ |

(i) Operating Expense Ratio (\%) (The numerator to include the followingcommissions, operating expenses, premium taxes and regulatory/appeal expenses.)

The ratio of operating expenses to net premiums earned measures the company's operational efficiency in underwriting its book of business.
(ii) Claims Expense Ratio (\%) (The numerator to include claims expenses and loss prevention/road safety expenses.)

The ratio of claims expense to net premium earned measures the company's efficiency in adjudicating claims.
(iii) Loss Ratio (\%)

The ratio of claims incurred to net premiums earned measures the company's underlying profitability, or loss experience, on its book of business.
(iv) Combined Ratio (\%)

The sum of the loss, operating expense and claims expense ratios, not reflecting investment income or income taxes, measures the company's overall underwriting profitability, and a combined ratio of less than 100 indicates an underwriting profit.
(v) Investment Income Ratio (\%)

The ratio of investment income to net premiums earned measures the contribution of investment income toward the combined ratio in measuring the company's overall net profitability.
(vi) Investment Yield (\%)

To be calculated on current market value basis as per Annual Reports.
(vii) Operating Expense/Policy (\$)

The operating expense/policy dollar value measures the cost efficiency or activity cost of issuing a policy.
(viii) Claims Expense/Claims (\$)

The claims expense/claims dollar value measures the cost efficiency or activity cost of adjudicating a claim.
(ix) Policies/Support Employee (\#)

The policies/support employee number value measures the number of policies a support employee can handle or the number of support employees required to manage policies effectively and efficiently.
(x) Claims/Claims Employee (\#)

The claims/claims employee number value measures the number of claims a claims employee can handle or the number of claims employees required to manage claims effectively and efficiently.
(xi) Premiums/Policy (\$)

The premiums/policy dollar value measures net premiums written changes per policy, year over year, even if there is no premium rate increases or decreases.
(xii) Insurance Costs/Capita (\$)

The insurance costs/capita dollar value measures net premiums written (basic insurance) changes per capita based on the provincial population providing a social or public cost indicator.
a) Please update the tables with the 2013/14 actual indicators and reference the source data in the 2015 GRA and provide detailed calculations.
b) Please update the tables with 2014/15 through to 2018/19 with updated forecasted indicators and reference the source data in the 2015 GRA and provide detailed calculations.
c) Please elaborate on any significant differences in the indicators from last year.

## RESPONSE:

a) to c )

Please refer to CAC (MPI) 1-2 a) and b).

Manitoba Public Insurance

## CAC (MPI) 1-62

## Reference: Claims and Operating Expenses statistics CAC (MPI) 1-21 from the 2014 GRA.

a) Please update and file Tables 1 to 4 as per CAC (MPI) 1-21 (a) from the 2014 GRA with 2015 GRA "actual" and "forecasted" information.
b) Please elaborate on any significant differences from last year values.

## RESPONSE:

a) Please refer to CAC (MPI) 1-2 a) and b).
b) Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-63

## Reference: Annual Audited Financial Statements Ended February 28, 2014 pages 27 and 28.

Preamble: Provision for Employee Current and Future Benefits

Please file a copy of the December 31, 2013 external actuary's report relating to the actuarial valuation of future employee benefits.

## RESPONSE:

Please see PUB(MPI)1-28.

## CAC (MPI) 1-64 Reference: Pro Formas Volume II page 7

Preamble: Normal operations expenses indicate a higher external labour costs required to support project delivery of $\$ 2,223,000$ and initiative implementation expense indicate an additional external labour expense for unbudgeted projects (ITO transition) of $\$ 1,470,000$.

Please provide a detailed analysis of these increased external labour costs which were over and above the forecast provided in the 2014 GRA.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-65

## Reference: Volume II Expenses

## E.2.1.1 page 14

Preamble: "Management will undertake a careful analysis of each vacated position to assess the value to the Corporation and will look to eliminate up to 30 positions."
a) Please advise if the 30 positions have been removed from the staffing compliment for the forecasting period. If not, why not?
b) If not 30, please advise of the number of positions that have been removed from the staffing compliment for the forecasting period. Please explain why they were removed.

## RESPONSE:

a) and b)

The specific positions the Corporation will look to eliminate have not been identified.

## CAC (MPI) 1-66

## Reference: Volume II Expenses

## E. 4 page 23

Preamble: Capital expenditures:

| $\mathbf{( \$ 0 0 0 )}$ | $\mathbf{1 3 / 1 4 A}$ | $\mathbf{1 4 / 1 5 P}$ | $\mathbf{1 5 / 1 6 P}$ | $\mathbf{1 6 / 1 7 P}$ | $\mathbf{1 7 / 1 8 P}$ | $\mathbf{1 8 / 1 9 P}$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  <br> Buildings | $\$ 2,507$ | $\$ 2,245$ | $\$ 2,504$ | $\$ 741$ | $\$ 1,182$ | $\$ 717$ |
| Automobiles | 569 | 609 | 1,253 | 748 | 1,105 | 1,158 |
|  <br> Equipment | 1,034 | 1,215 | 1,518 | 999 | 999 | 999 |
| Total | $\mathbf{\$ 4 , 1 1 0}$ | $\mathbf{\$ 4 , 0 6 9}$ | $\mathbf{\$ 5 , 2 7 5}$ | $\mathbf{\$ 2 , 4 8 8}$ | $\mathbf{\$ 3 , 2 8 6}$ | $\mathbf{\$ 2 , 8 7 4}$ |

a) Please provide a detailed analysis of the items purchased for 2013/14 for Land \& Buildings, Automobiles and Furniture and Equipment.
b) Please explain the significant increase in Automobile expenditures in 15/16, $17 / 18$ and 18/19.

## RESPONSE:

a) Please refer to CAC (MPI) 1-2 a) and b).
b) The corporate guideline is to replace vehicles every seven years or 160,000 kms. The need to replace vehicles is dependent on these factors as well as the type of vehicle and its use. As a result, each year the fleet is reviewed and estimates made on replacements based on these factors which does not result in smooth growth factors but rather is based on usage. The policy is reviewed every two years and is scheduled for a review in 2014/15.

## CAC (MPI) 1-67

## Reference: Volume I Pre-Filed Testimony PowerPoint Presentation Corporate Priorities page 2

Preamble: "Prepare the organization for the digital economy; adapt to meet new operating realities"

Please elaborate if the Corporation anticipates a reduction in the use of physical space as it moves to a digital economy. If yes, is the Corporation anticipating leasing some of its Service Centre plant space to commercial tenants? Please elaborate. If not, please explain.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-68

## Reference: Volume II Expenses

 Appendix 1 page 4.Preamble: Data Processing Variance of $\$ 4$ million 2013/14. " $\$ 4.0$ million increase over the 2014 GRA related to greater than forecasted expenses for initiative implementation external labour costs."

Please provide a breakdown of the variance related to external labour costs by initiative.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-69

## Reference: Volume II Expenses

 Appendix 1 page 3.Preamble: Special Services for basic insurance.

Please provide a detailed account analysis of the special services amount of $\$ 5,164,000$ for basic insurance or corporate for 2013/14.

## RESPONSE:

Please see CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-70

Reference: Volume II Expenses Appendix 1 page 10.

Preamble: Postage for basic insurance.

Please elaborate on the zero allocation of postage expenses to claims expense in the 2015 GRA for years 2014/15 through to 2017/18.

## RESPONSE:

For the 2014/15 budget, the Corporation centralized all postage expenses within the Administrative Services unit. This unit is allocated $100 \%$ to operating expenses. This approach remains consistent throughout the forecast period.

## CAC (MPI) 1-71

## Reference: Volume II Expenses Appendix 9 page 40.

Preamble: IBM Data Centre vs. IT Compensation.

Please elaborate as to the continuing IT compensation expense of about \$10 to $\$ 12$ million per year from 2014 through to 2018 vs. the IBM Data Centre managed service model expense of about $\$ 7$ million per year - one would expect the IT compensation expense amount to decline as a certain amount of work has been transferred to IBM.

## RESPONSE:

Staff impacted by the transition have been redeployed/retrained to support corporate priorities.

## CAC (MPI) 1-72

## Reference: Volume III Benchmarking Appendices Page 1 and 7

Preamble: Operational Efficiency and Claims Performance

Please provide targets for MPI's Corporate Performance Measures for years 2013, 2014 and 2015 for each Metric for Operational Efficiency and Claims Performance. If targets have not been developed, please elaborate as to when they will be developed.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-73 Reference: SM. 2

Preamble: On page 19 of Section SM. 2 a comparison is made between MPI and other auto groups.

Please specify which insurers are included in the Canadian Personal Auto Group, the Canadian Benchmark Group and the US Personal Auto Group.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-74 Reference: SM. 2

Preamble: On page 21 of section SM. 2 a comparison is made of insurance rates in Winnipeg, Calgary and Toronto.

What companies are being used in this comparison?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-75 Reference: SM. 1 Value to Manitobans

Preamble: Bodily Injury Improvement Initiative (BI3) page 26.

The Corporation has realized savings of $\$ 16$ of the $\$ 41.9$ million projected. Of the $\$ 16$ million saved to-date, please provide a detailed analysis showing the amount relating to reductions in claims leakage and productivity improvements.

## RESPONSE:

Please refer to 2012 Rate Application, Post Implementation Review, Volume III AI. 12 PIPP Infrastructure Study.

## CAC (MPI) 1-76

Reference: Volume II Expenses

## E.4.2 page 26.

Preamble: HRMS project and ongoing expenses for basic insurance are expected to be:

| Year | Amount Phase <br> $\mathbf{1 ~ \& ~ 2 ~ ( \$ 0 0 0 ) ~}$ | Amount Phase <br> $\mathbf{3 ~ \& ~ 4 ~ ( \$ 0 0 0 ) ~}$ | Total (\$000) |
| :--- | ---: | ---: | ---: |
| $2015 P$ | $\$ 1,984$ | $\$ 0$ | $\$ 1,984$ |
| 2016 P | 2,000 | 196 | 2,196 |
| $2017 P$ | 1,993 | 196 | 2,189 |
| $2018 P$ | 1,982 | 196 | 2,178 |
| $2019 P$ | 1,982 | 196 | 2,178 |
| Total | $\mathbf{\$ 9 , 9 4 1}$ | $\mathbf{\$ 7 8 4}$ | $\mathbf{\$ 1 0 , 7 2 5}$ |

a) Please provide a detailed analysis of the total project expenditure to implement the HRMS system, by account category, compared to the initial business case estimates and explain any significant difference.
b) Please file a copy of the post-implementation review report for the HRMS project.
c) Please detail and elaborate on the benefits achieved to-date, for basic insurance, by implementing the HRMS system.

## RESPONSE:

a) This analysis is not available at this time as all phases of the project are not yet complete.
b) and c) Following the completion of phases 3 and 4, a post implementation review report will be completed and is expected to be filed with the 2017 GRA.

## CAC (MPI) 1-77

Reference: Volume II Expenses

## E.4. 2 page 24.

Preamble: Total Provision for Future Projects is as follows:

| $\mathbf{( \$ 0 0 0 )}$ | 2016P | 2017P | 2018P | 2019P |
| :--- | ---: | ---: | ---: | ---: |
| Deferred | $\$ 4,793$ | $\$ 10,384$ | $\$ 11,183$ | $\$ 11,183$ |
| Capital | 399 | 799 | 799 | 799 |
| Expense | 2,397 | 3,195 | 3,994 | 3,994 |
| Total | $\$ 7,589$ | $\$ 14,378$ | $\$ 15,976$ | $\$ 15,976$ |

a) Please confirm that the Provision for Future Projects do not impact the proposed rate change of $3.4 \%$ effective March 1, 2015. If the provision for future projects impacts the rate change, please quantify the financial impact.
b) Please explain, in general terms, the projects/initiatives anticipated requiring a total provision for the years 2016 through to 2019 of \$53,919,000.

## RESPONSE:

a) Refer to PUB (MPI) 1-74 (b).
b) Refer to PUB (MPI) 1-74 (b).

## CAC (MPI) 1-78

## Reference: Volume II Expenses

E.4.3.1 page 25 and 28.

Preamble: BI3/FINEOS Upgrade

Please elaborate on the costs of ( $\$ 289,000$ plus $\$ 1,257,000$ ) $\$ 1,546,000$ to upgrade the BI3/FINEOS. Please provide a copy of the upgrade cost benefit analysis and project plan.

## RESPONSE:

The upgrade is a contractual requirement arising from the initial MPI/Fineos agreement.

## CAC (MPI) 1-79

## Reference: Volume II Expenses

 Appendix 1 page 16.Preamble: Security Strategy \& Roadmap initiative

Please provide a description of the Security Strategy \& Roadmap initiative, including a cost benefit analysis, if available.

## RESPONSE:

Please see PUB (MPI) 1-78.

## CAC (MPI) 1-80

## Reference: Volume III AI. 10 Charter PDR page 6.

Preamble: "The following two pilots are related to the Collaborative Estimating and are expected to start in fourth quarter 2013 and the third quarter 2014."

Please elaborate on the success of the 'pilots' to-date and provide the results of the Collaborative Estimating pilot from the fourth quarter 2013.

## RESPONSE:

A post implementation review report will be completed once the Collaborative Estimating initiative is concluded.

# CAC (MPI) 1-81 <br> Reference: Volume III AI. 10 Charter PDR page 8. 

Preamble: Loss Prevention Project RFP

Please file a copy of the Loss Prevention Project predictive analytics software RFP.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-82

Reference: Volume III AI. 10 Charter PDR page 8.

Preamble: PD Re-engineering Program Charter budget of $\$ 65,485,774$

Please provide a copy of the detailed budget, by cost category/project, and broken down by fiscal year for the Physical Damage Re-engineering Program.

## RESPONSE:

Please refer to PUB (MPI) 1-75.

## CAC (MPI) 1-83 Reference: Pre-Filed Testimony page 13

Preamble: MPI states on page 13 of the Pre-Filed Testimony section that "No driver is discriminated against on the basis of age, gender or marital status."

Is it not true that some drivers in Manitoba pay more for their auto insurance than they would if rates were set using a more granular rating algorithm? Stated another way, is it not true that subsidization exists between drivers in Manitoba?

## RESPONSE:

Not true.

## CAC (MPI) 1-84 Reference: SM. 2

Preamble: On page 28 of section SM. 2 a comparison is made between MPI, SGI and ICBC on how the consumer feels when dealing with the three corporations.

Has the Corporation looked at these types of comparisons with private insurers? If not, why not?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-85 Reference: SM. 2

Preamble: On page 33 of section SM. 2 it insinuates that SGI may have higher public support because they also offer home insurance.

Please give supporting documents for this insinuation.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-86 Reference: PUB Orders SM. 6 Page 6

Preamble: Five-Year IT Strategic Plan. "Second, the Board and Management committee will be developing an overall vision and strategy for the next five years."

Please elaborate whether the mentioned vision and strategy relates to the Five-Year IT Strategic Plan or the Corporate Strategic Plan. If the mentioned vision and strategy relates to the IT Strategic Plan, please elaborate on the expected content of the plan.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-87 Reference: PUB Orders SM. 6 Page 7

Preamble: "With respect to information and technology support for the overall business strategy, the Business Transformation Office has developed a structured methodology whereby a portfolio of technology enabled business transformation initiatives is developed which support the stated business strategy."

Please file a copy of the structured methodology referred to in the preamble.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-88

## Reference: Audit Committee Minutes

Please file a copy of the Audit Committee of the Board of Directors Minutes for the 2013/14 fiscal year.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-89

Please indicate, list and explain any technical, process, information technology or management constraints that the PUB should take into consideration in issuing its 2015 GRA ruling effective March 1, 2015.

## RESPONSE:

Rates are set within the classification system defined within the regulations. The classification system has been established over a very long period of time and is therefore imbedded in systems and processes that cannot easily be changed. The customer-based system that began to be in place with the introduction of Autopac On-Line in 1995 is imbedded in the classification system in Regulation and that is what defines how customers are grouped into various rating classification cells. For example, the system is customer-driven and therefore the same DSR rate must apply to all the policies owned by that customer because that is the specifications included in the Regulations to the Manitoba Public Insurance Corporation Act. Also, ordering a rate file for part of an insurance year and a different rate file for the balance of an insurance year is not possible because of constraints related to the requirements of system version controls and the March 1 insurance year start date as well as the long standing policy consideration to ensure all customers receive the same rating treatment.

The foregoing is intended to provide a context regarding the potential issues that could be encountered and is not, in any way, intended to be a comprehensive and complete identification of potential problem areas. To avoid these problems, it is preferred that potential changes be explored during the hearing process, in order that the Corporation be given an opportunity to comment, on the public record, regarding the feasibility.

To allow sufficient time to reflect changes in Basic rates it is imperative that the PUB order be received by the Corporation by Monday, December 1, 2014.

## CAC (MPI) 1-90

Please indicate, list and explain any financial transactions under consideration or in progress that have not been explicitly reported in the 2015 GRA, either by management, the Board of Directors or Government, which could impact the 2015 GRA proposed rates.

## RESPONSE:

There is nothing to report.

## CAC (MPI) 1-91

## Reference: Crown Corporation Council

Please file copies of the last four quarterly reports prepared by the Crown Corporations Council relating to MPI.

## RESPONSE:

Please see the reports at the website of the Crown Corporations Council at:
http://www.crowncc.mb.ca/en/about/reports/

## CAC (MPI) 1-92

## Reference: Compliance to Legislation

Please file a copy of the most recent Compliance to Legislation Authority Audit report.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-93 Reference: Risk Profile

a) Please indicate whether there have been any material changes to the Corporation's risk profile since last year's GRA, with respect to financial risk, operational risk, continuation of service risk, unpaid claims risk, information technology risk or with respect to any other risk factors. If so, please elaborate and provide details.
b) Please indicate whether the Corporation expects any changes to its risk profile going forward through the outlook period. If so, please elaborate and provide details.

## RESPONSE:

a) No material changes to the risk profile, other than as discussed in the Rate Application regarding interest rate forecasting risk which together with a net loss in 2013/14 and inadequate capital reserves has increased our overall financial risk.
b) See response to a).

## CAC (MPI) 1-94

Reference: 2013 Annual Report AI. 6 Part 1B pages 31.

Preamble: In the Risk Management section of the 2013 Annual Report the Corporation describes the corporate Risk Management Framework and risk mitigation strategies.
a) Please elaborate on the Risk Management Framework.
b) Have there been any changes to the Risk Management Framework since last year.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-95

Reference: 2013 Annual Report
AI. 6 Part 1B pages 31.

Preamble: "Much of the risk management process is focused on Goal 1. Rates, on average, will be lower than those charged by private insurance companies for comparable coverage and services." The key risk mitigation areas are listed on page 31.

Please list or elaborate on the key risk mitigation areas for Goals 2 to 7 described in the Corporate Strategic Plan 2014-2018 Volume III AI. 6 Part2 pages 12 to 17.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-96

## Reference: Value to Manitobans SM. 1

On page 42 of section SM. 1 of the rate application it states "Manitoba Public Insurance relies on the Canadian Loss Experience Automobile Rating (CLEAR) system". Since the CLEAR tables were not published in 2013 what CLEAR table did the Corporation rely upon for this year's rate application?

## RESPONSE:

As reported in the 2014 GRA (Volume III, AI. 4 Vehicle Classification System, section AI.4.3.A), for 2014/15, CLEAR recommendations were not available on time from IBC. As a result, the Corporation transitioned to a one year lag in using CLEAR rating recommendations. For 2015/16, the Corporation used the CLEAR recommendations published on July 29, 2013.

## CAC (MPI) 1-97 Reference: AI. 4

With reference to Section AI.4.1 has the Corporation completed any territorial analysis to validate the current rating territories? If not, why not? If so, when was this analysis completed? Please provide the results.

## RESPONSE:

The Corporation does not consider changes to Basic coverage and territories as this is the exclusive purview of the Legislature of Manitoba through amendments to The Manitoba Public Insurance Corporation Act and regulations thereunder. The Corporation administers the universal compulsory automobile insurance plan and implements changes as legislated by government.

## CAC (MPI) 1-98

## Reference: Volume I Overview page 25

Preamble: 2015/16 and 2016/17 Average Rating Period Forecast - 2015 GRA versus 2014 GRA ('000's)
a) Please file the detailed operating statements comprising the 2015 GRA and 2014 GRA averages.

Preamble: Per the table on page 25 of the Overview, when summing the Earned Revenues, Claim Costs, Expenses and Investment Income the resulting Net (Loss) is as follows:

|  | 2015GRA | 2014GRA | Difference |
| :--- | ---: | ---: | ---: |
| Per table | $(\$ 15,880)$ | $\$ 11,339$ | $(\$ 27,219)$ |
| CAC Summation | $(\$ 35,150)$ | $\$ 15,398$ | $(\$ 50,548)$ |

b) Please explain the reason for the difference between the table and the CAC Summation.

## RESPONSE:

a) Refer to PUB (MPI) 1-4 b) for the 2015 GRA operating statement before any 2015 rate increases.

Refer to 2014 GRA Volume I Pro Forma section for the 2014 operating statement.
b) The total average net loss and income for the respective GRAs in the Overview table are correct. The overview table included the 2015/16 investment income amounts only for both the 2014 GRA and the 2015 GRA, not the average of $2015 / 16$ and $2016 / 17$. This is why the columns do not add to the totals shown. The subsequent explanation of the variance in the overview also relates to the
one year difference, not the average. A full explanation of investment income differences from last year's GRA for the 2014/15, 2015/16, 2016/17 and 2017/18 years can be found in Volume II Investment Income, Section II.11.

## CAC (MPI) 1-99

## Reference: 2013 Annual Report

AI. 6 Part 1B page 23

Preamble: The rate comparison chart in the Annual Report measures Winnipeg, Calgary and Toronto.

Please prepare and file an updated chart including Halifax, Regina and Vancouver.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-100

## Reference: Volume II Pro Formas page 9

Preamble: Actual premiums written from 2013/14 are less than expected by \$3,990,000.

Please provide a detailed analysis of the decrease in premiums written compared to the forecast in the 2014 GRA.

## RESPONSE:

The decrease in premiums written was primarily due to a lower than anticipated volume increase and a higher than anticipated fleet rebate.

# CAC (MPI) 1-101 <br> Reference: Volume II R.1.3 Net Fleet Rebates page 13 

Preamble: "The loss experience is the ratio between all losses paid by the Corporation and fleet premiums."

For greater clarity, please elaborate on the loss experience: is the ratio between all 'losses paid' or all `losses incurred'?

## RESPONSE:

All losses incurred by the Corporation subject to the cap on individual losses of \$25,000.

# CAC (MPI) 1-102 <br> Reference: Volume II R. 4 Service Fees and Other Revenue page 25 

Preamble: "This year's forecast is higher than last year's forecast mainly as a result of...ignition interlock program."

Please explain the ignition interlock program and the fees earned from this program.

## RESPONSE:

The forecast of Service Fees and Other Revenues was developed on the basis that a portion of fees from the Ignition Interlock Program are allocated to Basic. This is an error and will be corrected in the 2016 GRA. The restatement for 2015 is less than $\$ 120,000$ and an amended allocation will not be forthcoming.

# CAC (MPI) 1-103 <br> Reference: Volume II R. 4 Service Fees and Other Revenue page 31 

Preamble: "Miscellaneous fees include ... lemon law revenue...."

Please elaborate on the lemon law revenue and the amount of fees collected from this source for the last fiscal year.

## RESPONSE:

Lemon law revenue was incorrectly included in the examples of miscellaneous fees provided in Volume II Revenues, section R. 4 Service Fees and Other Revenues (page 31). These revenues are not allocated to Basic.

# CAC (MPI) 1-104 <br> Reference: Volume II R. 4 Service Fees and Other Revenue 

 page 31Preamble: "Unclaimed cheque forecasts are based on an analysis of the current amount of outstanding premium rebate cheques plus the expected amount of normal operations write offs."

Please file a copy of the 'analysis' referred to in the preamble.

## RESPONSE:

The forecasted unclaimed cheques for 2014/15 are based on 2013/14 actual write offs. In 2013/14 the basic portion of actual write offs excluding rebate checques was approximately $\$ 425,000$. This amount is reflected in the forecasted miscellaneous fees. The forecasted amount for unclaimed cheques is $\$ 500,000$ per year and remains static throughout the forecast.

# CAC (MPI) 1-105 <br> Reference: Volume II Revenues Appendix A page 1 

Preamble: Driver Premium Forecast by DSR Level.

Please update and extend the table on page 1 of Appendix A to include Driver Premiums Written by DSR Level for fiscal years 2013 through to 2017.

## RESPONSE:

Please see attached.

## Manitoba Public Insurance Driver Premium Forecast by DSR Level

| DSR LeveL | Written Premium |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2013(a) | 2014 | 2015 | 2016 | 2017 |
| 15 | \$2,711,130 | \$2,699,015 | \$3,759,573 | \$4,053,450 | \$4,131,263 |
| 14 | \$253,840 | \$1,874,188 | \$834,659 | \$540,457 | \$845,024 |
| 13 | \$2,126,172 | \$914,061 | \$595,803 | \$947,717 | \$575,365 |
| 12 | \$919,405 | \$573,824 | \$944,247 | \$508,399 | \$490,582 |
| 11 | \$643,002 | \$1,000,828 | \$539,911 | \$534,163 | \$827,012 |
| 10 | \$1,080,240 | \$582,827 | \$593,340 | \$926,502 | \$614,002 |
| 9 | \$579,154 | \$629,225 | \$1,054,814 | \$574,084 | \$591,652 |
| 8 | \$831,017 | \$1,332,793 | \$717,423 | \$768,977 | \$966,615 |
| 7 | \$1,348,521 | \$699,335 | \$805,755 | \$991,681 | \$697,739 |
| 6 | \$647,752 | \$817,085 | \$979,204 | \$690,982 | \$767,171 |
| 5 | \$890,535 | \$1,033,795 | \$743,839 | \$843,528 | \$962,238 |
| 4 | \$1,010,292 | \$720,820 | \$854,190 | \$961,629 | \$854,366 |
| 3 | \$896,157 | \$1,088,125 | \$1,204,640 | \$1,104,554 | \$1,202,909 |
| 2 | \$1,196,182 | \$1,305,233 | \$1,244,622 | \$1,361,428 | \$1,446,360 |
| 1 | \$1,618,722 | \$1,615,788 | \$1,766,599 | \$1,869,838 | \$1,897,074 |
| 0 | \$2,606,769 | \$2,829,695 | \$2,988,388 | \$3,086,830 | \$3,222,765 |
| -1 | \$1,023,501 | \$1,140,653 | \$1,158,962 | \$1,264,021 | \$1,353,500 |
| -2 | \$952,605 | \$944,627 | \$1,048,231 | \$1,118,026 | \$1,144,214 |
| -3 | \$1,162,765 | \$1,354,238 | \$1,467,625 | \$1,515,874 | \$1,642,047 |
| -4 | \$1,519,561 | \$1,708,895 | \$1,832,467 | \$2,020,477 | \$2,156,328 |
| -5 | \$1,698,056 | \$1,853,271 | \$2,053,634 | \$2,171,992 | \$2,292,409 |
| -6 | \$1,023,403 | \$1,213,578 | \$1,325,722 | \$1,439,209 | \$1,565,009 |
| -7 | \$1,385,600 | \$1,581,307 | \$1,764,297 | \$1,949,301 | \$2,090,133 |
| -8 | \$897,142 | \$1,043,409 | \$1,204,515 | \$1,326,653 | \$1,449,751 |
| -9 | \$1,082,224 | \$1,288,428 | \$1,436,669 | \$1,577,644 | \$1,713,211 |
| -10 | \$954,748 | \$1,111,771 | \$1,271,628 | \$1,417,884 | \$1,542,246 |
| -11 | \$892,320 | \$1,071,104 | \$1,237,247 | \$1,367,003 | \$1,494,427 |
| -12 | \$1,015,508 | \$1,267,566 | \$1,462,595 | \$1,649,028 | \$1,815,217 |
| -13 | \$1,107,170 | \$1,460,960 | \$1,803,773 | \$2,113,635 | \$2,392,233 |
| -14 | \$835,714 | \$1,038,052 | \$1,208,873 | \$1,356,272 | \$1,493,916 |
| -15 | \$878,677 | \$1,099,557 | \$1,299,883 | \$1,492,068 | \$1,661,901 |
| -16 | \$927,523 | \$1,184,140 | \$1,416,597 | \$1,618,185 | \$1,799,791 |
| -17 | \$649,226 | \$837,932 | \$1,003,506 | \$1,152,176 | \$1,288,620 |
| -18 | \$613,002 | \$810,603 | \$994,238 | \$1,161,314 | \$1,310,051 |
| -19 | \$598,094 | \$765,030 | \$916,518 | \$1,049,111 | \$1,168,535 |
| -20 | \$3,159,974 | \$4,500,137 | \$5,750,479 | \$6,902,774 | \$7,952,169 |
| Total | \$41,735,704 | \$46,991,897 | \$51,284,467 | \$55,426,865 | \$59,417,843 |
| Finance Adjustment* | (\$215,704) | \$0 | \$0 | \$0 | \$0 |
| ProForma Total | \$41,520,000 | \$46,991,897 | \$51,284,467 | \$55,426,865 | \$59,417,843 |

* The actual amount of premium collected from customers is slightly lower than estimated by the DSR
model because of customer appeals and other factors.


## CAC (MPI) 1-106

## Reference: Referring to page 13 of the Revenues section

Please give the loss ratios for fleets for 2011/12 through 2013/14.

## RESPONSE:

Refer to the table below.

| Fiscal <br> Year | Total <br> Premium | Net <br> Rebates | Net <br> Premium | Reported <br> Losses | Factor to <br> Ultimate | Ultimate <br> Losses | Claims <br> Expense | Loss <br> Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $[1]$ | $[2]$ | $[3]$ | $[4]$ | $[5]$ | $[6]$ | $[7]$ | $[8]$ | $[9]$ |
|  |  |  |  |  |  |  |  |  |
| $2011 / 12$ | 57,168 | 13,251 | 43,917 | 25,943 | 1.0428 | 27,053 | 4,761 | $72.4 \%$ |
| $2012 / 13$ | 59,045 | 14,384 | 44,661 | 26,055 | 1.0628 | 27,691 | 4,874 | $72.9 \%$ |
| $2013 / 14$ | 57,983 | 11,930 | 46,053 | 26,726 | 1.1820 | 31,590 | 5,560 | $80.7 \%$ |
| Total | 336,984 | $\mathbf{7 9 , 4 3 3}$ | $\mathbf{2 5 7 , 5 5 1}$ | $\mathbf{1 4 7 , 8 8 4}$ |  | $\mathbf{1 5 6 , 7 2 5}$ | $\mathbf{2 7 , 5 8 4}$ | $\mathbf{7 1 . 6 \%}$ |

Notes:
[2] \& [3]: Per Volume II, Revenues, Page 14
[4] = [2] - [3]
[6]: Per Volume III, Al.7, Actuary's Report as at Feb 14, Exhibit 2, Sheet 14, Column 7 / Column 5
$[7]=[5]$ * $[6]$
$[8]=[7]$ * 17.6\% (Ratio of Claims Expense to Claims per RM.4, Page 37)
$[9]=([7]+[8]) /[4]$

## CAC (MPI) 1-107 <br> Reference: Referring to page 16 of the Revenues section

Please give the actual anti-theft discounts for the years 2010/11 to 2013/14.

## RESPONSE:

Anti-Theft Discounts (\$000)

| Actuals |  |  |  |
| ---: | ---: | ---: | ---: |
| $2010 / 11$ | $2011 / 12$ | $2012 / 13$ | $2013 / 14$ |
| 6,819 | 6,148 | 5,591 | 5,065 |

## CAC (MPI) 1-108 Reference: Revenues page 23

Preamble: On page 23 of the Revenues section it is noted that the table shows that the vehicle units per earned driver unit is higher for those drivers in the higher DSR levels.

Has the Corporation considered that those in the higher DSR levels may be insuring vehicles that they do not actually drive? That is, could it be that some of those drivers in the higher DSR levels insure vehicles for their family members or friends?

## RESPONSE:

This issue was discussed at length in the DSR hearing held in 2009.

## CAC (MPI) 1-109 Reference: Revenues page 31

Preamble: On page 31 of the Revenues section there is reference to "lemon law revenue".

Please explain what that refers to.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-110 Reference: Pre-Filed Testimony page 23

Preamble: "..I ask that the Board work with me to come to agreement on ...A risk based interest rate forecasting methodology..."
a) In general terms, please elaborate on what would constitute a risk based interest rate forecasting methodology.
b) Please compare and contrast the proposed risk based interest rate forecasting methodology to the current methodology.
c) Please elaborate on the P \& C Industry use of the risk based interest rate forecasting methodology.
d) Please elaborate on the use by SGI and ICBC of the risk based interest rate forecasting methodology.

## RESPONSE:

a) , b), c), \& d)

During the 2014 GRA hearings, the Corporation indicated that it had adjusted the results of the standard interest rate forecasting methodology it had been using (i.e., taking the average of the five major banks and Global Insights) and adjusted it based on the Corporation's risk tolerance (essentially, it took the banks' and Global forecast and stretched the forecasted increase over ten years instead of five). It is this adjusted forecast that is referred to as the "risk based interest rate forecasting methodology"

## CAC (MPI) 1-111

Reference: Volume I Overview page 29

Preamble: ".. while we wait for the results of the asset liability matching study..."
a) Please advise when the asset liability matching study will be completed and, when completed will the study be filed with PUB?
b) Please file a copy of the asset liability study Request for Proposal, Terms of Reference and the service agreement with the consulting firm engaged to perform the study.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-112 Reference: Volume III 2013 Annual Report AI. 6 Part 1B page 28 and 37

Preamble: The Corporation reported an operating net loss of $\$ 44.8$ million. "The total fair value of the Corporation's investments portfolio was $\$ 2.4$ billion at February 28, 2014, an increase of 5.3 per cent or $\$ 123.7$ million from the previous year."

Please elaborate and contrast the growth in the investment portfolio to the net operating loss.

## RESPONSE:

The growth in investments is consistent with the statement of cash flows on page 37. The net loss is caused in large part by an increase in unpaid claims of approximately $\$ 150.0$ million. Total assets increased while total liabilities increased more resulting in a net loss for the year.

## CAC (MPI) 1-113 Reference: Volume II Pro Formas page 11

Preamble: MPI is projecting, for 2015/16, higher CDN equities gain due to higher forecasted return assumptions of $\$ 5,035,000$.

Please elaborate on the change to higher return assumptions. Please provide the source supporting the higher return assumptions.

## RESPONSE:

Please see Volume II Investment Income, section II.5.3 pages 34 and 35 .

## CAC (MPI) 1-114

## Reference: Volume II Investment Income II.1.1

Preamble: "There is a significant forecasting risk if the interest rate forecast does not materialize: the proposed premium rate increase would be deficient by approximately 2\%."
a) Please elaborate on the risk and quantify the percentage by which the premium rate would be deficient if the claims incurred forecast does not materialize, if any.
b) Please elaborate on the risk and quantify the percentage by which the premium rate would be deficient if the revenue forecast does not materialize, if any.

## RESPONSE:

(a) and (b)

The claims forecast (prior to the impact of interest rate changes) and the revenue forecasts are made on a best estimate basis and are well supported by the information provided in the Claims Incurred and Revenue sections of the Rate Application. The forecasts underlying the overall claims and revenue forecasts all have a degree of variability around the best estimate assumptions. However, "best estimate" forecasts imply that the expected value of any deviations from budget will be very close to zero (i.e., roughly an equal chance that the actual results will be below or above budget depending on the skewness of the distribution of outcomes).

In regards to interest rates, the chart on page 12 of Volume II Investment Income, section II.1.1, shows that the interest rate forecasts made by the major banks have underperformed significantly in recent years. Based on this historical experience and given the significant risk that interest rates have on the Basic financial results, the Corporation believes that it is reasonable to question whether these forecast are truly "best estimates". Unlike the (undiscounted) claims and revenue forecasts, which are based heavily on recent historical experience, the Corporation is projecting changes to interest rates that are (i) significantly different than the current interest
rates and (ii) not at all supported by the recent historical data. The context around the quoted statement is that if interest rates simply stay the same, then the Corporation would require an additional $2.0 \%$ rate increase.

## CAC (MPI) 1-115

Reference: Volume II Investment Income II. 5 page 33

Preamble: "The Canadian equity portfolio is managed by three active managers and one passive manager under contract with the Department of Finance."

Please file a copy of each equity manager's Mandate.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-116 <br> Reference: Investment Performance Report

Please file a copy of the February 28, 2014 and May 31, 2014 investment performance reports provided to the Investment Committee of the Board of Directors.

## RESPONSE:

Please refer to PUB (MPI) 1-19

# CAC (MPI) 1-117 <br> Reference: Investment Income II.9.5 page 53 

Please file a copy of the most recent investment income allocation formulas.

## RESPONSE:

Please see PUB(MPI) 1-17(a).

# CAC (MPI) 1-118 Reference: Value to Manitobans SM.1, Page 38 

Please list the properties that the Corporation owns or rents for its own use.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-119

## Reference: Volume II, Investment Income, Page 75 Portfolio Asset Classes, Page 21 Cash and Short Term

Preamble: Page 75 indicates a range of 0\% to 3\% with a $1 \%$ target for the Cash and Short Term asset class. Page 21 indicates that the portfolio allocation will increase from $1 \%$ to the maximum $3 \%$ by $2018 / 19$, well above the $1 \%$ target.
a) Since higher rates of return are forecast to be available in other asset classes, why are you modeling an increased allocation above the target rate?
b) Please describe and quantify the benefit to consumers of this allocation as opposed to a target allocation of $1 \%$

## RESPONSE:

a) It is unrealistic to assume a constant $1 \%$ flat value for cash over the five year forecast. The model is dynamic and can handle rebalancing based on the minimum and maximums for each asset class. For this rebalancing to occur, each asset class, including cash, cannot be artificially kept at target weight in the model. As long as cash remains within the Investment Policy Statement tolerance range (Section 7.1 of the Attachment A)), then cash levels within the defined tolerance range is acceptable.
b) Cash remains at $1 \%$ over the rating years (2015/16 and 2016/17). Cash reaches $3 \%$ in the final two years of the forecast, but these two years are not used to set rates for consumers.

## CAC (MPI) 1-120

## Reference: Volume II, Investment Income, Page 75 Portfolio Asset Classes, Page 22 Marketable Bonds

Preamble: Page 75 indicates three separate bond asset classes or mandates, Marketable Universe Bonds, Marketable Long Term Bonds, and Real Return Bonds, each with separate minimum maximum and target allocations. In aggregate these three separate bond asset classes or mandates range from a minimum of $30 \%$ to a maximum of $58 \%$ with a $39 \%$ target. That target of $39 \%$ for those three asset classes also appears subject to an overall total of $80 \%$ when Cash and Short term instruments and Non-Marketable Bonds are included, as the aggregate maximum of those 5 asset classes would add to $86 \%$. Table 3.1 on Page 22 indicates that the portfolio allocation for Marketable Bonds will fall from $38.7 \%$ as at 2013/14 year end to $37.5 \%$ in $2014 / 15$, well above the $30 \%$ target, and $32.3 \%$ in $2015 / 16$.
a) In light of the concerns expressed throughout the application relating to interest rate risks, and significant realized and unrealized gains and losses in the period 2014/15 to 2017/18, and the apparent liquidity indicated by the turnover rates indicated on page 24 , please indicate why the marketable bond portfolio duration risk is not being more rapidly reduced.
b) Please describe and quantify the benefit (or costs) to consumers of the forecast allocations as opposed to a target allocation.
c) Please describe and quantify the benefit (or costs) to consumers of the forecast allocations as opposed to a minimum allocation.
d) Please provide a table in form similar to Table 3.1 for each of the three separate bond asset classes or mandates, Marketable Universe Bonds, Marketable Long Term Bonds, and Real Return Bonds.

## RESPONSE:

a) The marketable bond duration is dependent on the claims duration. As per section 8.4 of the Investment Policy Statement, the total fixed income duration is required to be within +/- 1 year from the claims duration.
b) It is unrealistic to assume a constant target weight for each asset class. Real estate's target allocation is $13 \%$, and the allocation to the asset allocation was $10.1 \%$ as of February 28, 2014. To assume that real estate would be $13 \%$ or Canadian equities would be $15 \%$ for the entire five year forecast is clearly unrealistic.

The model is dynamic and can handle rebalancing and alternative asset class funding. For this rebalancing and alternative asset class funding to occur in the model, each asset class cannot be artificially kept at target weight in the model. As long as the various asset classes remain within the Investment Policy Statement tolerance range (Section 7.1 of the Attachment A), and are rebalanced accordingly in the model, then dynamic values for the asset classes represents a more realistic modeling of the asset values for each asset class.
c) This question is unrealistic. If all asset classes were held at the minimum allocation, the total portfolio percentage value would be $68 \%$ ( $45 \%$ fixed income, $15 \%$ equities, $8 \%$ alternatives as per Section 7.1 of the Investment Policy Statement). Even if the equities and alternative asset classes were at their maximum weights the total allocation would be only $93.5 \%$.
d) Marketable bonds are forecast as one asset class in the model and are not forecasted as three separate mandates as described in the question.

## CAC (MPI) 1-121

## Reference: Volume II, Investment Income, Attachment A PDF Page 5, Investment Income Page 24 line8 and Table 3.3.1.2, Marketable Bonds

Preamble: Attachment A PDF Page 5 appears to indicate that the fixed income assets should "be passively managed in a 'buy and hold' strategy". Table 3.3.1.2 appears to indicate the marketable bond turnover of up to $101 \%$ over the last seven years.
a) Please explain the apparent contradiction of "buy and hold" and annual rates above in recent years
b) Please identify the last year the turnover rate was below $20 \%$ and provide annual data for each of the intervening years.

## RESPONSE:

a) The Corporation's Investment Policy Statement states: "When it is advantageous, the Department may trade bonds to take advantage of various bonds that appear undervalued and to take advantage of the changing shape of the yield curve." Therefore, the fixed income manager is permitted to buy and sell bonds in order to add value relative to the benchmark. The Corporation's fixed income portfolio has consistently outperformed its benchmark, adding 27 basis points annualized from December, 1997 to February, 2014, which places the portfolio at the $36^{\text {th }}$ percentile, meaning that it outperformed $64 \%$ of the fixed income portfolios in API's (Asset Performance Inc.) universe of institutional investors.
b) As indicated in Table 3.3.1.2, the turnover rate has not been below $20 \%$ in the last seven years.

## CAC (MPI) 1-122

## Reference: Volume II, Investment Income, Page 22 Table 3.1, Page 26 Table 3.3.1.4, Marketable Bonds

Preamble: Table 3.1 appears to indicate that the spread of marketable bonds will decrease from 61 basis points in 2014/15 to 48 basis points in 2018/19. Table 3.3.1.4 appears to indicate the marketable bond duration and spread are related, and implies that the duration will fall from over 9 years to under 8 years during the periods indicated.

Please compare each of the Marketable bonds duration, and, the duration of the debt portfolio by individual asset class to the forecast liability or overall claims duration.

## RESPONSE:

Fixed Income and Claims Duration Forecast

| Date | Cash <br> Duration | MUSH <br> Bond <br> Duration | Marketable <br> Bond <br> Duration | Total <br> Fixed <br> Income <br> Duration <br> (as per <br> IPS) | Claims <br> Duration | Duration Gap |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Feb-15 | 0.1 | 6.7 | 9.3 | 8.1 | 9.0 | $(0.9)$ |
| Feb-16 | 0.1 | 6.7 | 8.6 | 7.6 | 8.7 | $(1.1)$ |
| Feb-17 | 0.1 | 6.7 | 8.2 | 7.4 | 8.5 | $(1.1)$ |
| Feb-18 | 0.1 | 6.7 | 7.8 | 6.9 | 8.2 | $(1.2)$ |
| Feb-19 | 0.1 | 6.7 | 7.8 | 7.0 | 8.1 | $(1.1)$ |

## CAC (MPI) 1-123

## Reference: Volume II, Investment Income, Page 22 Table 3.1, PDF Page 5 Attachment A

Preamble: Table 3.1 appears to indicate that the spread of marketable bonds will decrease from 61 basis points in 2014/15 to 48 basis points in 2018/19. PDF Page 5 Attachment A appears to indicate that the fixed income portfolio is to be diversified amongst federal, Manitoba, other provincial, municipal and corporate issues and amongst a variety of maturities.

Please quantify the extent to which the decline in the spread forecast is due to changes
a) in the allocation of purchases to higher quality government credits relative to relative to corporate issues.
b) In the maturities forecast to be purchased, or
c) Other assumptions

## RESPONSE:

a) The decline in the marketable bond spread over the five year forecast is solely based on the declining marketable bond duration forecast. As per Table 3.3.2.1, the claims duration decreases over the forecast period from a rising interest rate forecast, causing the marketable bond duration to decrease as well. As per Table 3.3.1.4, the lower the marketable bond duration, the lower the marketable bond spread.

The marketable bond spread is calculated by separating the spread of provincial AA bonds over the GoC 10 year bond rate as of February 28, 2014 at various levels of duration (i.e. seven years, ten years, etc.) and applying this spread to
the forecasted GoC 10 year bond rate. No corporate issues were used in the analysis.

There is a direct relationship between the duration of a bond and the maturity of a bond. All else being equal, the longer the term of a bond, the higher the duration of the bond. As of February 28, 2014, the yield curve was upward sloping. Therefore, bonds with a longer maturity/duration had a higher spread over the Government of Canada 10 year bond than bonds with a lower maturity/duration.
b) Please see the response in a).
c) Please see the response in a).

## CAC (MPI) 1-124 Reference: Volume II, Investment <br> Income, Page 28 Section <br> II.3.3.2.2, Convexity

Preamble: Section II.3.3.2.2, mentions the topic of Convexity and provides a February 2014 value, but does not provide any historical values to allow readers to appreciate the trend in Convexity for 2010 through 2013. Section II.3.3.2.2 does not discuss how and in what manner the Convexity calculation assists the Board in understanding the interest rate and matching risks faced by MPI.
a) Please provide the comparable data points for February 2010 through 2013.
b) Please explain why this measure for this single date should be forecast as constant and its importance in the discussion of investment income.

## RESPONSE:

a) The table below shows the comparable data points from February 2010 to February 2013.

|  | Convexity (*) |
| :--- | :---: |
| Feb-10 | 1.34 |
| Feb-11 | 1.52 |
| Feb-12 | 1.57 |
| Feb-13 | 1.70 |
|  |  |

(*) Valuation as of July 2014
b) As part of the financial model testing, the sensitivity of investment income to changes in convexity was assessed (Volume III AI.11-Financial Model Test Report, section 2.2.3). As that section shows, significant changes in convexity (i.e. 0.5) do not have a major impact on investment income. For that reason, the simplifying assumption of a constant convexity for the forecasted period was applied.

## CAC (MPI) 1-125

## Reference: Volume II, Investment Income, Page 6 Table of Ending Values and Allocations, PDF Page 5 Attachment A

Preamble: The Table of Ending Values and Allocations appears to indicate that the size of the allocation to Canadian Fixed Income decreased from nearly $\$ 1.3$ billion to s forecast of $\$ 792$ million 2015/16. MUSH, another class of Fixed income assets will increase from $\$ 461$ million to $\$ 657$ million. PDF Page 5 Attachment A appears to indicate that the Corporation expects to book approximately $\$ 5$ million in gains or losses from fixed income assets.
a) Please provide the annual gains or losses from the fixed income assets to which this guideline refers for the actual and forecast periods in the Table of Ending Values and Allocations.
b) Please discuss the relevance of the $\$ 5$ million level relative to fixed income assets of over $\$ 1$ billion, and the substantial changes in the value of fixed income portfolio over the 2009/10 to forecast 2018/19 period.

## RESPONSE:

a) The actual and forecasted annual gains or losses from the fixed income assets can be found in Volume II Investment Income, page 5, lines 10 and 11.
b) Gains and losses on the fixed income assets are volatile and difficult to accurately predict as they depend on many factors, including changes in interest rates (both quantum and direction) and the degree of turnover within the bond portfolio. Therefore, in the past the Corporation previously assumed $\$ 5$ million of realized gains, however, this practice is not currently used. The financial model is now used to predict the amount of gains that will be generated based on the factors mentioned above.

## CAC (MPI) 1-126

## Reference: Volume II, Investment Income, Page 6 Table of Ending Values and Allocations, PDF Page 19 Attachment A

Preamble: The Table of Ending Values and Allocations appears to indicate that the ending rebalanced allocations, but aggregates sub categories of Canadian Equities and US equities. Paragraphs 7.3 and 7.4 of PDF Page 19 Attachment A appear to grant certain discretionary authority to allocate assets into sub mandates.
a) Please enhance the Table of Ending Values and Allocations by providing the split of the various equity categories into their component parts.
b) Does paragraph 7.3 place a maximum cap on Canadian Small Cap of 3\%?
c) If paragraph 7.3 places a maximum cap on Canadian Small Cap of 3\%, is this maximum subject to the same leisurely rebalancing as other asset classes?
d) Were the Working Group to have allocated 3\% of the total fund to Canadian Small Cap mandate, and as a result of adverse market conditions, the Canadian Small Cap allocation exceeded 20\% of total allocation to Canadian Equities, would a rebalancing be required?
e) Please discuss why the allocation discretion is $20 \%$ in Canadian equities and $30 \%$ in the US equity asset classes.

## RESPONSE:

a) The following table shows the component parts for Canadian and U.S. equities for fiscal years 2009/10 to 2013/14 in both dollars and percent. The forecast generated by the financial model (for fiscal years 2014/15 to 2018/19) does not separate Canadian and U.S. equities into the component parts.
Ending Asset Values (C $\$ 000,000$ 's)

| Fiscal Year | $2009 / 10$ | $2010 / 11$ | 2011/12 | 2012/13 | $2013 / 14$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Canadian Equities | 315 | 397 | 369 | 401 | 381 |
| Large | 280 | 354 | 324 | 324 | 265 |
| Core | - | - | - | 23 | 58 |
| Small | 35 | 43 | 45 | 54 | 59 |
| US Equities | 72 | 130 | 133 | 163 | 138 |
| Large | 53 | 103 | 107 | 131 | 110 |
| MID | 10 | - | - | - | - |
| Small | 10 | 27 | 26 | 32 | 28 |

Ending Allocations (\%)

| Fiscal Year | $2009 / 10$ | $2010 / 11$ | $2011 / 12$ | $2012 / 13$ | $2013 / 14$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Canadian Equities \% | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |
| Large | $89 \%$ | $89 \%$ | $88 \%$ | $81 \%$ | $69 \%$ |
| Core | $0 \%$ | $0 \%$ | $0 \%$ | $6 \%$ | $15 \%$ |
| Small | $11 \%$ | $11 \%$ | $12 \%$ | $14 \%$ | $15 \%$ |
| US Equities \% | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ | $100 \%$ |
| Large | $73 \%$ | $80 \%$ | $80 \%$ | $80 \%$ | $80 \%$ |
| MID | $13 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| Small | $13 \%$ | $20 \%$ | $20 \%$ | $20 \%$ | $20 \%$ |

b) Section 7.3 states that the Working Group, at its discretion, can allocate up to 20.0\% from the Canadian Large Cap equity asset class to the Canadian Small to Mid Cap equity asset class, not to exceed 3.0\% of the total fund's allocation.
c) The Canadian small cap exposure is monitored on a regular, ongoing basis. As section 7.5 of the Investment Policy Statement states, the Working Group will monitor the target asset allocation of the fund on a quarterly basis, at a minimum, and rebalance if necessary in accordance with the Working Group's rebalancing policy. The Working Group's rebalancing policy states that:

Whenever an asset class is outside of its target range, it will be reported to the Investment Committee during the Investment Activity and Performance Report. If the weight of any asset class falls outside the allowable range, then that asset class will be rebalanced back into the target range for that asset class within six (6) months.
d) Yes. Please see section 7.5 of the Investment Policy Statement and the rebalancing policy in Section 16 of the Investment Income Document (page 75).
e) The Canadian equity small-mid cap allocation of $20 \%$ is lower than the U.S. allocation of $30 \%$ because the liquidity of the Canadian small cap market is significantly lower than the U.S. small cap market. The Canadian equity portfolio represents a significantly larger weight than the U.S. equity allocation ( $15 \%$ target vs. $5 \%$ target). Small-mid cap limit of $20 \%$ of the Canadian equity fund translates to $3 \%$ of the total Investment Fund; if the exposure was increased to $30 \%$ then small-mid cap would represent $4.5 \%$ of the total Investment Fund. In contrast, U.S. small-mid cap exposure of $30 \%$ of the U.S. equity fund translates to only $1.5 \%$ of the total Investment Fund.

## CAC (MPI) 1-127

## Reference: Volume II, Investment Income, PDF Page 20 Attachment A

Preamble: Paragraph 8.4 of PDF Page 20 Attachment A appears to grant certain discretionary authority to remove fixed income assets from the duration calculation.
a) Has the Working Group exercised that authority at any time, and if so, please discuss the reason for the decision?
b) Are any of the duration calculations actual or forecast in this application based on the exercise of that authority, and if so, please provide the unaffected calculation?

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-128

Reference: Volume II, Investment Income, Page 27 Duration, lines 7, 12 and 15

Preamble: Line 12 indicates that the overall claims duration is recalculated at each "fiscal year end". The model adjusts the duration of the marketable bond portfolio on a "quarterly basis".

In real life, are the various debt managers required individually or in aggregate, or with the assistance of finance to adjust the duration of the marketable bond portfolio on a "quarterly basis"? If not when is the portfolio compared to the "bandwidth"?

## RESPONSE:

The Corporation's Investment Department calculates the duration of the total fixed income portfolio at every month-end and compares this to the most recent duration of the liabilities. This information is provided to the fixed income manager on a monthly basis. In addition, the fixed income manager can use Bloomberg to calculate the duration of the marketable bond portfolio at any time.

## CAC (MPI) 1-129

## Reference: Volume II, Investment Income, Page 29 Table 4.1, MUSH, Page 55 MUSH, Page 75 Portfolio Asset Classes, PDF Page 14 Attachment F

Preamble: Page 75 indicates a range of $15 \%$ to $25 \%$ with a $20 \%$ target for the MUSH asset class. Page 55 indicates that the "minimum and maximum allocation is considered when new MUSH bonds are to be purchased. Table 4.1 indicates that in forecast 2014/15 and 2015/16 MUSH will represent more than 25\% of the portfolio. PDF Page 14 Attachment A indicates that the annual commitment to MUSH will be determined "the Department".
a) Why are we modeling a level of MUSH purchases in excess of the Investment Policy maximum allocation to this asset class?
b) Was there a problem in forecasting purchases of approximately $\$ 7$ million fewer purchases of MUSH, such that the MUSH proportion would not exceed $25 \%$ ?
c) Is it the intention of "the Department" to cause MPI to invest in MUSH bonds in excess of the Investment Policy maximum allocation to this asset class?
d) Please describe and quantify the benefit (or costs) to consumers of the forecast asset allocation being greater than the maximum.
e) Please provide and enhanced table 4.1 which contains the forecast duration of MUSH in each of the years 2014/15 through 2018/19

## RESPONSE:

a) The maximum weight for MUSH bonds in the portfolio is $25 \%$. If the beginning value for MUSH in a quarter is greater than $25.0 \%$, then new MUSH purchases
for that quarter are decreased such that the MUSH portfolio remains within the $25 \%$ maximum. See section 4.4 for reference to this mechanism in the model.

The MUSH new purchase adjustment is based on the beginning values in the quarter. When interest rates increase and are applied to the marketable bond portfolio during the quarter, the marketable bond values fall, increasing relative size of the MUSH portfolio at the end of the quarter (known as the denominator effect). Changes in market values for other asset classes during the quarter can also generate a MUSH proportion that exceeds the $25 \%$ upper limit at the end of the quarter. As shown in the table below, the MUSH allocation does not stay above the 25\% past Q4 2015/16.

|  | MUSH <br> Allocation |
| :--- | ---: |
| Q1 2014/15 | $24.2 \%$ |
| Q2 2014/15 | $24.6 \%$ |
| Q3 2014/15 | $25.0 \%$ |
| Q4 2014/15 | $25.3 \%$ |
| Q1 2015/16 | $25.4 \%$ |
| Q2 2015/16 | $25.3 \%$ |
| Q3 2015/16 | $25.1 \%$ |
| Q4 2015/16 | $25.1 \%$ |
| Q1 2016/17 | $24.9 \%$ |
| Q2 2016/17 | $24.9 \%$ |
| Q3 2016/17 | $24.9 \%$ |
| Q4 2016/17 | $24.8 \%$ |
| Q1 2017/18 | $24.8 \%$ |
| Q2 2017/18 | $24.7 \%$ |
| Q3 2017/18 | $24.5 \%$ |
| Q4 2017/18 | $24.3 \%$ |
| Q1 2018/19 | $24.0 \%$ |
| Q2 2018/19 | $23.8 \%$ |
| Q3 2018/19 | $23.5 \%$ |
| Q4 2018/19 | $23.2 \%$ |

b) There was no "problem". Please see the response in a).
c) Please see CAC (MPI) 1-2 a) and b).
d) As per the table in response a), MUSH bonds were outside the limit for one quarter in 2014/15 and four quarters in 2015/16. The benefits to consumers of the forecast asset allocation being greater than the maximum is estimated to be an increase in investment income of $\$ 23$ thousand for 2014/15 and \$70 thousand for 2015/16.
e)

Table 4.1
MUSH

|  | $\mathbf{2 0 1 4 / 1 5}$ | $\mathbf{2 0 1 5 / 1 6}$ | $\mathbf{2 0 1 6 / 1 7}$ |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Forecast (End of Period) | $\mathbf{2 0 1 7 / 1 8}$ | $\mathbf{2 0 1 8 / 1 9}$ |  |  |  |
| MUSH Book Value | 606,826 | 613,548 | 632,779 | 647,150 | 657,311 |
| Total Investment Income | 30,293 | 31,079 | 31,667 | 32,999 | 34,352 |
| New MUSH Purchase Rate* | $10.3 \%$ | $7.3 \%$ | $9.8 \%$ | $9.5 \%$ | $9.3 \%$ |
| End of Period MUSH Yield | $5.22 \%$ | $5.20 \%$ | $5.23 \%$ | $5.32 \%$ | $5.43 \%$ |
| MUSH Duration (years) | 6.7 | 6.7 | 6.7 | 6.7 | 6.7 |
| \% of Portfolio | $25.3 \%$ | $25.1 \%$ | $24.8 \%$ | $24.3 \%$ | $23.2 \%$ |

*total annual MUSH purchases / total value of MUSH bond portfolio

## CAC (MPI) 1-130

## Reference: Volume II, Investment Income, PDF Page 14 Attachment A

Preamble: PDF Page 14 Attachment A indicates that the threshold for investment in MUSH is that there be "no degradation in yield or grade" in comparison to a 10 year Canada bond. As Canada bonds frequently have a higher rating or grade than other issuers, and trade at lower rates than provincial bonds of similar term to maturity, we are unclear how the prevention of degradation is achieved, particularly in light of the underperformance of this asset category compared to the benchmark chosen by MPI.
a) Does "no degradation in yield or grade" mean MUSH bonds must only meet the 10 year Canada rate?
b) Does "no degradation in yield or grade" mean MUSH bonds must only meet the Manitoba 10 year rate at the time of purchase by MPI, or are there other enhancements provided, and if so please quantify.

## RESPONSE:

a) The minimum acceptable yield for a MUSH bond is the yield on a 10 year Government of Canada bond. However, in practice the bonds provide a positive spread to Province of Manitoba bonds of a similar term.
b) When issued, MUSH bonds provide a yield that exceeds the yield on both the Government of Canada 10 year bond and also the Province of Manitoba 10 year bond. The actual yield spread relative to the Government of Canada 10 year bond averaged 192 basis points over the 5 years ended at February 28, 2014, as indicated in Volume II, Investment Income, pages 30 \& 31 .

## CAC (MPI) 1-131 <br> Reference: Volume II, Investment Income, PDF Page 12 Attachment A

Preamble: PDF Page 12 Attachment A indicates that the benchmark for MUSH is the DEX Provincial Total Return Bond Index. We are unclear how the characteristics of the benchmark match the characteristics of the MUSH portfolio.

Please compare or contrast the characteristics of the MUSH portfolio to the characteristics of the DEX Provincial Total Return Bond Index?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-132 <br> Reference: Volume II, Investment Income, PDF Page 16 Attachment A

Preamble: PDF Page 16 Attachment A indicates that Fund may purchase derivatives and enter into forward transactions, futures or "swaps" consistent with risk management. Interest rate swaps can alter the duration of a bond portfolio. The Board will be aware from previous Manitoba Hydro hearing that MH has entered into interest rate swap transactions.
a) Has the Fund ever entered into an interest rate swap forward or future transaction, and if so please provide the details of the transaction and the purpose for which it was entered into?
b) Has the management or the Working Group considered a derivative or swap transaction as a method to reduce the interest rate risk or duration variance identified in this application, and if so, please provide details of the transaction considered?
c) Has the management or the Working Group considered a derivative or swap transaction as a method to reduce the interest rate risk or duration variance identified in this application, and if not, in what if any circumstances would considering such a transaction, clearly considered reasonable in section 6.12 of Attachment A, be appropriate?

## RESPONSE:

a) to c )

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-133

## Reference: Volume II, Investment Income, PDF Page 19 Attachment A

Preamble: PDF Page 19 Attachment A, in section 7.2 removes a sentence which indicates the date of the last allocation review without providing a new date.
a) What was the date of the last allocation review?
b) When is the next allocation review contemplated?
c) If there is no specific date for review of asset allocation, has a threshold been identified to trigger such a review?

## RESPONSE:

a) to c

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-134

## Reference: Volume II, Investment Income, Page 29 lines 18 and 19, MUSH, Attachment F

Preamble: Lines 18 and 19, indicate that the MUSH bonds provide additional yield over a 10 year Canada bond, but do not provide any information as to the term, amortization, or other features of the MUSH bonds. Attachment F indicates that the Non-marketable bonds underperformed the benchmark in several years, including 2012 and 2010.
a) For the 3 most recent MUSH bonds purchased for MPI please provide term sheets setting out the maturity, coupon, repayment terms and average life, and the spread to the relevant or most comparable Canada bond at date of purchase.
b) Please extend the annual performance information in Attachment F back in time to allow the calculation of the compound annual return in MUSH and its benchmark for a period of 10 years.
c) Please discuss the factors which lead to the $7.7 \%$ underperformance in 2012 and the $2.5 \%$ underperformance in 2010.

## RESPONSE:

a) to c )

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-135 Reference: Volume II, Investment Income, Page 75 Portfolio Asset Classes

Preamble: Page 75 indicates that real Return Bonds are a permitted asset class, but there is no discussion as to the Real Return bonds in the preceding pages.
a) Please provide details of the percentage of the portfolio that is currently made up of Real Return Bonds or is anticipated to be included in the portfolio in the period 2014/15 through 2018/19.
b) To the extent that there are no Real Return Bonds, in the portfolio, why has it not been opportune to purchase those bonds?
c) Please discuss the market conditions in which it is anticipated that it may be opportune to acquire assets in that asset class.
d) In anticipation of the acquisition of Real Return bonds, please provide a discussion as to the anticipated yields, the spreads related to Canada bonds of similar maturities, the accounting treatment with respect to interest paid and accretion of value., turnover, and, a discussion of how assets of that class will impact the calculation of duration of the fixed income or bond portfolio.

## RESPONSE:

a) The portfolio currently does not hold any real return bonds. The future allocation to all asset classes, including real return bonds, will be determined by the upcoming asset liability management study.
b) c) and d)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-136

## Reference: Volume II, Investment Income, PDF Page 5 Attachment A, Page 3 Attachment E

Preamble: PDF Page 5 in Attachment A indicates that the Corporation may request the external equity investment managers to realize capital gains. Page 3 in Attachment E appears to indicate that as at February 28, 2014, the aggregate unrealized gain in the Canadian portfolio was over $\$ 76$ million on an asset value of $\$ 380$ million. The table on page 5 of the Investment Income section shows a forecast drop in realized Canadian Equity gains from $\$ 58$ million in 2014 to $\$ 16$ million in 2015.

Has the Corporation ever requested [other than as part of a rebalancing] the realization of equity capital gains of its asset managers, and if so, please describe the circumstances?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-137 <br> Reference: Volume II, Investment Income, Pages 33-38 Canadian Equities

Preamble: Information about 4 Canadian Equities mandates is supplied, including some information related to accounting treatment, expectations for market return assumptions, realization of gains, dividend yield, and sales or turnover. There appears to be no modeling of any value being added by any of the managers in the future. In each case the assumed future turnover rate range of each active Manager appears to lower than one might expect based on the data presented
a) Please provide the weighted average total turnover, for each to the years 20062013 for the three active managers only.
b) For each of 4 managers, please provide the date at which that mandate was originally funded.
c) As firms such as RBC Investor Services provide comparative performance statistics on fund managers, if MPI has employed such a service,
(i) Please provide a table showing the active managers percentile ranking compared to other Canadian equity managers in that mandate category [e.g. Canadian equity, Canadian small cap, real estate, infrastructure] for each of the years 2006-2013.
(ii) If the benchmarks are other than those set out in section 5.5 of Investment Objectives in Attachment A, please enhance the table in Attachment F by identifying the benchmark used for each mandate category [e.g. NonMarketable Bonds, Canadian equity, Canadian small cap, real estate, infrastructure],
(iii) Please segment Canadian Equities data in the Table in Attachment F by manager, for each of the years.
(iv) Please clarify how, if at all, the SSGA MA S\&P/TSX Index fund identified in Attachment E , is reflected in the table in Attachment F .
d) With respect to Manager $A$, as table 5.6 .1 provides data showing an average turnover of approximately $23.75 \%$ for the years 2006-2013, please explain why its expected future turnover is the range of $15 \%$ to $20 \%$ ?
e) With respect to Manager $B$, as table 5.6 .1 provides data showing an average turnover of approximately 23.63\% for the years 2006-2013, please explain why its expected future turnover is the range of $15 \%$ to $25 \%$ ?
f) The 2013 turnover rate for Manager B is materially higher than the other data points. Please discuss the reason for this value, perhaps a change in investment philosophy, change of staff, or change of manager?
g) With respect to Manager $C$, as table 5.6 .1 provides data showing an average turnover of approximately $39.25 \%$ for the years, 2006-2013, please explain why its expected future turnover is the range of $25 \%$ to $35 \%$ ?

## RESPONSE:

a) The table below contains the weighted average total turnover for the last five years for the three active managers only.

Historical Weighted Average Canadian Equity Portfolio Turnover

| Manager | $\mathbf{2 0 0 9}$ | $\mathbf{2 0 1 0}$ | $\mathbf{2 0 1 1}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 3}$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Manager A | $19 \%$ | $29 \%$ | $4 \%$ | $6 \%$ | $42 \%$ |
| Manager B | $9 \%$ | $13 \%$ | $13 \%$ | $22 \%$ | $72 \%$ |
| Manager C | $36 \%$ | $24 \%$ | $35 \%$ | $25 \%$ | $25 \%$ |
|  |  |  |  |  |  |
| Weighted Average Total Turnover | $18 \%$ | $22 \%$ | $13 \%$ | $15 \%$ | $49 \%$ |

b) Please refer to CAC (MPI) 1-2 a) and b).
c)
i. Please refer to CAC (MPI) 1-2 a) and b).
ii. Please refer to CAC (MPI) 1-2 a) and b).
iii. Please refer to CAC (MPI) 1-2 a) and b).
iv. The SSGA MA S\&P/TSX Index fund identified in Attachment $E$ is reflected in the table in Attachment F within Canadian Large Capitalization Equities.
d) As per line 15 on page 38, the forecasted equity turnover ratio is based on the five year average. Each manager was requested to provide their expected turnover for their fund going forward, and this information is provided for additional context.
e) Please see the response in d).
f) Please see CAC (MPI) 1-2 a) and b).
g) Please see the response in d).

## CAC (MPI) 1-138 <br> Reference: Volume II, Investment Income, Pages 33-38 Canadian Equities

Preamble: Information about 4 Canadian Equities mandates is supplied, including some information related to accounting treatment, expectations for market return assumptions, realization of gains, dividend yield, and sales or turnover.

Table 5.6.1 indicates zero turnovers for the S\&P Index investment Mandate for the period 2006-2013. This has the effect of reducing the overall turnover average and therefore reducing the current forecast year net income from equities.

Press releases from S\&P Dow Jones Indices http://ca.spindices.com/indices/equity/sp-tsx-composite-index show frequent changes in the index portfolio. For example on June 13, 2014, AutoCanada, Canaccord, Canyon Services, Painted Pony, Parex, Primero, RMP, TORC, were added and Silvercop was removed from the Composite Index. A similar announcement with 6 additions and 2 deletions to the Composite was made March 14, 2014. Various reorganizations also trigger adjustments to the Index as may be seen with the March 25, 2014 Shoppers Drug Mart and June 9, 2014 Osisko Mining, and similar releases. Substantial new issues may trigger weighting adjustments to the Index as may be seen with the November 14, 2013 release related to Barrick Gold.
a) Under what circumstances is it correct to view the Index mandate as having zero turnover?
b) If it is correct to view this mandate as having zero turnover, why is it appropriate to include it in the calculation of the average turnover of the equity portfolio?
c) Please indicate whether any of the companies listed in the preamble are or have been in the portfolios since 2012. If yes, please specify each company and the year(s) they were in the portfolios.

## RESPONSE:

a) The turnover ratio is used to calculate realized gains/losses in the equity portfolios. For forecasting purposes, the index mandate has a zero turnover.
b) As mentioned in response a), the turnover ratio is used in the model to calculate realized gains in the equity portfolio. If $15 \%$ or $50 \%$ or $75 \%$ of the portfolio had $0 \%$ turnover, then this number should be included in the weighted average turnover calculation for the entire Canadian equity portfolio.
c) The index portfolio is effectively a full replication portfolio. Therefore, whenever a stock is added or deleted from the index, the index portfolio adds or deletes the stock from the portfolio.

## CAC (MPI) 1-139

## Reference: Volume II, Investment Income, PDF Pages 12 and 24 Attachment A, and, Attachment F

Preamble: PDF Page 12 in Attachment A, provides an annual expected return that differs from the benchmark found on page 24 of Attachment A for Canadian equities, and, Attachment $F$, provides an annual expected return benchmark in percentage terms.

If the annual expected return benchmark in Attachment $F$, is not the benchmark as the term is used on page 24 of Attachment A, please explain the adjustment to the value, and provide the raw benchmarks for Canadian equities for the periods indicated in Attachment F.

## RESPONSE:

The annual expected return for active Canadian equity managers is the annualized return of the respective benchmarks over a rolling four year period plus the alpha target of 150 basis points. For the large cap mandate, the benchmark is the S\&P/TSX Capped Composite Total Return Index and for the small/mid cap mandate the benchmark is the BMO Small Cap (Un-weighted) Blended Index. The alpha target is the value added that active equity managers are expected to provide over and above the return of the benchmark.

The table below shows the benchmark's annual performance for periods 2010 to 2014.

|  | Annual Return Ending February |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | 2014 | 2013 | 2012 | 2011 | 2010 |
| S\&P/TSX Capped Composite Total |  |  |  |  |  |
| Return Index | $14.3 \%$ | $4.6 \%$ | $-8.1 \%$ | $24.8 \%$ | $47.6 \%$ |
| BMO Small Cap (Un-weighted) |  |  |  |  |  |
| Blended Index | $13.1 \%$ | $-12.1 \%$ | $-10.0 \%$ | $39.2 \%$ | $102.4 \%$ |

## CAC (MPI) 1-140

## Reference: Volume II, Investment Income, Page 39 Table 6.1, Page 41 Line 18 Turnover Ratio

Preamble: Table 6.1 on page 39 indicates a $\$ 17$ million realization in 2018/19. Line 18 on page 41 indicates that there are "no sales of U. S. equities projected over the five year forecast period".
a) Please reconcile the $\$ 17$ million realization in $2018 / 19$, with Line 18 on page 41 .
b) As the EFT managers may be required to rebalance their portfolios as the index changes, and distribute a portion of income other than dividends to unit holders, please discuss how MPI will account for income other than dividends realized from a US EFT.

## RESPONSE:

a) The U.S. equity portfolio was rebalanced in 2018/19 because the asset class was outside of the maximum limit of $7.0 \%$ for two quarters. This rebalancing caused $\$ 17.6$ million in unrealized gains to be realized in 2018/19.
b) The U.S. listed ETF funds held in the portfolio have never distributed any capital gains. Based on conversations with the ETF manager, going forward it is not expected that there will be any distribution of capital gains in the future. These particular ETF funds are managed to minimize capital gains.

## CAC (MPI) 1-141

## Reference: Volume II, Investment Income, Attachment A, PDF Page18, Line 20 page 42 Accounting Treatment of Real Estate Pooled Fund, Line 13 page 45, Accounting Treatment Cityplace

Preamble: Attachment A, PDF Page18, indicates that all real estate will be accounted for on a Fair Value Through Profit and Loss basis. Line 20 page 42 Accounting Treatment of Real Estate Pooled Fund appears to indicate that all unrealized losses and gains flow through the profit and loss statement. Line 13 page 45 Accounting Treatment Cityplace appears to indicate that changes in the market value are not reflected in the profit and loss statement

Please explain the apparently conflicting treatment in Attachment A, and pages 42 and 45.

## RESPONSE:

The accounting class column in Attachment A refers to the accounting treatment of financial instruments. The unrealized and realized gains and losses of financial instruments that are classified as Fair Value Through Profit flow through the profit and loss statement (statement of operations). Cityplace is an investment property for accounting purposes, not a financial instrument and is recorded at amortized cost, although the fair value is disclosed in the financial statement notes. The accounting treatments noted are consistent with our audited financial statements.

## CAC (MPI) 1-142

## Reference: Volume II, Investment Income, Page 43, Return Assumption, Real Estate Pooled Fund.

Preamble: At line 17, page 43, the corporation indicates that recent returns for the real estate pooled fund have been in the $11.5 \%$ to $12.3 \%$ range. Chart 7.3 provides the Index return, which in recent years has been between 5\% and 7\%.

Please discuss the specific factors if any in the recent performance of the pooled fund, that would suggest that the average performance of this manager [say for the same 2009-13 period] should not be a better guide to future performance than the less attractive recent rates found in the benchmark index, to which the mangers results appear to have a low correlation.

## RESPONSE:

Chart 7.3 provides the income return for the index, which does not include capital appreciation. The reference to the real estate pooled fund returns are total return, which include both capital appreciation and income. Therefore, the income return of the index and the last two years of total returns for the real estate pooled fund are not comparable.

## CAC (MPI) 1-143

## Reference: Tab, Page 45, Return Assumption, Cityplace, Page 5 Summary of Investment Income

Preamble: While page 5 Summary of Investment Income provides information as to the Forecast Pooled fund in line 7A, it does not have a line 7B to reflect the \$3 million per year income from Cityplace.
a) Does the information in line 7A of the Summary of Investment Income, include both the Cityplace and Pooled Fund results?
(i) and if not, please amend the table on Page 5, or
(ii) if it does, please provide a segmenting the Pooled Fund results
b) In forecasting future rental income, was the current lease renewal schedule considered, or, are the preponderance of leases extending beyond the 2019 forecast period?

## RESPONSE:

a) The information in line 7A of the Summary of Investment Income includes the Pooled Fund results only. Information on Cityplace is shown on line 7B, which is located 7 rows above line 7A, between U.S. equities and infrastructure.
b) The current lease schedule and rental rates were considered in estimating future rental revenues.

## CAC (MPI) 1-144

## Reference: Tab , Page 55 to 57, Rebalancing, Page 75 Table providing 'Target' values for asset classes, Attachment A, Statement of Investment Beliefs.

Preamble: The discussion of rebalancing describes actions that will be modeled in certain circumstances when the value of certain asset classes cross certain thresholds. For example at page 56 line 16 and line 22, when certain classes of equities remain "outside the maximum or minimum" for "two consecutive quarters" they will be adjusted to "the target weight in the following quarter" and the proceeds will be placed in marketable bonds. In Attachment A, Statement of Investment Beliefs, the first point is that "Asset allocation is the most important factor in determining the performance of the Fund'.
a) Is this modeling description of the Rebalancing policy, under which the portfolio allocation to the various asset classes will be adjusted, an accurate representation of the policy?
b) What is the reason for requiring that any particular asset class need be outside the min-max range for half a year before action would be taken to rebalance within the min-max ranges?
c) If asset allocation is the "most important factor" in performance, and asset classes have wide ranges, such as $5 \%$ to $13 \%$ for Long Term Bonds, how is it consistent to wait two quarters to rebalance?
d) Were these rebalancing ranges developed as a result of an analysis of the relative performance of the asset classes and the extent to which the asset classes results are counterbalancing risk and optimizing return, and if so, may we see that analysis?
e) Having regard to the forecast of returns of each of the asset classes, what is the rational of rebalancing from the point of excess or deficiency [say $18.5 \%$ or
$11.5 \%$ for Canadian equities] to the midpoint of the range [15\% for Canadian equities] rather than some other point within the range that represents a less substantial change in portfolio allocation, which would represent a change of allocation of over 3\%, or about 20\% of the 'Target' allocation, as indicated on page 75 ?
f) For the purposes of these rebalancing rules are GOC, or Provincial real return bonds, treated as "marketable bonds" as that term appears in line 2 on page 56, or if not, what is the rebalancing policy for real return bonds?

## RESPONSE:

a) and b)

The investment model is calculated on a quarterly basis. As a result, the model requires rules for rebalancing asset classes that match the capabilities of the quarterly model. Therefore, the description of the rebalancing assumptions on page 55 is a reasonable representation of the Rebalancing Policy on page 75, within the constraints of a quarterly model.
c) There is a simple tradeoff when deciding to rebalance a portfolio - the cost of rebalancing compared to the cost of not rebalancing. Transaction costs can either partially or fully offset the benefits of rebalancing. For instance, if every asset class in the portfolio was rebalanced to target weight once a fiscal quarter, it would cause a significant cost drag to the investment portfolio.
d) No, the analysis as described in the question was not performed.
e) If the model rebalanced Canadian equities back to maximum weight instead of to target, then the Canadian equities would require a rebalance soon thereafter. The target weight was chosen to ensure that the model would not be required to rebalance the same asset class within a short period of time.
f) There is no allocation to real return bonds in the portfolio. Also, there are no real return bonds held in the portfolio.

## CAC (MPI) 1-145

## Reference: Volume II, Investment Income, Page 56, Rebalancing, Page 75 Table providing "Target" values for asset classes, Page 76 noting that the "asset class will be rebalanced back" into the target range for that asset class within six (6) months"."

Preamble: The discussion of rebalancing on page 56, describes actions that will be modeled in certain circumstances when the value of certain asset classes cross certain thresholds. For example at page 56 line 16 and line 22, when certain classes of equities remain "outside the maximum or minimum" for "two consecutive quarters" they "will be adjusted to the target weight in the following quarter" and the proceeds will be placed in marketable bonds.
a) Does the rebalancing policy require rebalancing "to the target weight in the following quarter" as indicated on page 56, or "into the target range for that asset class within six (6) months", as indicated on page 76 ?
b) Which of the two alternatives does the forecast model embrace?

## RESPONSE:

a) \& b)

The investment model is calculated on a quarterly basis. As a result, the model requires rules for rebalancing asset classes that are matched to the capabilities of the quarterly model. The discussion of rebalancing on page 56 describes how the financial model will rebalance various asset classes for forecasting purposes.

The Investment Committee Working Group's Rebalancing Policy (page 75) is used for actual situations requiring rebalancing. The difference between rebalancing assumptions in the model and the Rebalancing Policy is explained on page 55, lines 3 to 5 .

## CAC (MPI) 1-146

## Reference: Volume II, Investment Income, Page 7 line 23-28, `significant forecasting risk' and 'benefits', and Duration Matching Discussion Paper

Preamble: MPI notes that a negative duration gap between fixed income and claims may give rises to "benefits from a rising interest rate forecast". In its discussion of "duration" MPI appears to use the duration of the entire fixed income holdings. To better understand the use of marching assets and liabilities to reduce risk, we have observed that the Saskatchewan Auto Fund appears to segment its portfolios into a "Matching Portfolio" and a "Return Seeking Portfolio". Within the Saskatchewan Auto Fund "Matching Portfolio" into 6 buckets of different ranges terms, e.g. "Over 1 to 3 years", and "Over 5 to 10 years", and "Over 15 years ...". See page 222/279 of the pdf found at http://www.saskratereview.ca/images/docs/sgi-2013/saf-minimum-filing-requirements-srrp-website.pdf
a) Please confirm that the assumption underlying your duration calculation of "parallel shifts in the yield curve", is that each point on the interest rate curve [including, 3 months, 1 year, 3 years, 5 years, 10 years, 20 years, 30 years] is increased, or decreased, by an equal measure [say 1\%]., or if unable to confirm provide the correct assumption.
b) Please confirm that the changes in the interest rate curves rarely if ever move in a parallel shift.
c) Please confirm that the changes in interest rates forecast in Tables 13.2.2 and 13.2.3 suggest that markets will move from a relatively steep T-bill to 10 year yield curve to a relatively flat T-bill to 10 year yield curve.
d) Would we be correct in thinking that by segmenting its portfolios into "buckets" of a few years duration, all other things being equal, there is more reduce the financial risk of non-parallel changes in interest rates in one portion of the yield curve, or, if not why not?
e) Saskatchewan indicates it will match "Buckets with terms over 1 year" to "within $+/-5 \%$ of the estimated liability cash flow for each bucket", does this represent a more precise matching range providing consumers with greater protection from interest rate risk than a +/- 1 year matching range or duration bandwidth, and if not why not?
f) At line 27 of page 2 of the Duration Matching Discussion Paper, MPI indicates that the "duration bandwidth ... was increased from +/- 1.5 years to +/- 2 years which increased the Corporation's exposure to interest rate risk."
(i) Was it the change of policy alone that "increased the Corporation's exposure to interest rate risk", or did the Corporation have to act to use this larger range to increase the risk?
(ii) Please discuss the internal actions that lead to this policy change, including the administrative studies that indicated the benefits outweighed the cost, the process that lead to the recommendation to the decision maker or decision making body, and rational for the decision.
(iii) Please provide a table showing the claims duration and fixed income portfolio duration on a quarterly basis from November 2009 and the variance, to permit one to see the extent to which the newly permitted bandwidth expansion increased risk, and the amount of aggregate claims liability and amount of the fixed income portfolio.
(iv) Since in Attachment C, at page 18, the authors observe that "MPI duration mismatch must be within $+/-2$ years" and that organizations "with shorter term liabilities had higher tolerance for mismatch", please discuss the underlying factors that resulted in the apparent reversal of the policy change increasing the bandwidth to +/- 2 to now +/- 1 .
g) Please confirm that it is possible that a $\$ 500$ million and a $\$ 1$ billion bond portfolio could each have the same duration, but neither would immunize or
match the risk of $\$ 750$ million liability portfolio owing to the size mismatch, or, if unable to confirm provide the correct statement.
h) Since in Attachment C, at page 17, the authors observe that the "majority" appear to use buckets, does MPI use buckets, and if not, please provide the reasoning for holding this minority position?
i) Please provide the duration for fixed income assets and claims liabilities for each of the following periods.
(i) Up to one year
(ii) Over 1 to 3 years
(iii) Over 3 to 5 years
(iv) Over 5 to 10 years
(v) Over 10 to 15 years
(vi) Over 15 years

## RESPONSE:

a) Confirmed. Parallel shifts in the yield curve occur when the yield of all maturities on the yield curve move by an equal amount.
b) Confirmed. As defined in a), parallel shifts in the yield curve rarely occur in reality.
c) Confirmed.
d) This issue of segmenting the asset and liability portfolios into "buckets" will be studied and the benefits, if any, quantified during the upcoming ALM study. Until the results to the ALM study are received we cannot comment on this question.
e) See the response to Part d) above.
f)
(i) The Corporation was not compelled to use the larger range.
(ii) This change to the duration bandwidth was made for several reasons. First, because the definition of the liabilities was changed from total liabilities to claims liabilities. Second, because the bond portfolio was in transition with the elimination of real return bonds and the addition of long bonds. Third, interest rates were forecasted to increase.
(iii) The requested data is provided in the following table.

| Date | Fixed <br> Income <br> Duration | Liability <br> Duration* | Variance <br> Duration ** | Fixed Income <br> Assets (\$ <br> Billion) | Ag * |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Claims <br> Liability |  |  |  |  |  |
| Nov-09 | 7.4 | 7.6 | -0.2 | 1.77 | 1.66 |
| Feb-10 | 7.2 | 9.0 | -1.8 | 1.80 | 1.62 |
| May-10 | 6.6 | 9.0 | -2.4 | 1.82 | 1.56 |
| Aug-10 | 6.7 | 9.4 | -2.7 | 1.85 | 1.67 |
| Nov-10 | 7.6 | 9.4 | -1.8 | 1.54 | 1.66 |
| Feb-11 | 7.6 | 9.4 | -1.9 | 1.50 | 1.44 |
| May-11 | 7.5 | 9.4 | -1.9 | 1.39 | 1.43 |
| Aug-11 | 7.4 | 9.1 | -1.7 | 1.40 | 1.48 |
| Nov-11 | 7.5 | 9.1 | -1.6 | 1.41 | 1.51 |
| Feb-12 | 8.3 | 9.1 | -0.9 | 1.33 | 1.48 |
| May-12 | 8.3 | 9.1 | -0.8 | 1.34 | 1.48 |
| Aug-12 | 6.9 | 8.9 | -2.0 | 1.53 | 1.52 |
| Nov-12 | 6.6 | 8.9 | -2.3 | 1.53 | 1.54 |
| Feb-13 | 7.4 | 8.9 | -1.5 | 1.51 | 1.55 |
| May-13 | 7.2 | 8.9 | -1.7 | 1.48 | 1.59 |
| Aug-13 | 8.1 | 8.9 | -0.8 | 1.48 | 1.56 |
| Nov-13 | 6.7 | 8.9 | -2.2 | 1.61 | 1.59 |
| Feb-14 | 7.3 | 9.4 | -2.1 | 1.61 | 1.70 |
| May-14 | 8.1 | 9.4 | -1.3 | 1.65 | 1.69 |

* Prior to February 2010, liability duration was total liability duration
* After February 2010, liability duration was claim liability duration
** Variance Duration = Fixed Income Duration - Liability Duration
*** Fixed Income Assets utilized to calculate fixed income duration
I. Please see Attachment B Duration Matching Discussion Paper for a full discussion of the reasons why the duration bandwidth was changed from +/- 2.0 years to +/-1.0 year.
g) Immunization requires that ${ }^{1}$ :

1. Average duration of assets and liabilities are equal at all times.

[^0]2. The market value of assets must be greater than or equal to the present value of liabilities.
3. The dispersion of assets be greater than or equal to the dispersion of liabilities.

In the above example only the $\$ 1.0$ billion bond portfolio can potentially immunize or match the risk of $\$ 750$ million liability portfolio. The $\$ 500$ million bond portfolio does not have sufficient funds to fund the liability and has a large current deficit (of $\$ 250.0$ million).
h) The Corporation does not currently use time buckets to segment its liabilities or bond portfolio. However, the upcoming ALM study will address this issue and the consultant has been asked to quantify the benefits of adopting a cash flow matching strategy to manage interest rate risk.
i) Please see CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-147

## Reference: Volume II, Investment Income, Attachment E

Preamble: Included in the list of Canadian Equities are 3 Canadian T bills with an aggregate value of $\$ 3.9$ million.

Are these amounts uninvested cash held by active equity managers, and if not, please explain?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-148

## Reference: Volume II, Investment Income, PDF Page 2 Attachment A, Governance

Preamble: Page 2 Attachment A, Governance appears to indicate that the next review date is "April 2013" and thereafter, the policy is to be reviewed on an annual basis.
a) Was the April 2013 review completed?
b) What is the status of the April 2014 review?
c) If the April 2014 review has been completed, please supply any policy revisions resulting there from.

## RESPONSE:

a) to c )

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-149

## Reference: Volume 2, Investment Income, II.5.3, Total Return Assumptions, pages 34-36.

In preparing its analysis, has Manitoba Public Insurance considered the analysis including equity risk premium found in any of the following reports or proceedings:

- Alberta Utilities Commission, 2011 Generic Cost of Capital decision 2011-474, December 8, 2011;
- Concentric Advisors - Authorized Return on Equity for Canadian Gas and Electric Distributors and Select Comparators, Volume 1, October 1, 2013
- Concentric Advisors - Authorized Return on Equity for Canadian Gas and Electric Distributors and Select Comparators, Volume II, May 8, 2014
- TESTIMONY ON COST OF CAPITAL FOR The Alberta Utilities Commission Prepared by KATHLEEN C. MCSHANE FOSTER ASSOCIATES, INC., January 2014;
- BEFORE THE ALBERTA UTILITIES COMMISSION IN THE MATTER OF: ALBERTA UTILITIES COMMISSION (AUC) 2014 GENERIC COST OF CAPITAL APPLICATION NO. 1608918 PROCEEDING ID 2191, EVIDENCE OF DR. SEAN CLEARY, CFA, BMO PROFESSOR OF FINANCE
- FAIR RETURN AND COMMON EQUITY RATIO FOR ATCO PIPE . EVIDENCE OF Laurence D. Booth BEFORE THE ALBERTA UTILITIES COMMISSION, January 2014


## RESPONSE:

No. The Corporation has described in Volume II Investment Income (Section II.5) how it has forecasted equity returns based on PUB Order 157/12.

# CAC (MPI) 1-150 <br> Reference: Volume 2, Investment Income, II.5.3 

Preamble: Total Return Assumptions, page 34. "Table 5.3.2 provides the percentile returns over 5, 10 and 20 year annualized periods."

Please provide the underlying data and calculations in support of Table 5.3.2.

## RESPONSE:

The underlying data and calculations in support of Table 5.3.2 are attached.

S\&P/TSX Composite Total Annualized Rolling Returns from 1956 to Present (*)

| Percentile | 5 Year Annualized | 10 Year Annualized | 20 Year Annualized |
| :--- | :---: | :---: | :---: |
| Min | $-1.9 \%$ | $2.8 \%$ | $6.2 \%$ |
| $1 \%$ | $-0.5 \%$ | $3.9 \%$ | $6.6 \%$ |
| $5 \%$ | $1.2 \%$ | $5.0 \%$ | $\mathbf{7 . 3 \%}$ |
| $10 \%$ | $2.2 \%$ | $6.1 \%$ | $8.2 \%$ |
| $20 \%$ | $5.1 \%$ | $7.7 \%$ | $8.8 \%$ |
| $25 \%$ | $5.7 \%$ | $8.0 \%$ | $9.1 \%$ |
| $50 \%$ | $8.7 \%$ | $9.4 \%$ | $10.0 \%$ |
| Max | $27.8 \%$ | $19.5 \%$ | $14.1 \%$ |

(*) January 31, 1956 to February 28, 2014

| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \\ \hline \end{gathered}$ | Monthly Return (\%) | Product Return | 1 Year Total Return | 5 Year Total Return | 5 Year <br> Annualized Return | 10 Year Total Return | 10 Year <br> Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1/31/1956 | 246.77 |  |  |  |  |  |  |  |  |  |  |
| 2/29/1956 | 256.42 | 3.91\% | 1.039 |  |  |  |  |  |  |  | 2/29/1956 |
| 3/30/1956 | 278.04 | 8.43\% | 1.084 |  |  |  |  |  |  |  | 3/30/1956 |
| 4/30/1956 | 276.03 | -0.72\% | 0.993 |  |  |  |  |  |  |  | 4/30/1956 |
| 5/31/1956 | 265.26 | -3.90\% | 0.961 |  |  |  |  |  |  |  | 5/31/1956 |
| 6/29/1956 | 273.65 | 3.16\% | 1.032 |  |  |  |  |  |  |  | 6/29/1956 |
| 7/31/1956 | 294.41 | 7.59\% | 1.076 |  |  |  |  |  |  |  | 7/31/1956 |
| 8/31/1956 | 288.2 | -2.11\% | 0.979 |  |  |  |  |  |  |  | 8/31/1956 |
| 9/28/1956 | 271.73 | -5.71\% | 0.943 |  |  |  |  |  |  |  | 9/28/1956 |
| 10/31/1956 | 266.09 | -2.08\% | 0.979 |  |  |  |  |  |  |  | 10/31/1956 |
| 11/30/1956 | 252.16 | -5.24\% | 0.948 |  |  |  |  |  |  |  | 11/30/1956 |
| 12/31/1956 | 273.42 | 8.43\% | 1.084 |  |  |  |  |  |  |  | 12/31/1956 |
| 1/31/1957 | 275.72 | 0.84\% | 1.008 | 11.73\% |  |  |  |  |  |  | 1/31/1957 |
| 2/28/1957 | 265.21 | -3.81\% | 0.962 | 3.43\% |  |  |  |  |  |  | 2/28/1957 |
| 3/29/1957 | 275.35 | 3.82\% | 1.038 | -0.97\% |  |  |  |  |  |  | 3/29/1957 |
| 4/30/1957 | 288.42 | 4.75\% | 1.047 | 4.49\% |  |  |  |  |  |  | 4/30/1957 |
| 5/31/1957 | 297.03 | 2.99\% | 1.030 | 11.98\% |  |  |  |  |  |  | 5/31/1957 |
| 6/28/1957 | 291.66 | -1.81\% | 0.982 | 6.58\% |  |  |  |  |  |  | 6/28/1957 |
| 7/31/1957 | 284.78 | -2.36\% | 0.976 | -3.27\% |  |  |  |  |  |  | 7/31/1957 |
| 8/30/1957 | 257.03 | -9.74\% | 0.903 | -10.82\% |  |  |  |  |  |  | 8/30/1957 |
| 9/30/1957 | 239.95 | -6.65\% | 0.934 | -11.70\% |  |  |  |  |  |  | 9/30/1957 |
| 10/31/1957 | 222.99 | -7.07\% | 0.929 | -16.20\% |  |  |  |  |  |  | 10/31/1957 |
| 11/29/1957 | 228.43 | 2.44\% | 1.024 | -9.41\% |  |  |  |  |  |  | 11/29/1957 |
| 12/31/1957 | 217.14 | -4.94\% | 0.951 | -20.58\% |  |  |  |  |  |  | 12/31/1957 |
| 1/31/1958 | 226.37 | 4.25\% | 1.043 | -17.90\% |  |  |  |  |  |  | 1/31/1958 |
| 2/28/1958 | 224.46 | -0.84\% | 0.992 | -15.37\% |  |  |  |  |  |  | 2/28/1958 |
| 3/31/1958 | 232.31 | 3.50\% | 1.035 | -15.63\% |  |  |  |  |  |  | 3/31/1958 |
| 4/30/1958 | 231.22 | -0.47\% | 0.995 | -19.83\% |  |  |  |  |  |  | 4/30/1958 |
| 5/30/1958 | 241.05 | 4.25\% | 1.043 | -18.85\% |  |  |  |  |  |  | 5/30/1958 |
| 6/30/1958 | 248.08 | 2.92\% | 1.029 | -14.94\% |  |  |  |  |  |  | 6/30/1958 |
| 7/31/1958 | 260.92 | 5.18\% | 1.052 | -8.38\% |  |  |  |  |  |  | 7/31/1958 |
| 8/29/1958 | 264.79 | 1.48\% | 1.015 | 3.02\% |  |  |  |  |  |  | 8/29/1958 |
| 9/30/1958 | 274.55 | 3.69\% | 1.037 | 14.42\% |  |  |  |  |  |  | 9/30/1958 |
| 10/31/1958 | 278.12 | 1.30\% | 1.013 | 24.72\% |  |  |  |  |  |  | 10/31/1958 |
| 11/28/1958 | 279.7 | 0.57\% | 1.006 | 22.44\% |  |  |  |  |  |  | 11/28/1958 |
| 12/31/1958 | 284.99 | 1.89\% | 1.019 | 31.25\% |  |  |  |  |  |  | 12/31/1958 |
| 1/30/1959 | 293.48 | 2.98\% | 1.030 | 29.65\% |  |  |  |  |  |  | 1/30/1959 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year <br> Annualized Return | 10 Year Total Return | 10 Year Annualized Return | 20 Year Total Return | 20 Year Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2/27/1959 | 296.18 | 0.92\% | 1.009 | 31.95\% |  |  |  |  |  |  | 2/27/1959 |
| 3/31/1959 | 295.19 | -0.33\% | 0.997 | 27.07\% |  |  |  |  |  |  | 3/31/1959 |
| 4/30/1959 | 298.6 | 1.16\% | 1.012 | 29.14\% |  |  |  |  |  |  | 4/30/1959 |
| 5/29/1959 | 299.41 | 0.27\% | 1.003 | 24.21\% |  |  |  |  |  |  | 5/29/1959 |
| 6/30/1959 | 302.81 | 1.14\% | 1.011 | 22.06\% |  |  |  |  |  |  | 6/30/1959 |
| 7/31/1959 | 317.12 | 4.73\% | 1.047 | 21.54\% |  |  |  |  |  |  | 7/31/1959 |
| 8/31/1959 | 301.47 | -4.94\% | 0.951 | 13.85\% |  |  |  |  |  |  | 8/31/1959 |
| 9/30/1959 | 288.11 | -4.43\% | 0.956 | 4.94\% |  |  |  |  |  |  | 9/30/1959 |
| 10/30/1959 | 288.78 | 0.23\% | 1.002 | 3.83\% |  |  |  |  |  |  | 10/30/1959 |
| 11/30/1959 | 287.53 | -0.43\% | 0.996 | 2.80\% |  |  |  |  |  |  | 11/30/1959 |
| 12/31/1959 | 298.06 | 3.66\% | 1.037 | 4.59\% |  |  |  |  |  |  | 12/31/1959 |
| 1/29/1960 | 285.31 | -4.28\% | 0.957 | -2.78\% |  |  |  |  |  |  | 1/29/1960 |
| 2/29/1960 | 276.46 | -3.10\% | 0.969 | -6.66\% |  |  |  |  |  |  | 2/29/1960 |
| 3/31/1960 | 277.52 | 0.38\% | 1.004 | -5.99\% |  |  |  |  |  |  | 3/31/1960 |
| 4/29/1960 | 273.38 | -1.49\% | 0.985 | -8.45\% |  |  |  |  |  |  | 4/29/1960 |
| 5/31/1960 | 281.77 | 3.07\% | 1.031 | -5.89\% |  |  |  |  |  |  | 5/31/1960 |
| 6/30/1960 | 276.03 | -2.04\% | 0.980 | -8.84\% |  |  |  |  |  |  | 6/30/1960 |
| 7/29/1960 | 270.85 | -1.88\% | 0.981 | -14.59\% |  |  |  |  |  |  | 7/29/1960 |
| 8/31/1960 | 289.21 | 6.78\% | 1.068 | -4.07\% |  |  |  |  |  |  | 8/31/1960 |
| 9/30/1960 | 276 | -4.57\% | 0.954 | -4.20\% |  |  |  |  |  |  | 9/30/1960 |
| 10/31/1960 | 276.66 | 0.24\% | 1.002 | -4.20\% |  |  |  |  |  |  | 10/31/1960 |
| 11/30/1960 | 287.62 | 3.96\% | 1.040 | 0.03\% |  |  |  |  |  |  | 11/30/1960 |
| 12/30/1960 | 303.37 | 5.48\% | 1.055 | 1.78\% |  |  |  |  |  |  | 12/30/1960 |
| 1/31/1961 | 321.39 | 5.94\% | 1.059 | 12.65\% | 30.24\% | 5.43\% |  |  |  |  | 1/31/1961 |
| 2/28/1961 | 332.57 | 3.48\% | 1.035 | 20.30\% | 29.70\% | 5.34\% |  |  |  |  | 2/28/1961 |
| 3/31/1961 | 340.11 | 2.27\% | 1.023 | 22.55\% | 22.32\% | 4.11\% |  |  |  |  | 3/31/1961 |
| 4/28/1961 | 356.51 | 4.82\% | 1.048 | 30.41\% | 29.16\% | 5.25\% |  |  |  |  | 4/28/1961 |
| 5/31/1961 | 364.01 | 2.10\% | 1.021 | 29.19\% | 37.23\% | 6.53\% |  |  |  |  | 5/31/1961 |
| 6/30/1961 | 367.96 | 1.09\% | 1.011 | 33.30\% | 34.46\% | 6.10\% |  |  |  |  | 6/30/1961 |
| 7/31/1961 | 375.49 | 2.05\% | 1.020 | 38.63\% | 27.54\% | 4.99\% |  |  |  |  | 7/31/1961 |
| 8/31/1961 | 381.77 | 1.67\% | 1.017 | 32.00\% | 32.47\% | 5.78\% |  |  |  |  | 8/31/1961 |
| 9/29/1961 | 376.89 | -1.28\% | 0.987 | 36.55\% | 38.70\% | 6.76\% |  |  |  |  | 9/29/1961 |
| 10/31/1961 | 379.96 | 0.81\% | 1.008 | 37.34\% | 42.79\% | 7.38\% |  |  |  |  | 10/31/1961 |
| 11/30/1961 | 391.82 | 3.12\% | 1.031 | 36.23\% | 55.39\% | 9.21\% |  |  |  |  | 11/30/1961 |
| 12/29/1961 | 402.71 | 2.78\% | 1.028 | 32.75\% | 47.29\% | 8.05\% |  |  |  |  | 12/29/1961 |
| 1/31/1962 | 393.28 | -2.34\% | 0.977 | 22.37\% | 42.64\% | 7.36\% |  |  |  |  | 1/31/1962 |
| 2/28/1962 | 396.21 | 0.75\% | 1.007 | 19.14\% | 49.39\% | 8.36\% |  |  |  |  | 2/28/1962 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly <br> Return (\%) | Product Return | 1 Year Total Return | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year Annualized Return | 10 Year Total Return | 10 Year <br> Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3/30/1962 | 397.06 | 0.21\% | 1.002 | 16.74\% | 44.20\% | 7.60\% |  |  |  |  | 3/30/1962 |
| 4/30/1962 | 387.27 | -2.47\% | 0.975 | 8.63\% | 34.27\% | 6.07\% |  |  |  |  | 4/30/1962 |
| 5/31/1962 | 355.65 | -8.16\% | 0.918 | -2.30\% | 19.74\% | 3.67\% |  |  |  |  | 5/31/1962 |
| 6/29/1962 | 334.16 | -6.04\% | 0.940 | -9.19\% | 14.57\% | 2.76\% |  |  |  |  | 6/29/1962 |
| 7/31/1962 | 343.14 | 2.69\% | 1.027 | -8.62\% | 20.49\% | 3.80\% |  |  |  |  | 7/31/1962 |
| 8/31/1962 | 352.16 | 2.63\% | 1.026 | -7.76\% | 37.01\% | 6.50\% |  |  |  |  | 8/31/1962 |
| 9/28/1962 | 336.76 | -4.37\% | 0.956 | -10.65\% | 40.35\% | 7.01\% |  |  |  |  | 9/28/1962 |
| 10/31/1962 | 342.95 | 1.84\% | 1.018 | -9.74\% | 53.80\% | 8.99\% |  |  |  |  | 10/31/1962 |
| 11/30/1962 | 370.21 | 7.95\% | 1.079 | -5.52\% | 62.07\% | 10.14\% |  |  |  |  | 11/30/1962 |
| 12/31/1962 | 374.14 | 1.06\% | 1.011 | -7.09\% | 72.30\% | 11.50\% |  |  |  |  | 12/31/1962 |
| 1/31/1963 | 393.65 | 5.21\% | 1.052 | 0.09\% | 73.90\% | 11.70\% |  |  |  |  | 1/31/1963 |
| 2/28/1963 | 381.51 | -3.08\% | 0.969 | -3.71\% | 69.97\% | 11.19\% |  |  |  |  | 2/28/1963 |
| 3/29/1963 | 394.45 | 3.39\% | 1.034 | -0.66\% | 69.79\% | 11.17\% |  |  |  |  | 3/29/1963 |
| 4/30/1963 | 414.56 | 5.10\% | 1.051 | 7.05\% | 79.29\% | 12.39\% |  |  |  |  | 4/30/1963 |
| 5/31/1963 | 421.77 | 1.74\% | 1.017 | 18.59\% | 74.97\% | 11.84\% |  |  |  |  | 5/31/1963 |
| 6/28/1963 | 407.89 | -3.29\% | 0.967 | 22.06\% | 64.42\% | 10.46\% |  |  |  |  | 6/28/1963 |
| 7/31/1963 | 398.11 | -2.40\% | 0.976 | 16.02\% | 52.58\% | 8.82\% |  |  |  |  | 7/31/1963 |
| 8/30/1963 | 401.47 | 0.84\% | 1.008 | 14.00\% | 51.62\% | 8.68\% |  |  |  |  | 8/30/1963 |
| 9/30/1963 | 415.11 | 3.40\% | 1.034 | 23.27\% | 51.20\% | 8.62\% |  |  |  |  | 9/30/1963 |
| 10/31/1963 | 419.49 | 1.06\% | 1.011 | 22.32\% | 50.83\% | 8.57\% |  |  |  |  | 10/31/1963 |
| 11/29/1963 | 415.83 | -0.87\% | 0.991 | 12.32\% | 48.67\% | 8.25\% |  |  |  |  | 11/29/1963 |
| 12/31/1963 | 432.51 | 4.01\% | 1.040 | 15.60\% | 51.76\% | 8.70\% |  |  |  |  | 12/31/1963 |
| 1/31/1964 | 445.28 | 2.95\% | 1.030 | 13.12\% | 51.72\% | 8.70\% |  |  |  |  | 1/31/1964 |
| 2/28/1964 | 442.34 | -0.66\% | 0.993 | 15.94\% | 49.35\% | 8.35\% |  |  |  |  | 2/28/1964 |
| 3/31/1964 | 461.23 | 4.27\% | 1.043 | 16.93\% | 56.25\% | 9.34\% |  |  |  |  | 3/31/1964 |
| 4/30/1964 | 479.38 | 3.94\% | 1.039 | 15.64\% | 60.54\% | 9.93\% |  |  |  |  | 4/30/1964 |
| 5/29/1964 | 496.53 | 3.58\% | 1.036 | 17.73\% | 65.84\% | 10.65\% |  |  |  |  | 5/29/1964 |
| 6/30/1964 | 497.63 | 0.22\% | 1.002 | 22.00\% | 64.34\% | 10.45\% |  |  |  |  | 6/30/1964 |
| 7/31/1964 | 510.63 | 2.61\% | 1.026 | 28.26\% | 61.02\% | 10.00\% |  |  |  |  | 7/31/1964 |
| 8/31/1964 | 508.06 | -0.50\% | 0.995 | 26.55\% | 68.53\% | 11.00\% |  |  |  |  | 8/31/1964 |
| 9/30/1964 | 531.69 | 4.65\% | 1.047 | 28.08\% | 84.54\% | 13.04\% |  |  |  |  | 9/30/1964 |
| 10/30/1964 | 534.86 | 0.60\% | 1.006 | 27.50\% | 85.21\% | 13.12\% |  |  |  |  | 10/30/1964 |
| 11/30/1964 | 537.63 | 0.52\% | 1.005 | 29.29\% | 86.98\% | 13.33\% |  |  |  |  | 11/30/1964 |
| 12/31/1964 | 542.51 | 0.91\% | 1.009 | 25.43\% | 82.01\% | 12.73\% |  |  |  |  | 12/31/1964 |
| 1/29/1965 | 574.34 | 5.87\% | 1.059 | 28.98\% | 101.30\% | 15.02\% |  |  |  |  | 1/29/1965 |
| 2/26/1965 | 572.96 | -0.24\% | 0.998 | 29.53\% | 107.25\% | 15.69\% |  |  |  |  | 2/26/1965 |
| 3/31/1965 | 570.05 | -0.51\% | 0.995 | 23.59\% | 105.41\% | 15.48\% |  |  |  |  | 3/31/1965 |


| S\&P Composite TR Index Date | $\begin{aligned} & \text { Index } \\ & \text { PX_LAST } \end{aligned}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year <br> Annualized Return | 10 Year Total Return | 10 Year <br> Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \end{gathered}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/30/1965 | 585.26 | 2.67\% | 1.027 | 22.09\% | 114.08\% | 16.44\% |  |  |  |  | 4/30/1965 |
| 5/31/1965 | 584.59 | -0.11\% | 0.999 | 17.74\% | 107.47\% | 15.72\% |  |  |  |  | 5/31/1965 |
| 6/30/1965 | 546.83 | -6.46\% | 0.935 | 9.89\% | 98.11\% | 14.65\% |  |  |  |  | 6/30/1965 |
| 7/30/1965 | 542.64 | -0.77\% | 0.992 | 6.27\% | 100.35\% | 14.91\% |  |  |  |  | 7/30/1965 |
| 8/31/1965 | 557.04 | 2.65\% | 1.027 | 9.64\% | 92.61\% | 14.01\% |  |  |  |  | 8/31/1965 |
| 9/30/1965 | 568.53 | 2.06\% | 1.021 | 6.93\% | 105.99\% | 15.55\% |  |  |  |  | 9/30/1965 |
| 10/29/1965 | 580.04 | 2.02\% | 1.020 | 8.45\% | 109.66\% | 15.96\% |  |  |  |  | 10/29/1965 |
| 11/30/1965 | 564.46 | -2.69\% | 0.973 | 4.99\% | 96.25\% | 14.44\% |  |  |  |  | 11/30/1965 |
| 12/31/1965 | 578.76 | 2.53\% | 1.025 | 6.68\% | 90.78\% | 13.79\% |  |  |  |  | 12/31/1965 |
| 1/31/1966 | 604.39 | 4.43\% | 1.044 | 5.23\% | 88.06\% | 13.46\% | 144.92\% | 9.37\% |  |  | 1/31/1966 |
| 2/28/1966 | 590.76 | -2.26\% | 0.977 | 3.11\% | 77.63\% | 12.18\% | 130.39\% | 8.70\% |  |  | 2/28/1966 |
| 3/31/1966 | 585.1 | -0.96\% | 0.990 | 2.64\% | 72.03\% | 11.46\% | 110.44\% | 7.72\% |  |  | 3/31/1966 |
| 4/29/1966 | 592 | 1.18\% | 1.012 | 1.15\% | 66.05\% | 10.68\% | 114.47\% | 7.93\% |  |  | 4/29/1966 |
| 5/31/1966 | 573.16 | -3.18\% | 0.968 | -1.96\% | 57.46\% | 9.50\% | 116.07\% | 8.01\% |  |  | 5/31/1966 |
| 6/30/1966 | 572.38 | -0.14\% | 0.999 | 4.67\% | 55.55\% | 9.24\% | 109.16\% | 7.66\% |  |  | 6/30/1966 |
| 7/29/1966 | 564.55 | -1.37\% | 0.986 | 4.04\% | 50.35\% | 8.50\% | 91.76\% | 6.73\% |  |  | 7/29/1966 |
| 8/31/1966 | 523.94 | -7.19\% | 0.928 | -5.94\% | 37.24\% | 6.54\% | 81.80\% | 6.16\% |  |  | 8/31/1966 |
| 9/30/1966 | 513.34 | -2.02\% | 0.980 | -9.71\% | 36.20\% | 6.37\% | 88.92\% | 6.57\% |  |  | 9/30/1966 |
| 10/31/1966 | 524.97 | 2.27\% | 1.023 | -9.49\% | 38.16\% | 6.68\% | 97.29\% | 7.03\% |  |  | 10/31/1966 |
| 11/30/1966 | 522.32 | -0.50\% | 0.995 | -7.47\% | 33.31\% | 5.92\% | 107.14\% | 7.55\% |  |  | 11/30/1966 |
| 12/30/1966 | 537.86 | 2.98\% | 1.030 | -7.07\% | 33.56\% | 5.96\% | 96.72\% | 7.00\% |  |  | 12/30/1966 |
| 1/31/1967 | 576.48 | 7.18\% | 1.072 | -4.62\% | 46.58\% | 7.95\% | 109.08\% | 7.65\% |  |  | 1/31/1967 |
| 2/28/1967 | 583.22 | 1.17\% | 1.012 | -1.28\% | 47.20\% | 8.04\% | 119.91\% | 8.20\% |  |  | 2/28/1967 |
| 3/31/1967 | 605.26 | 3.78\% | 1.038 | 3.45\% | 52.44\% | 8.80\% | 119.81\% | 8.19\% |  |  | 3/31/1967 |
| 4/28/1967 | 619.42 | 2.34\% | 1.023 | 4.63\% | 59.95\% | 9.85\% | 114.76\% | 7.94\% |  |  | 4/28/1967 |
| 5/31/1967 | 597.15 | -3.60\% | 0.964 | 4.19\% | 67.90\% | 10.92\% | 101.04\% | 7.23\% |  |  | 5/31/1967 |
| 6/30/1967 | 615.23 | 3.03\% | 1.030 | 7.49\% | 84.11\% | 12.98\% | 110.94\% | 7.75\% |  |  | 6/30/1967 |
| 7/31/1967 | 636.82 | 3.51\% | 1.035 | 12.80\% | 85.59\% | 13.16\% | 123.62\% | 8.38\% |  |  | 7/31/1967 |
| 8/31/1967 | 630.53 | -0.99\% | 0.990 | 20.34\% | 79.05\% | 12.36\% | 145.31\% | 9.39\% |  |  | 8/31/1967 |
| 9/29/1967 | 645.6 | 2.39\% | 1.024 | 25.76\% | 91.71\% | 13.90\% | 169.06\% | 10.40\% |  |  | 9/29/1967 |
| 10/31/1967 | 609.7 | -5.56\% | 0.944 | 16.14\% | 77.78\% | 12.20\% | 173.42\% | 10.58\% |  |  | 10/31/1967 |
| 11/30/1967 | 626.1 | 2.69\% | 1.027 | 19.87\% | 69.12\% | 11.08\% | 174.09\% | 10.61\% |  |  | 11/30/1967 |
| 12/29/1967 | 635.15 | 1.45\% | 1.014 | 18.09\% | 69.76\% | 11.17\% | 192.51\% | 11.33\% |  |  | 12/29/1967 |
| 1/31/1968 | 619.06 | -2.53\% | 0.975 | 7.39\% | 57.26\% | 9.48\% | 173.47\% | 10.58\% |  |  | 1/31/1968 |
| 2/29/1968 | 593.28 | -4.16\% | 0.958 | 1.72\% | 55.51\% | 9.23\% | 164.31\% | 10.21\% |  |  | 2/29/1968 |
| 3/29/1968 | 581.37 | -2.01\% | 0.980 | -3.95\% | 47.39\% | 8.07\% | 150.26\% | 9.61\% |  |  | 3/29/1968 |
| 4/30/1968 | 634.95 | 9.22\% | 1.092 | 2.51\% | 53.16\% | 8.90\% | 174.61\% | 10.63\% |  |  | 4/30/1968 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly <br> Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year Annualized Return | $\begin{gathered} 10 \text { Year } \\ \text { Total Return } \end{gathered}$ | 10 Year <br> Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \end{gathered}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5/31/1968 | 629.91 | -0.79\% | 0.992 | 5.49\% | 49.35\% | 8.35\% | 161.32\% | 10.08\% |  |  | 5/31/1968 |
| 6/28/1968 | 665.81 | 5.70\% | 1.057 | 8.22\% | 63.23\% | 10.30\% | 168.39\% | 10.38\% |  |  | 6/28/1968 |
| 7/31/1968 | 663.87 | -0.29\% | 0.997 | 4.25\% | 66.76\% | 10.77\% | 154.43\% | 9.79\% |  |  | 7/31/1968 |
| 8/30/1968 | 682.47 | 2.80\% | 1.028 | 8.24\% | 69.99\% | 11.20\% | 157.74\% | 9.93\% |  |  | 8/30/1968 |
| 9/30/1968 | 717.69 | 5.16\% | 1.052 | 11.17\% | 72.89\% | 11.57\% | 161.41\% | 10.09\% |  |  | 9/30/1968 |
| 10/31/1968 | 730.39 | 1.77\% | 1.018 | 19.79\% | 74.11\% | 11.73\% | 162.62\% | 10.14\% |  |  | 10/31/1968 |
| 11/29/1968 | 758.78 | 3.89\% | 1.039 | 21.19\% | 82.47\% | 12.78\% | 171.28\% | 10.49\% |  |  | 11/29/1968 |
| 12/31/1968 | 777.71 | 2.49\% | 1.025 | 22.45\% | 79.81\% | 12.45\% | 172.89\% | 10.56\% |  |  | 12/31/1968 |
| 1/31/1969 | 799.95 | 2.86\% | 1.029 | 29.22\% | 79.65\% | 12.43\% | 172.57\% | 10.55\% |  |  | 1/31/1969 |
| 2/28/1969 | 763.47 | -4.56\% | 0.954 | 28.69\% | 72.60\% | 11.53\% | 157.77\% | 9.93\% |  |  | 2/28/1969 |
| 3/31/1969 | 790.57 | 3.55\% | 1.035 | 35.98\% | 71.40\% | 11.38\% | 167.82\% | 10.35\% |  |  | 3/31/1969 |
| 4/30/1969 | 814.65 | 3.05\% | 1.030 | 28.30\% | 69.94\% | 11.19\% | 172.82\% | 10.56\% |  |  | 4/30/1969 |
| 5/30/1969 | 836.87 | 2.73\% | 1.027 | 32.86\% | 68.54\% | 11.00\% | 179.51\% | 10.83\% |  |  | 5/30/1969 |
| 6/30/1969 | 749.48 | -10.44\% | 0.896 | 12.57\% | 50.61\% | 8.54\% | 147.51\% | 9.49\% |  |  | 6/30/1969 |
| 7/31/1969 | 708.94 | -5.41\% | 0.946 | 6.79\% | 38.84\% | 6.78\% | 123.56\% | 8.38\% |  |  | 7/31/1969 |
| 8/29/1969 | 745.52 | 5.16\% | 1.052 | 9.24\% | 46.74\% | 7.97\% | 147.29\% | 9.48\% |  |  | 8/29/1969 |
| 9/30/1969 | 743.29 | -0.30\% | 0.997 | 3.57\% | 39.80\% | 6.93\% | 157.99\% | 9.94\% |  |  | 9/30/1969 |
| 10/31/1969 | 756.17 | 1.73\% | 1.017 | 3.53\% | 41.38\% | 7.17\% | 161.85\% | 10.10\% |  |  | 10/31/1969 |
| 11/28/1969 | 776.43 | 2.68\% | 1.027 | 2.33\% | 44.42\% | 7.63\% | 170.03\% | 10.44\% |  |  | 11/28/1969 |
| 12/31/1969 | 771.42 | -0.65\% | 0.994 | -0.81\% | 42.19\% | 7.29\% | 158.81\% | 9.98\% |  |  | 12/31/1969 |
| 1/30/1970 | 743.83 | -3.58\% | 0.964 | -7.02\% | 29.51\% | 5.31\% | 160.71\% | 10.06\% |  |  | 1/30/1970 |
| 2/27/1970 | 764.7 | 2.81\% | 1.028 | 0.16\% | 33.46\% | 5.94\% | 176.60\% | 10.71\% |  |  | 2/27/1970 |
| 3/31/1970 | 767.41 | 0.35\% | 1.004 | -2.93\% | 34.62\% | 6.13\% | 176.52\% | 10.71\% |  |  | 3/31/1970 |
| 4/30/1970 | 701.78 | -8.55\% | 0.914 | -13.86\% | 19.91\% | 3.70\% | 156.70\% | 9.89\% |  |  | 4/30/1970 |
| 5/29/1970 | 634.44 | -9.60\% | 0.904 | -24.19\% | 8.53\% | 1.65\% | 125.16\% | 8.46\% |  |  | 5/29/1970 |
| 6/30/1970 | 624.46 | -1.57\% | 0.984 | -16.68\% | 14.20\% | 2.69\% | 126.23\% | 8.51\% |  |  | 6/30/1970 |
| 7/31/1970 | 655.4 | 4.95\% | 1.050 | -7.55\% | 20.78\% | 3.85\% | 141.98\% | 9.24\% |  |  | 7/31/1970 |
| 8/31/1970 | 673.63 | 2.78\% | 1.028 | -9.64\% | 20.93\% | 3.87\% | 132.92\% | 8.82\% |  |  | 8/31/1970 |
| 9/30/1970 | 706.91 | 4.94\% | 1.049 | -4.89\% | 24.34\% | 4.45\% | 156.13\% | 9.86\% |  |  | 9/30/1970 |
| 10/30/1970 | 688.98 | -2.54\% | 0.975 | -8.89\% | 18.78\% | 3.50\% | 149.03\% | 9.55\% |  |  | 10/30/1970 |
| 11/30/1970 | 720.17 | 4.53\% | 1.045 | -7.25\% | 27.59\% | 4.99\% | 150.39\% | 9.61\% |  |  | 11/30/1970 |
| 12/31/1970 | 743.91 | 3.30\% | 1.033 | -3.57\% | 28.54\% | 5.15\% | 145.22\% | 9.38\% |  |  | 12/31/1970 |
| 1/29/1971 | 768.13 | 3.26\% | 1.033 | 3.27\% | 27.09\% | 4.91\% | 139.00\% | 9.10\% |  |  | 1/29/1971 |
| 2/26/1971 | 768.66 | 0.07\% | 1.001 | 0.52\% | 30.11\% | 5.41\% | 131.13\% | 8.74\% |  |  | 2/26/1971 |
| 3/31/1971 | 802.39 | 4.39\% | 1.044 | 4.56\% | 37.14\% | 6.52\% | 135.92\% | 8.96\% |  |  | 3/31/1971 |
| 4/30/1971 | 794.09 | -1.03\% | 0.990 | 13.15\% | 34.14\% | 6.05\% | 122.74\% | 8.34\% |  |  | 4/30/1971 |
| 5/31/1971 | 778.74 | -1.93\% | 0.981 | 22.74\% | 35.87\% | 6.32\% | 113.93\% | 7.90\% |  |  | 5/31/1971 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year <br> Annualized Return | $\begin{aligned} & 10 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 10 Year Annualized Return | 20 Year Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6/30/1971 | 795.96 | 2.21\% | 1.022 | 27.46\% | 39.06\% | 6.82\% | 116.32\% | 8.02\% |  |  | 6/30/1971 |
| 7/30/1971 | 787.11 | -1.11\% | 0.989 | 20.10\% | 39.42\% | 6.87\% | 109.62\% | 7.68\% |  |  | 7/30/1971 |
| 8/31/1971 | 783.56 | -0.45\% | 0.995 | 16.32\% | 49.55\% | 8.38\% | 105.24\% | 7.46\% |  |  | 8/31/1971 |
| 9/30/1971 | 758.44 | -3.21\% | 0.968 | 7.29\% | 47.75\% | 8.12\% | 101.24\% | 7.24\% |  |  | 9/30/1971 |
| 10/29/1971 | 710.9 | -6.27\% | 0.937 | 3.18\% | 35.42\% | 6.25\% | 87.10\% | 6.47\% |  |  | 10/29/1971 |
| 11/30/1971 | 731.75 | 2.93\% | 1.029 | 1.61\% | 40.10\% | 6.98\% | 86.76\% | 6.45\% |  |  | 11/30/1971 |
| 12/31/1971 | 803.48 | 9.80\% | 1.098 | 8.01\% | 49.38\% | 8.36\% | 99.52\% | 7.15\% |  |  | 12/31/1971 |
| 1/31/1972 | 877 | 9.15\% | 1.092 | 14.17\% | 52.13\% | 8.75\% | 123.00\% | 8.35\% |  |  | 1/31/1972 |
| 2/29/1972 | 909.65 | 3.72\% | 1.037 | 18.34\% | 55.97\% | 9.30\% | 129.59\% | 8.67\% |  |  | 2/29/1972 |
| 3/31/1972 | 888.65 | -2.31\% | 0.977 | 10.75\% | 46.82\% | 7.98\% | 123.81\% | 8.39\% |  |  | 3/31/1972 |
| 4/28/1972 | 900.1 | 1.29\% | 1.013 | 13.35\% | 45.31\% | 7.76\% | 132.42\% | 8.80\% |  |  | 4/28/1972 |
| 5/31/1972 | 917.17 | 1.90\% | 1.019 | 17.78\% | 53.59\% | 8.96\% | 157.89\% | 9.94\% |  |  | 5/31/1972 |
| 6/30/1972 | 908.47 | -0.95\% | 0.991 | 14.14\% | 47.66\% | 8.11\% | 171.87\% | 10.52\% |  |  | 6/30/1972 |
| 7/31/1972 | 932.88 | 2.69\% | 1.027 | 18.52\% | 46.49\% | 7.93\% | 171.87\% | 10.52\% |  |  | 7/31/1972 |
| 8/31/1972 | 978.63 | 4.90\% | 1.049 | 24.90\% | 55.21\% | 9.19\% | 177.89\% | 10.76\% |  |  | 8/31/1972 |
| 9/29/1972 | 967.21 | -1.17\% | 0.988 | 27.53\% | 49.82\% | 8.42\% | 187.21\% | 11.13\% |  |  | 9/29/1972 |
| 10/31/1972 | 933.31 | -3.50\% | 0.965 | 31.29\% | 53.08\% | 8.89\% | 172.14\% | 10.53\% |  |  | 10/31/1972 |
| 11/30/1972 | 995.88 | 6.70\% | 1.067 | 36.10\% | 59.06\% | 9.73\% | 169.00\% | 10.40\% |  |  | 11/30/1972 |
| 12/29/1972 | 1023.5 | 2.77\% | 1.028 | 27.38\% | 61.14\% | 10.01\% | 173.56\% | 10.59\% |  |  | 12/29/1972 |
| 1/31/1973 | 1044.42 | 2.04\% | 1.020 | 19.09\% | 68.71\% | 11.03\% | 165.32\% | 10.25\% |  |  | 1/31/1973 |
| 2/28/1973 | 1029.03 | -1.47\% | 0.985 | 13.12\% | 73.45\% | 11.64\% | 169.73\% | 10.43\% |  |  | 2/28/1973 |
| 3/30/1973 | 1040.96 | 1.16\% | 1.012 | 17.14\% | 79.05\% | 12.36\% | 163.90\% | 10.19\% |  |  | 3/30/1973 |
| 4/30/1973 | 1000.6 | -3.88\% | 0.961 | 11.17\% | 57.59\% | 9.52\% | 141.36\% | 9.21\% |  |  | 4/30/1973 |
| 5/31/1973 | 956.91 | -4.37\% | 0.956 | 4.33\% | 51.91\% | 8.72\% | 126.88\% | 8.54\% |  |  | 5/31/1973 |
| 6/29/1973 | 972.25 | 1.60\% | 1.016 | 7.02\% | 46.03\% | 7.87\% | 138.36\% | 9.07\% |  |  | 6/29/1973 |
| 7/31/1973 | 1034.76 | 6.43\% | 1.064 | 10.92\% | 55.87\% | 9.28\% | 159.92\% | 10.02\% |  |  | 7/31/1973 |
| 8/31/1973 | 1017.08 | -1.71\% | 0.983 | 3.93\% | 49.03\% | 8.31\% | 153.34\% | 9.74\% |  |  | 8/31/1973 |
| 9/28/1973 | 1065.89 | 4.80\% | 1.048 | 10.20\% | 48.52\% | 8.23\% | 156.77\% | 9.89\% |  |  | 9/28/1973 |
| 10/31/1973 | 1135.71 | 6.55\% | 1.066 | 21.69\% | 55.49\% | 9.23\% | 170.74\% | 10.47\% |  |  | 10/31/1973 |
| 11/30/1973 | 1011.86 | -10.91\% | 0.891 | 1.60\% | 33.35\% | 5.93\% | 143.34\% | 9.30\% |  |  | 11/30/1973 |
| 12/31/1973 | 1026.3 | 1.43\% | 1.014 | 0.27\% | 31.96\% | 5.70\% | 137.29\% | 9.03\% |  |  | 12/31/1973 |
| 1/31/1974 | 1052.72 | 2.57\% | 1.026 | 0.79\% | 31.60\% | 5.65\% | 136.42\% | 8.99\% |  |  | 1/31/1974 |
| 2/28/1974 | 1084.59 | 3.03\% | 1.030 | 5.40\% | 42.06\% | 7.27\% | 145.19\% | 9.38\% |  |  | 2/28/1974 |
| 3/29/1974 | 1053.51 | -2.87\% | 0.971 | 1.21\% | 33.26\% | 5.91\% | 128.41\% | 8.61\% |  |  | 3/29/1974 |
| 4/30/1974 | 959.39 | -8.93\% | 0.911 | -4.12\% | 17.77\% | 3.32\% | 100.13\% | 7.18\% |  |  | 4/30/1974 |
| 5/31/1974 | 899 | -6.29\% | 0.937 | -6.05\% | 7.42\% | 1.44\% | 81.06\% | 6.12\% |  |  | 5/31/1974 |
| 6/28/1974 | 884.15 | -1.65\% | 0.983 | -9.06\% | 17.97\% | 3.36\% | 77.67\% | 5.92\% |  |  | 6/28/1974 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | 10 Year Total Return | 10 Year Annualized Return | $\begin{aligned} & 20 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/31/1974 | 901.59 | 1.97\% | 1.020 | -12.87\% | 27.17\% | 4.93\% | 76.56\% | 5.85\% |  |  | 7/31/1974 |
| 8/30/1974 | 811.6 | -9.98\% | 0.900 | -20.20\% | 8.86\% | 1.71\% | 59.74\% | 4.80\% |  |  | 8/30/1974 |
| 9/30/1974 | 738.66 | -8.99\% | 0.910 | -30.70\% | -0.62\% | -0.12\% | 38.93\% | 3.34\% |  |  | 9/30/1974 |
| 10/31/1974 | 811.65 | 9.88\% | 1.099 | -28.53\% | 7.34\% | 1.43\% | 51.75\% | 4.26\% |  |  | 10/31/1974 |
| 11/29/1974 | 759.12 | -6.47\% | 0.935 | -24.98\% | -2.23\% | -0.45\% | 41.20\% | 3.51\% |  |  | 11/29/1974 |
| 12/31/1974 | 760.21 | 0.14\% | 1.001 | -25.93\% | -1.45\% | -0.29\% | 40.13\% | 3.43\% |  |  | 12/31/1974 |
| 1/31/1975 | 885.96 | 16.54\% | 1.165 | -15.84\% | 19.11\% | 3.56\% | 54.26\% | 4.43\% |  |  | 1/31/1975 |
| 2/28/1975 | 912.71 | 3.02\% | 1.030 | -15.85\% | 19.36\% | 3.60\% | 59.30\% | 4.77\% |  |  | 2/28/1975 |
| 3/31/1975 | 901.76 | -1.20\% | 0.988 | -14.40\% | 17.51\% | 3.28\% | 58.19\% | 4.69\% |  |  | 3/31/1975 |
| 4/30/1975 | 922.57 | 2.31\% | 1.023 | -3.84\% | 31.46\% | 5.62\% | 57.63\% | 4.66\% |  |  | 4/30/1975 |
| 5/30/1975 | 945.03 | 2.43\% | 1.024 | 5.12\% | 48.95\% | 8.30\% | 61.66\% | 4.92\% |  |  | 5/30/1975 |
| 6/30/1975 | 972.61 | 2.92\% | 1.029 | 10.01\% | 55.75\% | 9.27\% | 77.86\% | 5.93\% |  |  | 6/30/1975 |
| 7/31/1975 | 974.11 | 0.15\% | 1.002 | 8.04\% | 48.63\% | 8.25\% | 79.51\% | 6.03\% |  |  | 7/31/1975 |
| 8/29/1975 | 964.09 | -1.03\% | 0.990 | 18.79\% | 43.12\% | 7.43\% | 73.07\% | 5.64\% |  |  | 8/29/1975 |
| 9/30/1975 | 910.29 | -5.58\% | 0.944 | 23.24\% | 28.77\% | 5.19\% | 60.11\% | 4.82\% |  |  | 9/30/1975 |
| 10/31/1975 | 872.15 | -4.19\% | 0.958 | 7.45\% | 26.59\% | 4.83\% | 50.36\% | 4.16\% |  |  | 10/31/1975 |
| 11/28/1975 | 920.68 | 5.56\% | 1.056 | 21.28\% | 27.84\% | 5.04\% | 63.11\% | 5.01\% |  |  | 11/28/1975 |
| 12/31/1975 | 900.72 | -2.17\% | 0.978 | 18.48\% | 21.08\% | 3.90\% | 55.63\% | 4.52\% |  |  | 12/31/1975 |
| 1/30/1976 | 987.24 | 9.61\% | 1.096 | 11.43\% | 28.53\% | 5.15\% | 63.34\% | 5.03\% | 300.06\% | 7.18\% | 1/30/1976 |
| 2/27/1976 | 1022.24 | 3.55\% | 1.035 | 12.00\% | 32.99\% | 5.87\% | 73.04\% | 5.64\% | 298.66\% | 7.16\% | 2/27/1976 |
| 3/31/1976 | 1006.7 | -1.52\% | 0.985 | 11.64\% | 25.46\% | 4.64\% | 72.06\% | 5.58\% | 262.07\% | 6.64\% | 3/31/1976 |
| 4/30/1976 | 1031.13 | 2.43\% | 1.024 | 11.77\% | 29.85\% | 5.36\% | 74.18\% | 5.71\% | 273.56\% | 6.81\% | 4/30/1976 |
| 5/31/1976 | 1033.91 | 0.27\% | 1.003 | 9.40\% | 32.77\% | 5.83\% | 80.39\% | 6.08\% | 289.77\% | 7.04\% | 5/31/1976 |
| 6/30/1976 | 1018.99 | -1.44\% | 0.986 | 4.77\% | 28.02\% | 5.06\% | 78.03\% | 5.94\% | 272.37\% | 6.79\% | 6/30/1976 |
| 7/30/1976 | 1019.02 | 0.00\% | 1.000 | 4.61\% | 29.46\% | 5.30\% | 80.50\% | 6.08\% | 246.12\% | 6.40\% | 7/30/1976 |
| 8/31/1976 | 1019.27 | 0.02\% | 1.000 | 5.72\% | 30.08\% | 5.40\% | 94.54\% | 6.88\% | 253.67\% | 6.52\% | 8/31/1976 |
| 9/30/1976 | 1003.73 | -1.52\% | 0.985 | 10.26\% | 32.34\% | 5.76\% | 95.53\% | 6.94\% | 269.39\% | 6.75\% | 9/30/1976 |
| 10/29/1976 | 970.65 | -3.30\% | 0.967 | 11.29\% | 36.54\% | 6.43\% | 84.90\% | 6.34\% | 264.78\% | 6.68\% | 10/29/1976 |
| 11/30/1976 | 904.56 | -6.81\% | 0.932 | -1.75\% | 23.62\% | 4.33\% | 73.18\% | 5.65\% | 258.72\% | 6.60\% | 11/30/1976 |
| 12/31/1976 | 1000 | 10.55\% | 1.106 | 11.02\% | 24.46\% | 4.47\% | 85.92\% | 6.40\% | 265.74\% | 6.70\% | 12/31/1976 |
| 1/31/1977 | 992.88 | -0.71\% | 0.993 | 0.57\% | 13.21\% | 2.51\% | 72.23\% | 5.59\% | 260.10\% | 6.62\% | 1/31/1977 |
| 2/28/1977 | 1009.55 | 1.68\% | 1.017 | -1.24\% | 10.98\% | 2.11\% | 73.10\% | 5.64\% | 280.66\% | 6.91\% | 2/28/1977 |
| 3/31/1977 | 1028.14 | 1.84\% | 1.018 | 2.13\% | 15.70\% | 2.96\% | 69.87\% | 5.44\% | 273.39\% | 6.81\% | 3/31/1977 |
| 4/29/1977 | 1002.94 | -2.45\% | 0.975 | -2.73\% | 11.43\% | 2.19\% | 61.92\% | 4.94\% | 247.74\% | 6.43\% | 4/29/1977 |
| 5/31/1977 | 993.16 | -0.98\% | 0.990 | -3.94\% | 8.29\% | 1.60\% | 66.32\% | 5.22\% | 234.36\% | 6.22\% | 5/31/1977 |
| 6/30/1977 | 1050.85 | 5.81\% | 1.058 | 3.13\% | 15.67\% | 2.95\% | 70.81\% | 5.50\% | 260.30\% | 6.62\% | 6/30/1977 |
| 7/29/1977 | 1055.55 | 0.45\% | 1.004 | 3.58\% | 13.15\% | 2.50\% | 65.75\% | 5.18\% | 270.65\% | 6.77\% | 7/29/1977 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | $\begin{aligned} & 10 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 10 Year <br> Annualized Return | 20 Year <br> Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8/31/1977 | 1028.45 | -2.57\% | 0.974 | 0.90\% | 5.09\% | 1.00\% | 63.11\% | 5.01\% | 300.13\% | 7.18\% | 8/31/1977 |
| 9/30/1977 | 1030.73 | 0.22\% | 1.002 | 2.69\% | 6.57\% | 1.28\% | 59.65\% | 4.79\% | 329.56\% | 7.56\% | 9/30/1977 |
| 10/31/1977 | 1002.32 | -2.76\% | 0.972 | 3.26\% | 7.39\% | 1.44\% | 64.40\% | 5.10\% | 349.49\% | 7.80\% | 10/31/1977 |
| 11/30/1977 | 1055.48 | 5.30\% | 1.053 | 16.68\% | 5.98\% | 1.17\% | 68.58\% | 5.36\% | 362.06\% | 7.95\% | 11/30/1977 |
| 12/30/1977 | 1107.06 | 4.89\% | 1.049 | 10.71\% | 8.16\% | 1.58\% | 74.30\% | 5.71\% | 409.84\% | 8.49\% | 12/30/1977 |
| 1/31/1978 | 1044.55 | -5.65\% | 0.944 | 5.20\% | 0.01\% | 0.00\% | 68.73\% | 5.37\% | 361.43\% | 7.95\% | 1/31/1978 |
| 2/28/1978 | 1056.54 | 1.15\% | 1.011 | 4.65\% | 2.67\% | 0.53\% | 78.08\% | 5.94\% | 370.70\% | 8.05\% | 2/28/1978 |
| 3/31/1978 | 1124.21 | 6.40\% | 1.064 | 9.34\% | 8.00\% | 1.55\% | 93.37\% | 6.82\% | 383.93\% | 8.20\% | 3/31/1978 |
| 4/28/1978 | 1145.62 | 1.90\% | 1.019 | 14.23\% | 14.49\% | 2.74\% | 80.43\% | 6.08\% | 395.47\% | 8.33\% | 4/28/1978 |
| 5/31/1978 | 1200.09 | 4.75\% | 1.048 | 20.84\% | 25.41\% | 4.63\% | 90.52\% | 6.66\% | 397.86\% | 8.36\% | 5/31/1978 |
| 6/30/1978 | 1205.44 | 0.45\% | 1.004 | 14.71\% | 23.98\% | 4.39\% | 81.05\% | 6.12\% | 385.91\% | 8.23\% | 6/30/1978 |
| 7/31/1978 | 1280.39 | 6.22\% | 1.062 | 21.30\% | 23.74\% | 4.35\% | 92.87\% | 6.79\% | 390.72\% | 8.28\% | 7/31/1978 |
| 8/31/1978 | 1325.42 | 3.52\% | 1.035 | 28.88\% | 30.32\% | 5.44\% | 94.21\% | 6.86\% | 400.56\% | 8.39\% | 8/31/1978 |
| 9/29/1978 | 1388.49 | 4.76\% | 1.048 | 34.71\% | 30.27\% | 5.43\% | 93.47\% | 6.82\% | 405.73\% | 8.44\% | 9/29/1978 |
| 10/31/1978 | 1316.75 | -5.17\% | 0.948 | 31.37\% | 15.94\% | 3.00\% | 80.28\% | 6.07\% | 373.45\% | 8.08\% | 10/31/1978 |
| 11/30/1978 | 1382.25 | 4.97\% | 1.050 | 30.96\% | 36.60\% | 6.44\% | 82.17\% | 6.18\% | 394.19\% | 8.32\% | 11/30/1978 |
| 12/29/1978 | 1436.08 | 3.89\% | 1.039 | 29.72\% | 39.93\% | 6.95\% | 84.65\% | 6.33\% | 403.91\% | 8.42\% | 12/29/1978 |
| 1/31/1979 | 1488.17 | 3.63\% | 1.036 | 42.47\% | 41.36\% | 7.17\% | 86.03\% | 6.40\% | 407.08\% | 8.46\% | 1/31/1979 |
| 2/28/1979 | 1526.03 | 2.54\% | 1.025 | 44.44\% | 40.70\% | 7.07\% | 99.88\% | 7.17\% | 415.24\% | 8.54\% | 2/28/1979 |
| 3/30/1979 | 1623.65 | 6.40\% | 1.064 | 44.43\% | 54.12\% | 9.04\% | 105.38\% | 7.46\% | 450.04\% | 8.90\% | 3/30/1979 |
| 4/30/1979 | 1646.32 | 1.40\% | 1.014 | 43.71\% | 71.60\% | 11.40\% | 102.09\% | 7.29\% | 451.35\% | 8.91\% | 4/30/1979 |
| 5/31/1979 | 1692.56 | 2.81\% | 1.028 | 41.04\% | 88.27\% | 13.49\% | 102.25\% | 7.30\% | 465.30\% | 9.05\% | 5/31/1979 |
| 6/29/1979 | 1813.17 | 7.13\% | 1.071 | 50.42\% | 105.07\% | 15.45\% | 141.92\% | 9.24\% | 498.78\% | 9.36\% | 6/29/1979 |
| 7/31/1979 | 1748.91 | -3.54\% | 0.965 | 36.59\% | 93.98\% | 14.17\% | 146.69\% | 9.45\% | 451.50\% | 8.91\% | 7/31/1979 |
| 8/31/1979 | 1911.69 | 9.31\% | 1.093 | 44.23\% | 135.55\% | 18.69\% | 156.42\% | 9.87\% | 534.12\% | 9.68\% | 8/31/1979 |
| 9/28/1979 | 1983.15 | 3.74\% | 1.037 | 42.83\% | 168.48\% | 21.84\% | 166.81\% | 10.31\% | 588.33\% | 10.13\% | 9/28/1979 |
| 10/31/1979 | 1791.16 | -9.68\% | 0.903 | 36.03\% | 120.68\% | 17.15\% | 136.87\% | 9.01\% | 520.25\% | 9.55\% | 10/31/1979 |
| 11/30/1979 | 1937.24 | 8.16\% | 1.082 | 40.15\% | 155.20\% | 20.61\% | 149.51\% | 9.57\% | 573.75\% | 10.01\% | 11/30/1979 |
| 12/31/1979 | 2079.01 | 7.32\% | 1.073 | 44.77\% | 173.48\% | 22.29\% | 169.50\% | 10.42\% | 597.51\% | 10.20\% | 12/31/1979 |
| 1/31/1980 | 2327.62 | 11.96\% | 1.120 | 56.41\% | 162.72\% | 21.31\% | 212.92\% | 12.08\% | 715.82\% | 11.07\% | 1/31/1980 |
| 2/29/1980 | 2524.47 | 8.46\% | 1.085 | 65.43\% | 176.59\% | 22.57\% | 230.13\% | 12.69\% | 813.14\% | 11.69\% | 2/29/1980 |
| 3/31/1980 | 2079.19 | -17.64\% | 0.824 | 28.06\% | 130.57\% | 18.18\% | 170.94\% | 10.48\% | 649.20\% | 10.59\% | 3/31/1980 |
| 4/30/1980 | 2167.01 | 4.22\% | 1.042 | 31.63\% | 134.89\% | 18.62\% | 208.79\% | 11.94\% | 692.67\% | 10.91\% | 4/30/1980 |
| 5/30/1980 | 2294.76 | 5.90\% | 1.059 | 35.58\% | 142.82\% | 19.41\% | 261.70\% | 13.72\% | 714.41\% | 11.06\% | 5/30/1980 |
| 6/30/1980 | 2411.25 | 5.08\% | 1.051 | 32.99\% | 147.92\% | 19.91\% | 286.13\% | 14.47\% | 773.55\% | 11.45\% | 6/30/1980 |
| 7/31/1980 | 2577.58 | 6.90\% | 1.069 | 47.38\% | 164.61\% | 21.48\% | 293.28\% | 14.68\% | 851.66\% | 11.92\% | 7/31/1980 |
| 8/29/1980 | 2609.33 | 1.23\% | 1.012 | 36.49\% | 170.65\% | 22.03\% | 287.35\% | 14.50\% | 802.23\% | 11.63\% | 8/29/1980 |

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| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | 1 Year Total Return | 5 Year Total Return | 5 Year <br> Annualized Return | 10 Year <br> Total Return | 10 Year <br> Annualized Return | $\begin{aligned} & 20 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9/30/1980 | 2668.43 | 2.26\% | 1.023 | 34.56\% | 193.14\% | 24.00\% | 277.48\% | 14.21\% | 866.82\% | 12.01\% | 9/30/1980 |
| 10/31/1980 | 2648.72 | -0.74\% | 0.993 | 47.88\% | 203.70\% | 24.88\% | 284.44\% | 14.41\% | 857.39\% | 11.96\% | 10/31/1980 |
| 11/28/1980 | 2850.94 | 7.63\% | 1.076 | 47.17\% | 209.66\% | 25.36\% | 295.87\% | 14.75\% | 891.22\% | 12.15\% | 11/28/1980 |
| 12/31/1980 | 2705.51 | -5.10\% | 0.949 | 30.13\% | 200.37\% | 24.60\% | 263.69\% | 13.78\% | 791.82\% | 11.56\% | 12/31/1980 |
| 1/30/1981 | 2658.9 | -1.72\% | 0.983 | 14.23\% | 169.33\% | 21.91\% | 246.15\% | 13.22\% | 727.31\% | 11.14\% | 1/30/1981 |
| 2/27/1981 | 2611.5 | -1.78\% | 0.982 | 3.45\% | 155.47\% | 20.63\% | 239.75\% | 13.01\% | 685.25\% | 10.85\% | 2/27/1981 |
| 3/31/1981 | 2807.3 | 7.50\% | 1.075 | 35.02\% | 178.86\% | 22.77\% | 249.87\% | 13.34\% | 725.41\% | 11.13\% | 3/31/1981 |
| 4/30/1981 | 2778.4 | -1.03\% | 0.990 | 28.21\% | 169.45\% | 21.93\% | 249.88\% | 13.34\% | 679.33\% | 10.81\% | 4/30/1981 |
| 5/29/1981 | 2867 | 3.19\% | 1.032 | 24.94\% | 177.30\% | 22.63\% | 268.16\% | 13.92\% | 687.62\% | 10.87\% | 5/29/1981 |
| 6/30/1981 | 2869.3 | 0.08\% | 1.001 | 19.00\% | 181.58\% | 23.00\% | 260.48\% | 13.68\% | 679.79\% | 10.82\% | 6/30/1981 |
| 7/31/1981 | 2745.3 | -4.32\% | 0.957 | 6.51\% | 169.41\% | 21.92\% | 248.78\% | 13.31\% | 631.12\% | 10.46\% | 7/31/1981 |
| 8/31/1981 | 2659.8 | -3.11\% | 0.969 | 1.93\% | 160.95\% | 21.15\% | 239.45\% | 13.00\% | 596.70\% | 10.19\% | 8/31/1981 |
| 9/30/1981 | 2311.5 | -13.09\% | 0.869 | -13.38\% | 130.29\% | 18.16\% | 204.77\% | 11.79\% | 513.31\% | 9.49\% | 9/30/1981 |
| 10/30/1981 | 2265.9 | -1.97\% | 0.980 | -14.45\% | 133.44\% | 18.48\% | 218.74\% | 12.29\% | 496.35\% | 9.34\% | 10/30/1981 |
| 11/30/1981 | 2486.2 | 9.72\% | 1.097 | -12.79\% | 174.85\% | 22.41\% | 239.76\% | 13.01\% | 534.53\% | 9.68\% | 11/30/1981 |
| 12/31/1981 | 2428.3 | -2.33\% | 0.977 | -10.25\% | 142.83\% | 19.42\% | 202.22\% | 11.69\% | 502.99\% | 9.40\% | 12/31/1981 |
| 1/29/1982 | 2224.23 | -8.40\% | 0.916 | -16.35\% | 124.02\% | 17.51\% | 153.62\% | 9.75\% | 465.56\% | 9.05\% | 1/29/1982 |
| 2/26/1982 | 2087.86 | -6.13\% | 0.939 | -20.05\% | 106.81\% | 15.64\% | 129.52\% | 8.66\% | 426.96\% | 8.66\% | 2/26/1982 |
| 3/31/1982 | 1998.61 | -4.27\% | 0.957 | -28.81\% | 94.39\% | 14.22\% | 124.90\% | 8.44\% | 403.35\% | 8.42\% | 3/31/1982 |
| 4/30/1982 | 1952.15 | -2.32\% | 0.977 | -29.74\% | 94.64\% | 14.25\% | 116.88\% | 8.05\% | 404.08\% | 8.42\% | 4/30/1982 |
| 5/31/1982 | 1931.99 | -1.03\% | 0.990 | -32.61\% | 94.53\% | 14.23\% | 110.65\% | 7.73\% | 443.23\% | 8.83\% | 5/31/1982 |
| 6/30/1982 | 1745.7 | -9.64\% | 0.904 | -39.16\% | 66.12\% | 10.68\% | 92.16\% | 6.75\% | 422.41\% | 8.62\% | 6/30/1982 |
| 7/30/1982 | 1808.33 | 3.59\% | 1.036 | -34.13\% | 71.32\% | 11.37\% | 93.84\% | 6.84\% | 426.99\% | 8.67\% | 7/30/1982 |
| 8/31/1982 | 2074.04 | 14.69\% | 1.147 | -22.02\% | 101.67\% | 15.06\% | 111.93\% | 7.80\% | 488.95\% | 9.27\% | 8/31/1982 |
| 9/30/1982 | 2071.64 | -0.12\% | 0.999 | -10.38\% | 100.99\% | 14.98\% | 114.19\% | 7.91\% | 515.17\% | 9.51\% | 9/30/1982 |
| 10/29/1982 | 2297.6 | 10.91\% | 1.109 | 1.40\% | 129.23\% | 18.05\% | 146.18\% | 9.43\% | 569.95\% | 9.98\% | 10/29/1982 |
| 11/30/1982 | 2393.66 | 4.18\% | 1.042 | -3.72\% | 126.78\% | 17.79\% | 140.36\% | 9.17\% | 546.57\% | 9.78\% | 11/30/1982 |
| 12/31/1982 | 2562.85 | 7.07\% | 1.071 | 5.54\% | 131.50\% | 18.28\% | 150.40\% | 9.61\% | 585.00\% | 10.10\% | 12/31/1982 |
| 1/31/1983 | 2663.29 | 3.92\% | 1.039 | 19.74\% | 154.97\% | 20.59\% | 155.00\% | 9.81\% | 576.56\% | 10.03\% | 1/31/1983 |
| 2/28/1983 | 2751.2 | 3.30\% | 1.033 | 31.77\% | 160.40\% | 21.10\% | 167.36\% | 10.33\% | 621.13\% | 10.38\% | 2/28/1983 |
| 3/31/1983 | 2850.42 | 3.61\% | 1.036 | 42.62\% | 153.55\% | 20.45\% | 173.83\% | 10.60\% | 622.63\% | 10.39\% | 3/31/1983 |
| 4/29/1983 | 3100.13 | 8.76\% | 1.088 | 58.81\% | 170.61\% | 22.03\% | 209.83\% | 11.97\% | 647.81\% | 10.58\% | 4/29/1983 |
| 5/31/1983 | 3215.38 | 3.72\% | 1.037 | 66.43\% | 167.93\% | 21.79\% | 236.02\% | 12.88\% | 662.35\% | 10.69\% | 5/31/1983 |
| 6/30/1983 | 3263.28 | 1.49\% | 1.015 | 86.93\% | 170.71\% | 22.04\% | 235.64\% | 12.87\% | 700.04\% | 10.96\% | 6/30/1983 |
| 7/29/1983 | 3309.45 | 1.41\% | 1.014 | 83.01\% | 158.47\% | 20.92\% | 219.83\% | 12.33\% | 731.29\% | 11.17\% | 7/29/1983 |
| 8/31/1983 | 3325.25 | 0.48\% | 1.005 | 60.33\% | 150.88\% | 20.20\% | 226.94\% | 12.58\% | 728.27\% | 11.15\% | 8/31/1983 |
| 9/30/1983 | 3359.74 | 1.04\% | 1.010 | 62.18\% | 141.97\% | 19.33\% | 215.21\% | 12.17\% | 709.36\% | 11.02\% | 9/30/1983 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \\ \hline \end{gathered}$ | 10 Year Total Return | 10 Year Annualized Return | $\begin{aligned} & 20 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10/31/1983 | 3179.01 | -5.38\% | 0.946 | 38.36\% | 141.43\% | 19.28\% | 179.91\% | 10.84\% | 657.83\% | 10.66\% | 10/31/1983 |
| 11/30/1983 | 3442.98 | 8.30\% | 1.083 | 43.84\% | 149.09\% | 20.02\% | 240.26\% | 13.03\% | 727.98\% | 11.15\% | 11/30/1983 |
| 12/30/1983 | 3472.33 | 0.85\% | 1.009 | 35.49\% | 141.79\% | 19.31\% | 238.33\% | 12.96\% | 702.83\% | 10.98\% | 12/30/1983 |
| 1/31/1984 | 3364.18 | -3.11\% | 0.969 | 26.32\% | 126.06\% | 17.72\% | 219.57\% | 12.32\% | 655.52\% | 10.64\% | 1/31/1984 |
| 2/29/1984 | 3306.7 | -1.71\% | 0.983 | 20.19\% | 116.69\% | 16.73\% | 204.88\% | 11.79\% | 647.55\% | 10.58\% | 2/29/1984 |
| 3/30/1984 | 3269.4 | -1.13\% | 0.989 | 14.70\% | 101.36\% | 15.03\% | 210.33\% | 11.99\% | 608.84\% | 10.29\% | 3/30/1984 |
| 4/30/1984 | 3194.12 | -2.30\% | 0.977 | 3.03\% | 94.02\% | 14.17\% | 232.93\% | 12.78\% | 566.30\% | 9.95\% | 4/30/1984 |
| 5/31/1984 | 3075.06 | -3.73\% | 0.963 | -4.36\% | 81.68\% | 12.68\% | 242.05\% | 13.09\% | 519.31\% | 9.55\% | 5/31/1984 |
| 6/29/1984 | 3078.32 | 0.11\% | 1.001 | -5.67\% | 69.78\% | 11.17\% | 248.17\% | 13.29\% | 518.60\% | 9.54\% | 6/29/1984 |
| 7/31/1984 | 2973.02 | -3.42\% | 0.966 | -10.17\% | 69.99\% | 11.20\% | 229.75\% | 12.67\% | 482.23\% | 9.21\% | 7/31/1984 |
| 8/31/1984 | 3324.46 | 11.82\% | 1.118 | -0.02\% | 73.90\% | 11.70\% | 309.62\% | 15.14\% | 554.34\% | 9.85\% | 8/31/1984 |
| 9/28/1984 | 3346.41 | 0.66\% | 1.007 | -0.40\% | 68.74\% | 11.03\% | 353.04\% | 16.31\% | 529.39\% | 9.63\% | 9/28/1984 |
| 10/31/1984 | 3296.98 | -1.48\% | 0.985 | 3.71\% | 84.07\% | 12.98\% | 306.21\% | 15.05\% | 516.42\% | 9.52\% | 10/31/1984 |
| 11/30/1984 | 3328 | 0.94\% | 1.009 | -3.34\% | 71.79\% | 11.43\% | 338.40\% | 15.93\% | 519.01\% | 9.54\% | 11/30/1984 |
| 12/31/1984 | 3389.25 | 1.84\% | 1.018 | -2.39\% | 63.02\% | 10.27\% | 345.83\% | 16.12\% | 524.74\% | 9.59\% | 12/31/1984 |
| 1/31/1985 | 3669.57 | 8.27\% | 1.083 | 9.08\% | 57.65\% | 9.53\% | 314.19\% | 15.27\% | 538.92\% | 9.72\% | 1/31/1985 |
| 2/28/1985 | 3677.69 | 0.22\% | 1.002 | 11.22\% | 45.68\% | 7.82\% | 302.94\% | 14.95\% | 541.88\% | 9.74\% | 2/28/1985 |
| 3/29/1985 | 3720.81 | 1.17\% | 1.012 | 13.81\% | 78.95\% | 12.34\% | 312.62\% | 15.23\% | 552.72\% | 9.83\% | 3/29/1985 |
| 4/30/1985 | 3759.58 | 1.04\% | 1.010 | 17.70\% | 73.49\% | 11.65\% | 307.51\% | 15.08\% | 542.38\% | 9.75\% | 4/30/1985 |
| 5/31/1985 | 3917.24 | 4.19\% | 1.042 | 27.39\% | 70.70\% | 11.29\% | 314.51\% | 15.28\% | 570.08\% | 9.98\% | 5/31/1985 |
| 6/28/1985 | 3899.51 | -0.45\% | 0.995 | 26.68\% | 61.72\% | 10.09\% | 300.93\% | 14.90\% | 613.11\% | 10.32\% | 6/28/1985 |
| 7/31/1985 | 4001.53 | 2.62\% | 1.026 | 34.59\% | 55.24\% | 9.20\% | 310.79\% | 15.18\% | 637.42\% | 10.51\% | 7/31/1985 |
| 8/30/1985 | 4071.54 | 1.75\% | 1.017 | 22.47\% | 56.04\% | 9.31\% | 322.32\% | 15.50\% | 630.92\% | 10.46\% | 8/30/1985 |
| 9/30/1985 | 3814.15 | -6.32\% | 0.937 | 13.98\% | 42.94\% | 7.41\% | 319.00\% | 15.40\% | 570.88\% | 9.98\% | 9/30/1985 |
| 10/31/1985 | 3882.56 | 1.79\% | 1.018 | 17.76\% | 46.58\% | 7.95\% | 345.17\% | 16.11\% | 569.36\% | 9.97\% | 10/31/1985 |
| 11/29/1985 | 4157.03 | 7.07\% | 1.071 | 24.91\% | 45.81\% | 7.83\% | 351.52\% | 16.27\% | 636.46\% | 10.50\% | 11/29/1985 |
| 12/31/1985 | 4238.78 | 1.97\% | 1.020 | 25.07\% | 56.67\% | 9.40\% | 370.60\% | 16.75\% | 632.39\% | 10.47\% | 12/31/1985 |
| 1/31/1986 | 4159.78 | -1.86\% | 0.981 | 13.36\% | 56.45\% | 9.36\% | 321.35\% | 15.47\% | 588.26\% | 10.13\% | 1/31/1986 |
| 2/28/1986 | 4186.74 | 0.65\% | 1.006 | 13.84\% | 60.32\% | 9.90\% | 309.57\% | 15.14\% | 608.70\% | 10.29\% | 2/28/1986 |
| 3/31/1986 | 4486.28 | 7.15\% | 1.072 | 20.57\% | 59.81\% | 9.83\% | 345.64\% | 16.12\% | 666.75\% | 10.72\% | 3/31/1986 |
| 4/30/1986 | 4539.68 | 1.19\% | 1.012 | 20.75\% | 63.39\% | 10.32\% | 340.26\% | 15.98\% | 666.84\% | 10.72\% | 4/30/1986 |
| 5/30/1986 | 4612 | 1.59\% | 1.016 | 17.74\% | 60.87\% | 9.97\% | 346.07\% | 16.13\% | 704.66\% | 10.99\% | 5/30/1986 |
| 6/30/1986 | 4577.12 | -0.76\% | 0.992 | 17.38\% | 59.52\% | 9.79\% | 349.18\% | 16.21\% | 699.66\% | 10.95\% | 6/30/1986 |
| 7/31/1986 | 4361.33 | -4.71\% | 0.953 | 8.99\% | 58.87\% | 9.70\% | 327.99\% | 15.65\% | 672.53\% | 10.76\% | 7/31/1986 |
| 8/29/1986 | 4508.28 | 3.37\% | 1.034 | 10.73\% | 69.50\% | 11.13\% | 342.30\% | 16.03\% | 760.46\% | 11.36\% | 8/29/1986 |
| 9/30/1986 | 4451.7 | -1.26\% | 0.987 | 16.72\% | 92.59\% | 14.01\% | 343.52\% | 16.06\% | 767.20\% | 11.41\% | 9/30/1986 |
| 10/31/1986 | 4546.86 | 2.14\% | 1.021 | 17.11\% | 100.66\% | 14.95\% | 368.43\% | 16.70\% | 766.12\% | 11.40\% | 10/31/1986 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \\ \hline \end{gathered}$ | Monthly <br> Return (\%) | Product Return | 1 Year Total Return | 5 Year Total Return | 5 Year Annualized Return | 10 Year <br> Total Return | 10 Year <br> Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11/28/1986 | 4568.24 | 0.47\% | 1.005 | 9.89\% | 83.74\% | 12.94\% | 405.02\% | 17.58\% | 774.61\% | 11.45\% | 11/28/1986 |
| 12/31/1986 | 4618.32 | 1.10\% | 1.011 | 8.95\% | 90.19\% | 13.72\% | 361.83\% | 16.53\% | 758.65\% | 11.35\% | 12/31/1986 |
| 1/30/1987 | 5049.63 | 9.34\% | 1.093 | 21.39\% | 127.03\% | 17.82\% | 408.58\% | 17.66\% | 775.94\% | 11.46\% | 1/30/1987 |
| 2/27/1987 | 5283.82 | 4.64\% | 1.046 | 26.20\% | 153.07\% | 20.41\% | 423.38\% | 18.00\% | 805.97\% | 11.65\% | 2/27/1987 |
| 3/31/1987 | 5666.89 | 7.25\% | 1.072 | 26.32\% | 183.54\% | 23.18\% | 451.18\% | 18.61\% | 836.27\% | 11.83\% | 3/31/1987 |
| 4/30/1987 | 5638.25 | -0.51\% | 0.995 | 24.20\% | 188.82\% | 23.63\% | 462.17\% | 18.85\% | 810.25\% | 11.68\% | 4/30/1987 |
| 5/29/1987 | 5602.05 | -0.64\% | 0.994 | 21.47\% | 189.96\% | 23.73\% | 464.06\% | 18.89\% | 838.13\% | 11.84\% | 5/29/1987 |
| 6/30/1987 | 5705.34 | 1.84\% | 1.018 | 24.65\% | 226.82\% | 26.73\% | 442.93\% | 18.43\% | 827.35\% | 11.78\% | 6/30/1987 |
| 7/31/1987 | 6156.23 | 7.90\% | 1.079 | 41.15\% | 240.44\% | 27.76\% | 483.22\% | 19.28\% | 866.71\% | 12.01\% | 7/31/1987 |
| 8/31/1987 | 6109.49 | -0.76\% | 0.992 | 35.52\% | 194.57\% | 24.12\% | 494.05\% | 19.50\% | 868.95\% | 12.03\% | 8/31/1987 |
| 9/30/1987 | 5987.36 | -2.00\% | 0.980 | 34.50\% | 189.02\% | 23.65\% | 480.89\% | 19.24\% | 827.41\% | 11.78\% | 9/30/1987 |
| 10/30/1987 | 4638.82 | -22.52\% | 0.775 | 2.02\% | 101.90\% | 15.09\% | 362.81\% | 16.56\% | 660.84\% | 10.68\% | 10/30/1987 |
| 11/30/1987 | 4589.86 | -1.06\% | 0.989 | 0.47\% | 91.75\% | 13.91\% | 334.86\% | 15.83\% | 633.09\% | 10.47\% | 11/30/1987 |
| 12/31/1987 | 4889.82 | 6.54\% | 1.065 | 5.88\% | 90.80\% | 13.79\% | 341.69\% | 16.01\% | 669.87\% | 10.74\% | 12/31/1987 |
| 1/29/1988 | 4737.55 | -3.11\% | 0.969 | -6.18\% | 77.88\% | 12.21\% | 353.55\% | 16.32\% | 665.28\% | 10.71\% | 1/29/1988 |
| 2/29/1988 | 4976.47 | 5.04\% | 1.050 | -5.82\% | 80.88\% | 12.58\% | 371.02\% | 16.76\% | 738.81\% | 11.22\% | 2/29/1988 |
| 3/31/1988 | 5166.26 | 3.81\% | 1.038 | -8.83\% | 81.25\% | 12.63\% | 359.55\% | 16.48\% | 788.64\% | 11.54\% | 3/31/1988 |
| 4/29/1988 | 5213.41 | 0.91\% | 1.009 | -7.53\% | 68.17\% | 10.96\% | 355.07\% | 16.36\% | 721.07\% | 11.10\% | 4/29/1988 |
| 5/31/1988 | 5088.04 | -2.40\% | 0.976 | -9.18\% | 58.24\% | 9.61\% | 323.97\% | 15.54\% | 707.74\% | 11.01\% | 5/31/1988 |
| 6/30/1988 | 5410.06 | 6.33\% | 1.063 | -5.18\% | 65.79\% | 10.64\% | 348.80\% | 16.20\% | 712.55\% | 11.04\% | 6/30/1988 |
| 7/29/1988 | 5317.08 | -1.72\% | 0.983 | -13.63\% | 60.66\% | 9.95\% | 315.27\% | 15.30\% | 700.92\% | 10.96\% | 7/29/1988 |
| 8/31/1988 | 5196.58 | -2.27\% | 0.977 | -14.94\% | 56.28\% | 9.34\% | 292.07\% | 14.64\% | 661.44\% | 10.68\% | 8/31/1988 |
| 9/30/1988 | 5212.87 | 0.31\% | 1.003 | -12.94\% | 55.16\% | 9.18\% | 275.43\% | 14.14\% | 626.34\% | 10.42\% | 9/30/1988 |
| 10/31/1988 | 5399.3 | 3.58\% | 1.036 | 16.39\% | 69.84\% | 11.18\% | 310.05\% | 15.16\% | 639.24\% | 10.52\% | 10/31/1988 |
| 11/30/1988 | 5255.58 | -2.66\% | 0.973 | 14.50\% | 52.65\% | 8.83\% | 280.22\% | 14.29\% | 592.64\% | 10.16\% | 11/30/1988 |
| 12/30/1988 | 5431.68 | 3.35\% | 1.034 | 11.08\% | 56.43\% | 9.36\% | 278.23\% | 14.23\% | 598.42\% | 10.21\% | 12/30/1988 |
| 1/31/1989 | 5803.9 | 6.85\% | 1.069 | 22.51\% | 72.52\% | 11.52\% | 290.00\% | 14.58\% | 625.53\% | 10.42\% | 1/31/1989 |
| 2/28/1989 | 5745.48 | -1.01\% | 0.990 | 15.45\% | 73.75\% | 11.68\% | 276.50\% | 14.18\% | 652.55\% | 10.62\% | 2/28/1989 |
| 3/31/1989 | 5782.84 | 0.65\% | 1.007 | 11.93\% | 76.88\% | 12.08\% | 256.16\% | 13.54\% | 631.48\% | 10.46\% | 3/31/1989 |
| 4/28/1989 | 5871.01 | 1.52\% | 1.015 | 12.61\% | 83.81\% | 12.95\% | 256.61\% | 13.56\% | 620.68\% | 10.38\% | 4/28/1989 |
| 5/31/1989 | 6025.56 | 2.63\% | 1.026 | 18.43\% | 95.95\% | 14.40\% | 256.00\% | 13.54\% | 620.01\% | 10.37\% | 5/31/1989 |
| 6/30/1989 | 6138.42 | 1.87\% | 1.019 | 13.46\% | 99.41\% | 14.80\% | 238.55\% | 12.97\% | 719.02\% | 11.09\% | 6/30/1989 |
| 7/31/1989 | 6492.54 | 5.77\% | 1.058 | 22.11\% | 118.38\% | 16.91\% | 271.23\% | 14.02\% | 815.81\% | 11.71\% | 7/31/1989 |
| 8/31/1989 | 6574.01 | 1.25\% | 1.013 | 26.51\% | 97.75\% | 14.61\% | 243.88\% | 13.15\% | 781.80\% | 11.50\% | 8/31/1989 |
| 9/29/1989 | 6489.76 | -1.28\% | 0.987 | 24.49\% | 93.93\% | 14.16\% | 227.25\% | 12.59\% | 773.11\% | 11.44\% | 9/29/1989 |
| 10/31/1989 | 6463.05 | -0.41\% | 0.996 | 19.70\% | 96.03\% | 14.41\% | 260.83\% | 13.69\% | 754.71\% | 11.32\% | 10/31/1989 |
| 11/30/1989 | 6520.92 | 0.90\% | 1.009 | 24.08\% | 95.94\% | 14.40\% | 236.61\% | 12.90\% | 739.86\% | 11.23\% | 11/30/1989 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | $\begin{aligned} & 10 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 10 Year <br> Annualized Return | 20 Year Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/29/1989 | 6592.58 | 1.10\% | 1.011 | 21.37\% | 94.51\% | 14.23\% | 217.10\% | 12.23\% | 754.60\% | 11.32\% | 12/29/1989 |
| 1/31/1990 | 6162.06 | -6.53\% | 0.935 | 6.17\% | 67.92\% | 10.92\% | 164.74\% | 10.23\% | 728.42\% | 11.15\% | 1/31/1990 |
| 2/28/1990 | 6146.24 | -0.26\% | 0.997 | 6.98\% | 67.12\% | 10.82\% | 143.47\% | 9.31\% | 703.75\% | 10.98\% | 2/28/1990 |
| 3/30/1990 | 6093.7 | -0.85\% | 0.991 | 5.38\% | 63.77\% | 10.37\% | 193.08\% | 11.35\% | 694.06\% | 10.92\% | 3/30/1990 |
| 4/30/1990 | 5602.46 | -8.06\% | 0.919 | -4.57\% | 49.02\% | 8.30\% | 158.53\% | 9.96\% | 698.32\% | 10.95\% | 4/30/1990 |
| 5/31/1990 | 6027.09 | 7.58\% | 1.076 | 0.03\% | 53.86\% | 9.00\% | 162.65\% | 10.14\% | 849.99\% | 11.91\% | 5/31/1990 |
| 6/29/1990 | 5990.42 | -0.61\% | 0.994 | -2.41\% | 53.62\% | 8.97\% | 148.44\% | 9.53\% | 859.30\% | 11.97\% | 6/29/1990 |
| 7/31/1990 | 6031.03 | 0.68\% | 1.007 | -7.11\% | 50.72\% | 8.55\% | 133.98\% | 8.87\% | 820.21\% | 11.74\% | 7/31/1990 |
| 8/31/1990 | 5686.33 | -5.72\% | 0.943 | -13.50\% | 39.66\% | 6.91\% | 117.92\% | 8.10\% | 744.13\% | 11.26\% | 8/31/1990 |
| 9/28/1990 | 5390.49 | -5.20\% | 0.948 | -16.94\% | 41.33\% | 7.16\% | 102.01\% | 7.28\% | 662.54\% | 10.69\% | 9/28/1990 |
| 10/31/1990 | 5268.72 | -2.26\% | 0.977 | -18.48\% | 35.70\% | 6.30\% | 98.92\% | 7.12\% | 664.71\% | 10.71\% | 10/31/1990 |
| 11/30/1990 | 5406.51 | 2.62\% | 1.026 | -17.09\% | 30.06\% | 5.40\% | 89.64\% | 6.61\% | 650.73\% | 10.60\% | 11/30/1990 |
| 12/31/1990 | 5617.01 | 3.89\% | 1.039 | -14.80\% | 32.51\% | 5.79\% | 107.61\% | 7.58\% | 655.07\% | 10.64\% | 12/31/1990 |
| 1/31/1991 | 5654.56 | 0.67\% | 1.007 | -8.24\% | 35.93\% | 6.33\% | 112.67\% | 7.84\% | 636.15\% | 10.50\% | 1/31/1991 |
| 2/28/1991 | 5999.86 | 6.11\% | 1.061 | -2.38\% | 43.31\% | 7.46\% | 129.75\% | 8.67\% | 680.56\% | 10.82\% | 2/28/1991 |
| 3/29/1991 | 6083.5 | 1.39\% | 1.014 | -0.17\% | 35.60\% | 6.28\% | 116.70\% | 8.04\% | 658.17\% | 10.66\% | 3/29/1991 |
| 4/30/1991 | 6050.81 | -0.54\% | 0.995 | 8.00\% | 33.29\% | 5.92\% | 117.78\% | 8.09\% | 661.98\% | 10.69\% | 4/30/1991 |
| 5/31/1991 | 6213.23 | 2.68\% | 1.027 | 3.09\% | 34.72\% | 6.14\% | 116.72\% | 8.04\% | 697.86\% | 10.94\% | 5/31/1991 |
| 6/28/1991 | 6102.37 | -1.78\% | 0.982 | 1.87\% | 33.32\% | 5.92\% | 112.68\% | 7.84\% | 666.67\% | 10.72\% | 6/28/1991 |
| 7/31/1991 | 6242.16 | 2.29\% | 1.023 | 3.50\% | 43.13\% | 7.43\% | 127.38\% | 8.56\% | 693.05\% | 10.91\% | 7/31/1991 |
| 8/30/1991 | 6220.42 | -0.35\% | 0.997 | 9.39\% | 37.98\% | 6.65\% | 133.87\% | 8.87\% | 693.87\% | 10.91\% | 8/30/1991 |
| 9/30/1991 | 6014.44 | -3.31\% | 0.967 | 11.58\% | 35.10\% | 6.20\% | 160.20\% | 10.03\% | 693.00\% | 10.91\% | 9/30/1991 |
| 10/31/1991 | 6249.65 | 3.91\% | 1.039 | 18.62\% | 37.45\% | 6.57\% | 175.81\% | 10.68\% | 779.12\% | 11.48\% | 10/31/1991 |
| 11/29/1991 | 6146.27 | -1.65\% | 0.983 | 13.68\% | 34.54\% | 6.11\% | 147.22\% | 9.47\% | 739.94\% | 11.23\% | 11/29/1991 |
| 12/31/1991 | 6291.9 | 2.37\% | 1.024 | 12.02\% | 36.24\% | 6.38\% | 159.11\% | 9.99\% | 683.08\% | 10.84\% | 12/31/1991 |
| 1/31/1992 | 6452.51 | 2.55\% | 1.026 | 14.11\% | 27.78\% | 5.03\% | 190.10\% | 11.24\% | 635.75\% | 10.49\% | 1/31/1992 |
| 2/28/1992 | 6442.57 | -0.15\% | 0.998 | 7.38\% | 21.93\% | 4.05\% | 208.57\% | 11.93\% | 608.25\% | 10.28\% | 2/28/1992 |
| 3/31/1992 | 6162.76 | -4.34\% | 0.957 | 1.30\% | 8.75\% | 1.69\% | 208.35\% | 11.92\% | 593.50\% | 10.17\% | 3/31/1992 |
| 4/30/1992 | 6069.05 | -1.52\% | 0.985 | 0.30\% | 7.64\% | 1.48\% | 210.89\% | 12.01\% | 574.26\% | 10.01\% | 4/30/1992 |
| 5/29/1992 | 6143.26 | 1.22\% | 1.012 | -1.13\% | 9.66\% | 1.86\% | 217.98\% | 12.26\% | 569.81\% | 9.98\% | 5/29/1992 |
| 6/30/1992 | 6170.05 | 0.44\% | 1.004 | 1.11\% | 8.15\% | 1.58\% | 253.44\% | 13.46\% | 579.17\% | 10.05\% | 6/30/1992 |
| 7/31/1992 | 6279.34 | 1.77\% | 1.018 | 0.60\% | 2.00\% | 0.40\% | 247.25\% | 13.26\% | 573.11\% | 10.00\% | 7/31/1992 |
| 8/31/1992 | 6221.23 | -0.93\% | 0.991 | 0.01\% | 1.83\% | 0.36\% | 199.96\% | 11.61\% | 535.71\% | 9.69\% | 8/31/1992 |
| 9/30/1992 | 6054.57 | -2.68\% | 0.973 | 0.67\% | 1.12\% | 0.22\% | 192.26\% | 11.32\% | 525.98\% | 9.60\% | 9/30/1992 |
| 10/30/1992 | 6131.98 | 1.28\% | 1.013 | -1.88\% | 32.19\% | 5.74\% | 166.89\% | 10.31\% | 557.01\% | 9.87\% | 10/30/1992 |
| 11/30/1992 | 6052.93 | -1.29\% | 0.987 | -1.52\% | 31.88\% | 5.69\% | 152.87\% | 9.72\% | 507.80\% | 9.44\% | 11/30/1992 |
| 12/31/1992 | 6201.72 | 2.46\% | 1.025 | -1.43\% | 26.83\% | 4.87\% | 141.99\% | 9.24\% | 505.93\% | 9.43\% | 12/31/1992 |

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| S\&P Composite TR Index Date | $\begin{aligned} & \text { Index } \\ & \text { PX_LAST } \end{aligned}$ | Monthly Return (\%) | Product Return | 1 Year Total Return | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | 10 Year Total Return | 10 Year Annualized Return | 20 Year Total Return | $\begin{gathered} 20 \text { Year } \\ \text { Annualized Return } \\ \hline \end{gathered}$ | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1/29/1993 | 6124.83 | -1.24\% | 0.988 | -5.08\% | 29.28\% | 5.27\% | 129.97\% | 8.68\% | 486.43\% | 9.25\% | 1/29/1993 |
| 2/26/1993 | 6406.98 | 4.61\% | 1.046 | -0.55\% | 28.75\% | 5.18\% | 132.88\% | 8.82\% | 522.62\% | 9.57\% | 2/26/1993 |
| 3/31/1993 | 6714.88 | 4.81\% | 1.048 | 8.96\% | 29.98\% | 5.38\% | 135.58\% | 8.95\% | 545.07\% | 9.77\% | 3/31/1993 |
| 4/30/1993 | 7071.07 | 5.30\% | 1.053 | 16.51\% | 35.63\% | 6.29\% | 128.09\% | 8.60\% | 606.68\% | 10.27\% | 4/30/1993 |
| 5/31/1993 | 7271.67 | 2.84\% | 1.028 | 18.37\% | 42.92\% | 7.40\% | 126.15\% | 8.50\% | 659.91\% | 10.67\% | 5/31/1993 |
| 6/30/1993 | 7455.35 | 2.53\% | 1.025 | 20.83\% | 37.81\% | 6.62\% | 128.46\% | 8.61\% | 666.81\% | 10.72\% | 6/30/1993 |
| 7/30/1993 | 7463.91 | 0.11\% | 1.001 | 18.86\% | 40.38\% | 7.02\% | 125.53\% | 8.47\% | 621.32\% | 10.38\% | 7/30/1993 |
| 8/31/1993 | 7798.17 | 4.48\% | 1.045 | 25.35\% | 50.06\% | 8.46\% | 134.51\% | 8.90\% | 666.72\% | 10.72\% | 8/31/1993 |
| 9/30/1993 | 7544.63 | -3.25\% | 0.967 | 24.61\% | 44.73\% | 7.67\% | 124.56\% | 8.43\% | 607.82\% | 10.28\% | 9/30/1993 |
| 10/29/1993 | 8052.76 | 6.73\% | 1.067 | 31.32\% | 49.14\% | 8.32\% | 153.31\% | 9.74\% | 609.05\% | 10.29\% | 10/29/1993 |
| 11/30/1993 | 7926.13 | -1.57\% | 0.984 | 30.95\% | 50.81\% | 8.56\% | 130.21\% | 8.70\% | 683.32\% | 10.84\% | 11/30/1993 |
| 12/31/1993 | 8220.23 | 3.71\% | 1.037 | 32.55\% | 51.34\% | 8.64\% | 136.74\% | 9.00\% | 700.96\% | 10.96\% | 12/31/1993 |
| 1/31/1994 | 8670.34 | 5.48\% | 1.055 | 41.56\% | 49.39\% | 8.36\% | 157.73\% | 9.93\% | 723.61\% | 11.12\% | 1/31/1994 |
| 2/28/1994 | 8436.07 | -2.70\% | 0.973 | 31.67\% | 46.83\% | 7.98\% | 155.12\% | 9.82\% | 677.81\% | 10.80\% | 2/28/1994 |
| 3/31/1994 | 8283.08 | -1.81\% | 0.982 | 23.35\% | 43.24\% | 7.45\% | 153.35\% | 9.74\% | 686.24\% | 10.86\% | 3/31/1994 |
| 4/29/1994 | 8170.41 | -1.36\% | 0.986 | 15.55\% | 39.17\% | 6.83\% | 155.80\% | 9.85\% | 751.63\% | 11.30\% | 4/29/1994 |
| 5/31/1994 | 8301.33 | 1.60\% | 1.016 | 14.16\% | 37.77\% | 6.62\% | 169.96\% | 10.44\% | 823.40\% | 11.76\% | 5/31/1994 |
| 6/30/1994 | 7748.33 | -6.66\% | 0.933 | 3.93\% | 26.23\% | 4.77\% | 151.71\% | 9.67\% | 776.36\% | 11.46\% | 6/30/1994 |
| 7/29/1994 | 8051.04 | 3.91\% | 1.039 | 7.87\% | 24.00\% | 4.40\% | 170.80\% | 10.48\% | 792.98\% | 11.57\% | 7/29/1994 |
| 8/31/1994 | 8393.82 | 4.26\% | 1.043 | 7.64\% | 27.68\% | 5.01\% | 152.49\% | 9.70\% | 934.23\% | 12.39\% | 8/31/1994 |
| 9/30/1994 | 8426.82 | 0.39\% | 1.004 | 11.69\% | 29.85\% | 5.36\% | 151.82\% | 9.68\% | 1040.83\% | 12.94\% | 9/30/1994 |
| 10/31/1994 | 8312.82 | -1.35\% | 0.986 | 3.23\% | 28.62\% | 5.16\% | 152.13\% | 9.69\% | 924.19\% | 12.34\% | 10/31/1994 |
| 11/30/1994 | 7945.24 | -4.42\% | 0.956 | 0.24\% | 21.84\% | 4.03\% | 138.74\% | 9.09\% | 946.64\% | 12.46\% | 11/30/1994 |
| 12/30/1994 | 8205.73 | 3.28\% | 1.033 | -0.18\% | 24.47\% | 4.47\% | 142.11\% | 9.24\% | 979.40\% | 12.63\% | 12/30/1994 |
| 1/31/1995 | 7830.41 | -4.57\% | 0.954 | -9.69\% | 27.07\% | 4.91\% | 113.39\% | 7.87\% | 783.83\% | 11.51\% | 1/31/1995 |
| 2/28/1995 | 8053.21 | 2.85\% | 1.028 | -4.54\% | 31.03\% | 5.55\% | 118.97\% | 8.15\% | 782.34\% | 11.50\% | 2/28/1995 |
| 3/31/1995 | 8451.13 | 4.94\% | 1.049 | 2.03\% | 38.69\% | 6.76\% | 127.13\% | 8.55\% | 837.18\% | 11.84\% | 3/31/1995 |
| 4/28/1995 | 8391.47 | -0.71\% | 0.993 | 2.71\% | 49.78\% | 8.42\% | 123.20\% | 8.36\% | 809.58\% | 11.67\% | 4/28/1995 |
| 5/31/1995 | 8741.88 | 4.18\% | 1.042 | 5.31\% | 45.04\% | 7.72\% | 123.16\% | 8.36\% | 825.04\% | 11.77\% | 5/31/1995 |
| 6/30/1995 | 8923.67 | 2.08\% | 1.021 | 15.17\% | 48.97\% | 8.30\% | 128.84\% | 8.63\% | 817.50\% | 11.72\% | 6/30/1995 |
| 7/31/1995 | 9104.07 | 2.02\% | 1.020 | 13.08\% | 50.95\% | 8.58\% | 127.51\% | 8.57\% | 834.60\% | 11.82\% | 7/31/1995 |
| 8/31/1995 | 8926.86 | -1.95\% | 0.981 | 6.35\% | 56.99\% | 9.44\% | 119.25\% | 8.17\% | 825.94\% | 11.77\% | 8/31/1995 |
| 9/29/1995 | 8977.74 | 0.57\% | 1.006 | 6.54\% | 66.55\% | 10.74\% | 135.38\% | 8.94\% | 886.25\% | 12.12\% | 9/29/1995 |
| 10/31/1995 | 8845.8 | -1.47\% | 0.985 | 6.41\% | 67.89\% | 10.92\% | 127.83\% | 8.58\% | 914.25\% | 12.28\% | 10/31/1995 |
| 11/30/1995 | 9265.66 | 4.75\% | 1.047 | 16.62\% | 71.38\% | 11.38\% | 122.89\% | 8.35\% | 906.39\% | 12.24\% | 11/30/1995 |
| 12/29/1995 | 9397.97 | 1.43\% | 1.014 | 14.53\% | 67.31\% | 10.84\% | 121.71\% | 8.29\% | 943.38\% | 12.44\% | 12/29/1995 |
| 1/31/1996 | 9913.64 | 5.49\% | 1.055 | 26.60\% | 75.32\% | 11.88\% | 138.32\% | 9.07\% | 904.18\% | 12.23\% | 1/31/1996 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | 1 Year Total Return | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | 10 Year <br> Total Return | 10 Year <br> Annualized Return | 20 Year <br> Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2/29/1996 | 9861.55 | -0.53\% | 0.995 | 22.45\% | 64.36\% | 10.45\% | 135.54\% | 8.94\% | 864.70\% | 12.00\% | 2/29/1996 |
| 3/29/1996 | 9964.21 | 1.04\% | 1.010 | 17.90\% | 63.79\% | 10.37\% | 122.10\% | 8.31\% | 889.79\% | 12.14\% | 3/29/1996 |
| 4/30/1996 | 10323.89 | 3.61\% | 1.036 | 23.03\% | 70.62\% | 11.28\% | 127.41\% | 8.56\% | 901.22\% | 12.21\% | 4/30/1996 |
| 5/31/1996 | 10543.37 | 2.13\% | 1.021 | 20.61\% | 69.69\% | 11.16\% | 128.61\% | 8.62\% | 919.76\% | 12.31\% | 5/31/1996 |
| 6/28/1996 | 10167.15 | -3.57\% | 0.964 | 13.93\% | 66.61\% | 10.75\% | 122.13\% | 8.31\% | 897.77\% | 12.19\% | 6/28/1996 |
| 7/31/1996 | 9944.05 | -2.19\% | 0.978 | 9.23\% | 59.30\% | 9.76\% | 128.00\% | 8.59\% | 875.84\% | 12.06\% | 7/31/1996 |
| 8/30/1996 | 10391.76 | 4.50\% | 1.045 | 16.41\% | 67.06\% | 10.81\% | 130.50\% | 8.71\% | 919.53\% | 12.31\% | 8/30/1996 |
| 9/30/1996 | 10716.42 | 3.12\% | 1.031 | 19.37\% | 78.18\% | 12.25\% | 140.73\% | 9.18\% | 967.66\% | 12.57\% | 9/30/1996 |
| 10/31/1996 | 11350.62 | 5.92\% | 1.059 | 28.32\% | 81.62\% | 12.68\% | 149.64\% | 9.58\% | 1069.38\% | 13.08\% | 10/31/1996 |
| 11/29/1996 | 12217.32 | 7.64\% | 1.076 | 31.86\% | 98.78\% | 14.73\% | 167.44\% | 10.34\% | 1250.64\% | 13.90\% | 11/29/1996 |
| 12/31/1996 | 12061.95 | -1.27\% | 0.987 | 28.35\% | 91.71\% | 13.90\% | 161.18\% | 10.08\% | 1106.20\% | 13.26\% | 12/31/1996 |
| 1/31/1997 | 12444.13 | 3.17\% | 1.032 | 25.53\% | 92.86\% | 14.04\% | 146.44\% | 9.44\% | 1153.34\% | 13.48\% | 1/31/1997 |
| 2/28/1997 | 12560.15 | 0.93\% | 1.009 | 27.36\% | 94.96\% | 14.28\% | 137.71\% | 9.04\% | 1144.13\% | 13.43\% | 2/28/1997 |
| 3/31/1997 | 11961.2 | -4.77\% | 0.952 | 20.04\% | 94.09\% | 14.18\% | 111.07\% | 7.76\% | 1063.38\% | 13.05\% | 3/31/1997 |
| 4/30/1997 | 12227.41 | 2.23\% | 1.022 | 18.44\% | 101.47\% | 15.04\% | 116.87\% | 8.05\% | 1119.16\% | 13.32\% | 4/30/1997 |
| 5/30/1997 | 13079.21 | 6.97\% | 1.070 | 24.05\% | 112.90\% | 16.32\% | 133.47\% | 8.85\% | 1216.93\% | 13.76\% | 5/30/1997 |
| 6/30/1997 | 13222.76 | 1.10\% | 1.011 | 30.05\% | 114.31\% | 16.47\% | 131.76\% | 8.77\% | 1158.29\% | 13.50\% | 6/30/1997 |
| 7/31/1997 | 14135.23 | 6.90\% | 1.069 | 42.15\% | 125.11\% | 17.62\% | 129.61\% | 8.67\% | 1239.13\% | 13.85\% | 7/31/1997 |
| 8/29/1997 | 13605.16 | -3.75\% | 0.963 | 30.92\% | 118.69\% | 16.94\% | 122.69\% | 8.34\% | 1222.88\% | 13.78\% | 8/29/1997 |
| 9/30/1997 | 14513.63 | 6.68\% | 1.067 | 35.43\% | 139.71\% | 19.11\% | 142.40\% | 9.26\% | 1308.09\% | 14.14\% | 9/30/1997 |
| 10/31/1997 | 14116.3 | -2.74\% | 0.973 | 24.37\% | 130.21\% | 18.15\% | 204.31\% | 11.77\% | 1308.36\% | 14.14\% | 10/31/1997 |
| 11/28/1997 | 13454.71 | -4.69\% | 0.953 | 10.13\% | 122.28\% | 17.32\% | 193.14\% | 11.35\% | 1174.75\% | 13.57\% | 11/28/1997 |
| 12/31/1997 | 13868.54 | 3.08\% | 1.031 | 14.98\% | 123.62\% | 17.46\% | 183.62\% | 10.99\% | 1152.74\% | 13.47\% | 12/31/1997 |
| 1/30/1998 | 13881.55 | 0.09\% | 1.001 | 11.55\% | 126.64\% | 17.78\% | 193.01\% | 11.35\% | 1228.95\% | 13.81\% | 1/30/1998 |
| 2/27/1998 | 14711.4 | 5.98\% | 1.060 | 17.13\% | 129.62\% | 18.09\% | 195.62\% | 11.45\% | 1292.41\% | 14.07\% | 2/27/1998 |
| 3/31/1998 | 15706.32 | 6.76\% | 1.068 | 31.31\% | 133.90\% | 18.52\% | 204.02\% | 11.76\% | 1297.10\% | 14.09\% | 3/31/1998 |
| 4/30/1998 | 15938.75 | 1.48\% | 1.015 | 30.35\% | 125.41\% | 17.65\% | 205.73\% | 11.82\% | 1291.28\% | 14.07\% | 4/30/1998 |
| 5/29/1998 | 15799.89 | -0.87\% | 0.991 | 20.80\% | 117.28\% | 16.79\% | 210.53\% | 12.00\% | 1216.56\% | 13.76\% | 5/29/1998 |
| 6/30/1998 | 15367.27 | -2.74\% | 0.973 | 16.22\% | 106.12\% | 15.56\% | 184.05\% | 11.00\% | 1174.83\% | 13.57\% | 6/30/1998 |
| 7/31/1998 | 14469.33 | -5.84\% | 0.942 | 2.36\% | 93.86\% | 14.16\% | 172.13\% | 10.53\% | 1030.07\% | 12.89\% | 7/31/1998 |
| 8/31/1998 | 11560.18 | -20.11\% | 0.799 | -15.03\% | 48.24\% | 8.19\% | 122.46\% | 8.32\% | 772.19\% | 11.44\% | 8/31/1998 |
| 9/30/1998 | 11761.87 | 1.74\% | 1.017 | -18.96\% | 55.90\% | 9.29\% | 125.63\% | 8.48\% | 747.10\% | 11.27\% | 9/30/1998 |
| 10/30/1998 | 13017.91 | 10.68\% | 1.107 | -7.78\% | 61.66\% | 10.08\% | 141.10\% | 9.20\% | 888.64\% | 12.14\% | 10/30/1998 |
| 11/30/1998 | 13319 | 2.31\% | 1.023 | -1.01\% | 68.04\% | 10.94\% | 153.43\% | 9.75\% | 863.57\% | 11.99\% | 11/30/1998 |
| 12/31/1998 | 13648.84 | 2.48\% | 1.025 | -1.58\% | 66.04\% | 10.67\% | 151.28\% | 9.65\% | 850.42\% | 11.92\% | 12/31/1998 |
| 1/29/1999 | 14169.33 | 3.81\% | 1.038 | 2.07\% | 63.42\% | 10.32\% | 144.13\% | 9.34\% | 852.13\% | 11.93\% | 1/29/1999 |
| 2/26/1999 | 13306.03 | -6.09\% | 0.939 | -9.55\% | 57.73\% | 9.54\% | 131.59\% | 8.76\% | 771.94\% | 11.44\% | 2/26/1999 |

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| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year Total Return | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \\ \hline \end{gathered}$ | 10 Year Total Return | 10 Year Annualized Return | $\begin{gathered} 20 \text { Year } \\ \text { Total Return } \end{gathered}$ | 20 Year Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3/31/1999 | 13937.91 | 4.75\% | 1.047 | -11.26\% | 68.27\% | 10.97\% | 141.02\% | 9.20\% | 758.43\% | 11.35\% | 3/31/1999 |
| 4/30/1999 | 14828.82 | 6.39\% | 1.064 | -6.96\% | 81.49\% | 12.66\% | 152.58\% | 9.71\% | 800.73\% | 11.62\% | 4/30/1999 |
| 5/31/1999 | 14481.01 | -2.35\% | 0.977 | -8.35\% | 74.44\% | 11.77\% | 140.33\% | 9.16\% | 755.57\% | 11.33\% | 5/31/1999 |
| 6/30/1999 | 14864.79 | 2.65\% | 1.027 | -3.27\% | 91.85\% | 13.92\% | 142.16\% | 9.25\% | 719.82\% | 11.09\% | 6/30/1999 |
| 7/30/1999 | 15028.68 | 1.10\% | 1.011 | 3.87\% | 86.67\% | 13.30\% | 131.48\% | 8.76\% | 759.32\% | 11.35\% | 7/30/1999 |
| 8/31/1999 | 14811.04 | -1.45\% | 0.986 | 28.12\% | 76.45\% | 12.03\% | 125.30\% | 8.46\% | 674.76\% | 10.78\% | 8/31/1999 |
| 9/30/1999 | 14811.58 | 0.00\% | 1.000 | 25.93\% | 75.77\% | 11.94\% | 128.23\% | 8.60\% | 646.87\% | 10.58\% | 9/30/1999 |
| 10/29/1999 | 15458.63 | 4.37\% | 1.044 | 18.75\% | 85.96\% | 13.21\% | 139.18\% | 9.11\% | 763.05\% | 11.38\% | 10/29/1999 |
| 11/30/1999 | 16044.51 | 3.79\% | 1.038 | 20.46\% | 101.94\% | 15.09\% | 146.05\% | 9.42\% | 728.21\% | 11.15\% | 11/30/1999 |
| 12/31/1999 | 17977.46 | 12.05\% | 1.120 | 31.71\% | 119.08\% | 16.98\% | 172.69\% | 10.55\% | 764.71\% | 11.39\% | 12/31/1999 |
| 1/31/2000 | 18129.75 | 0.85\% | 1.008 | 27.95\% | 131.53\% | 18.28\% | 194.22\% | 11.40\% | 678.90\% | 10.81\% | 1/31/2000 |
| 2/29/2000 | 19530.39 | 7.73\% | 1.077 | 46.78\% | 142.52\% | 19.38\% | 217.76\% | 12.26\% | 673.64\% | 10.77\% | 2/29/2000 |
| 3/31/2000 | 20277.29 | 3.82\% | 1.038 | 45.48\% | 139.94\% | 19.13\% | 232.76\% | 12.78\% | 875.25\% | 12.06\% | 3/31/2000 |
| 4/28/2000 | 20039.08 | -1.17\% | 0.988 | 35.14\% | 138.80\% | 19.02\% | 257.68\% | 13.59\% | 824.73\% | 11.76\% | 4/28/2000 |
| 5/31/2000 | 19853.19 | -0.93\% | 0.991 | 37.10\% | 127.10\% | 17.83\% | 229.40\% | 12.66\% | 765.15\% | 11.39\% | 5/31/2000 |
| 6/30/2000 | 21912.16 | 10.37\% | 1.104 | 47.41\% | 145.55\% | 19.68\% | 265.79\% | 13.85\% | 808.75\% | 11.67\% | 6/30/2000 |
| 7/31/2000 | 22373.5 | 2.11\% | 1.021 | 48.87\% | 145.75\% | 19.70\% | 270.97\% | 14.01\% | 768.00\% | 11.41\% | 7/31/2000 |
| 8/31/2000 | 24204.48 | 8.18\% | 1.082 | 63.42\% | 171.14\% | 22.08\% | 325.66\% | 15.59\% | 827.61\% | 11.78\% | 8/31/2000 |
| 9/29/2000 | 22360.43 | -7.62\% | 0.924 | 50.97\% | 149.07\% | 20.02\% | 314.81\% | 15.29\% | 737.96\% | 11.21\% | 9/29/2000 |
| 10/31/2000 | 20777.28 | -7.08\% | 0.929 | 34.41\% | 134.88\% | 18.62\% | 294.35\% | 14.71\% | 684.43\% | 10.85\% | 10/31/2000 |
| 11/30/2000 | 19032.88 | -8.40\% | 0.916 | 18.63\% | 105.41\% | 15.49\% | 252.04\% | 13.41\% | 567.60\% | 9.96\% | 11/30/2000 |
| 12/29/2000 | 19309.36 | 1.45\% | 1.015 | 7.41\% | 105.46\% | 15.49\% | 243.77\% | 13.14\% | 613.70\% | 10.33\% | 12/29/2000 |
| 1/31/2001 | 20160.56 | 4.41\% | 1.044 | 11.20\% | 103.36\% | 15.25\% | 256.54\% | 13.56\% | 658.23\% | 10.66\% | 1/31/2001 |
| 2/28/2001 | 17486.34 | -13.26\% | 0.867 | -10.47\% | 77.32\% | 12.14\% | 191.45\% | 11.29\% | 569.59\% | 9.97\% | 2/28/2001 |
| 3/30/2001 | 16503.59 | -5.62\% | 0.944 | -18.61\% | 65.63\% | 10.62\% | 171.28\% | 10.49\% | 487.88\% | 9.26\% | 3/30/2001 |
| 4/30/2001 | 17246.49 | 4.50\% | 1.045 | -13.94\% | 67.05\% | 10.81\% | 185.03\% | 11.04\% | 520.73\% | 9.56\% | 4/30/2001 |
| 5/31/2001 | 17734.7 | 2.83\% | 1.028 | -10.67\% | 68.21\% | 10.96\% | 185.43\% | 11.06\% | 518.58\% | 9.54\% | 5/31/2001 |
| 6/29/2001 | 16849.28 | -4.99\% | 0.950 | -23.11\% | 65.72\% | 10.63\% | 176.11\% | 10.69\% | 487.23\% | 9.25\% | 6/29/2001 |
| 7/31/2001 | 16757.9 | -0.54\% | 0.995 | -25.10\% | 68.52\% | 11.00\% | 168.46\% | 10.38\% | 510.42\% | 9.47\% | 7/31/2001 |
| 8/31/2001 | 16145.25 | -3.66\% | 0.963 | -33.30\% | 55.37\% | 9.21\% | 159.55\% | 10.01\% | 507.01\% | 9.44\% | 8/31/2001 |
| 9/28/2001 | 14954.42 | -7.38\% | 0.926 | -33.12\% | 39.55\% | 6.89\% | 148.64\% | 9.54\% | 546.96\% | 9.79\% | 9/28/2001 |
| 10/31/2001 | 15071.46 | 0.78\% | 1.008 | -27.46\% | 32.78\% | 5.83\% | 141.16\% | 9.20\% | 565.14\% | 9.94\% | 10/31/2001 |
| 11/30/2001 | 16270.47 | 7.96\% | 1.080 | -14.51\% | 33.18\% | 5.90\% | 164.72\% | 10.22\% | 554.43\% | 9.85\% | 11/30/2001 |
| 12/31/2001 | 16881.75 | 3.76\% | 1.038 | -12.57\% | 39.96\% | 6.95\% | 168.31\% | 10.37\% | 595.21\% | 10.18\% | 12/31/2001 |
| 1/31/2002 | 16808.11 | -0.44\% | 0.996 | -16.63\% | 35.07\% | 6.20\% | 160.49\% | 10.05\% | 655.68\% | 10.64\% | 1/31/2002 |
| 2/28/2002 | 16801.82 | -0.04\% | 1.000 | -3.91\% | 33.77\% | 5.99\% | 160.79\% | 10.06\% | 704.74\% | 10.99\% | 2/28/2002 |
| 3/29/2002 | 17308.41 | 3.02\% | 1.030 | 4.88\% | 44.70\% | 7.67\% | 180.85\% | 10.88\% | 766.02\% | 11.40\% | 3/29/2002 |

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| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly <br> Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \\ \hline \end{gathered}$ | 5 Year Annualized Return | $\begin{gathered} 10 \text { Year } \\ \text { Total Return } \end{gathered}$ | 10 Year <br> Annualized Return | 20 Year <br> Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/30/2002 | 16903.86 | -2.34\% | 0.977 | -1.99\% | 38.25\% | 6.69\% | 178.53\% | 10.79\% | 765.91\% | 11.40\% | 4/30/2002 |
| 5/31/2002 | 16911.33 | 0.04\% | 1.000 | -4.64\% | 29.30\% | 5.27\% | 175.28\% | 10.66\% | 775.33\% | 11.46\% | 5/31/2002 |
| 6/28/2002 | 15819.63 | -6.46\% | 0.935 | -6.11\% | 19.64\% | 3.65\% | 156.39\% | 9.87\% | 806.21\% | 11.65\% | 6/28/2002 |
| 7/31/2002 | 14638.28 | -7.47\% | 0.925 | -12.65\% | 3.56\% | 0.70\% | 133.12\% | 8.83\% | 709.49\% | 11.02\% | 7/31/2002 |
| 8/30/2002 | 14670.69 | 0.22\% | 1.002 | -9.13\% | 7.83\% | 1.52\% | 135.82\% | 8.96\% | 607.35\% | 10.28\% | 8/30/2002 |
| 9/30/2002 | 13747.28 | -6.29\% | 0.937 | -8.07\% | -5.28\% | -1.08\% | 127.06\% | 8.55\% | 563.59\% | 9.92\% | 9/30/2002 |
| 10/31/2002 | 13913.94 | 1.21\% | 1.012 | -7.68\% | -1.43\% | -0.29\% | 126.91\% | 8.54\% | 505.59\% | 9.42\% | 10/31/2002 |
| 11/29/2002 | 14648.13 | 5.28\% | 1.053 | -9.97\% | 8.87\% | 1.71\% | 142.00\% | 9.24\% | 511.96\% | 9.48\% | 11/29/2002 |
| 12/31/2002 | 14782.01 | 0.91\% | 1.009 | -12.44\% | 6.59\% | 1.28\% | 138.35\% | 9.07\% | 476.78\% | 9.16\% | 12/31/2002 |
| 1/31/2003 | 14702 | -0.54\% | 0.995 | -12.53\% | 5.91\% | 1.16\% | 140.04\% | 9.15\% | 452.02\% | 8.92\% | 1/31/2003 |
| 2/28/2003 | 14698.9 | -0.02\% | 1.000 | -12.52\% | -0.08\% | -0.02\% | 129.42\% | 8.66\% | 434.27\% | 8.74\% | 2/28/2003 |
| 3/31/2003 | 14261.66 | -2.97\% | 0.970 | -17.60\% | -9.20\% | -1.91\% | 112.39\% | 7.82\% | 400.34\% | 8.38\% | 3/31/2003 |
| 4/30/2003 | 14818.77 | 3.91\% | 1.039 | -12.33\% | -7.03\% | -1.45\% | 109.57\% | 7.68\% | 378.00\% | 8.14\% | 4/30/2003 |
| 5/30/2003 | 15459 | 4.32\% | 1.043 | -8.59\% | -2.16\% | -0.44\% | 112.59\% | 7.83\% | 380.78\% | 8.17\% | 5/30/2003 |
| 6/30/2003 | 15776.68 | 2.05\% | 1.021 | -0.27\% | 2.66\% | 0.53\% | 111.62\% | 7.78\% | 383.46\% | 8.20\% | 6/30/2003 |
| 7/31/2003 | 16409.18 | 4.01\% | 1.040 | 12.10\% | 13.41\% | 2.55\% | 119.85\% | 8.20\% | 395.83\% | 8.33\% | 7/31/2003 |
| 8/29/2003 | 17004.12 | 3.63\% | 1.036 | 15.91\% | 47.09\% | 8.02\% | 118.05\% | 8.11\% | 411.36\% | 8.50\% | 8/29/2003 |
| 9/30/2003 | 16833.91 | -1.00\% | 0.990 | 22.45\% | 43.12\% | 7.43\% | 123.12\% | 8.36\% | 401.05\% | 8.39\% | 9/30/2003 |
| 10/31/2003 | 17648.99 | 4.84\% | 1.048 | 26.84\% | 35.57\% | 6.28\% | 119.17\% | 8.16\% | 455.17\% | 8.95\% | 10/31/2003 |
| 11/28/2003 | 17869.04 | 1.25\% | 1.012 | 21.99\% | 34.16\% | 6.05\% | 125.44\% | 8.47\% | 419.00\% | 8.58\% | 11/28/2003 |
| 12/31/2003 | 18732.48 | 4.83\% | 1.048 | 26.72\% | 37.25\% | 6.54\% | 127.88\% | 8.59\% | 439.48\% | 8.79\% | 12/31/2003 |
| 1/30/2004 | 19435.62 | 3.75\% | 1.038 | 32.20\% | 37.17\% | 6.52\% | 124.16\% | 8.41\% | 477.72\% | 9.17\% | 1/30/2004 |
| 2/27/2004 | 20065.93 | 3.24\% | 1.032 | 36.51\% | 50.80\% | 8.56\% | 137.86\% | 9.05\% | 506.83\% | 9.43\% | 2/27/2004 |
| 3/31/2004 | 19642.96 | -2.11\% | 0.979 | 37.73\% | 40.93\% | 7.10\% | 137.15\% | 9.02\% | 500.81\% | 9.38\% | 3/31/2004 |
| 4/30/2004 | 18878.81 | -3.89\% | 0.961 | 27.40\% | 27.31\% | 4.95\% | 131.06\% | 8.74\% | 491.05\% | 9.29\% | 4/30/2004 |
| 5/31/2004 | 19304.5 | 2.25\% | 1.023 | 24.88\% | 33.31\% | 5.92\% | 132.55\% | 8.81\% | 527.78\% | 9.62\% | 5/31/2004 |
| 6/30/2004 | 19638.12 | 1.73\% | 1.017 | 24.48\% | 32.11\% | 5.73\% | 153.45\% | 9.75\% | 537.95\% | 9.71\% | 6/30/2004 |
| 7/30/2004 | 19456.65 | -0.92\% | 0.991 | 18.57\% | 29.46\% | 5.30\% | 141.67\% | 9.22\% | 554.44\% | 9.85\% | 7/30/2004 |
| 8/31/2004 | 19299.08 | -0.81\% | 0.992 | 13.50\% | 30.30\% | 5.44\% | 129.92\% | 8.68\% | 480.52\% | 9.19\% | 8/31/2004 |
| 9/30/2004 | 20007.39 | 3.67\% | 1.037 | 18.85\% | 35.08\% | 6.20\% | 137.43\% | 9.03\% | 497.88\% | 9.35\% | 9/30/2004 |
| 10/29/2004 | 20494.96 | 2.44\% | 1.024 | 16.13\% | 32.58\% | 5.80\% | 146.55\% | 9.44\% | 521.63\% | 9.57\% | 10/29/2004 |
| 11/30/2004 | 20892.76 | 1.94\% | 1.019 | 16.92\% | 30.22\% | 5.42\% | 162.96\% | 10.15\% | 527.79\% | 9.62\% | 11/30/2004 |
| 12/31/2004 | 21444.89 | 2.64\% | 1.026 | 14.48\% | 19.29\% | 3.59\% | 161.34\% | 10.08\% | 532.73\% | 9.66\% | 12/31/2004 |
| 1/31/2005 | 21359.53 | -0.40\% | 0.996 | 9.90\% | 17.81\% | 3.33\% | 172.78\% | 10.56\% | 482.07\% | 9.21\% | 1/31/2005 |
| 2/28/2005 | 22464.42 | 5.17\% | 1.052 | 11.95\% | 15.02\% | 2.84\% | 178.95\% | 10.80\% | 510.83\% | 9.47\% | 2/28/2005 |
| 3/31/2005 | 22379.49 | -0.38\% | 0.996 | 13.93\% | 10.37\% | 1.99\% | 164.81\% | 10.23\% | 501.47\% | 9.39\% | 3/31/2005 |
| 4/29/2005 | 21846.77 | -2.38\% | 0.976 | 15.72\% | 9.02\% | 1.74\% | 160.34\% | 10.04\% | 481.10\% | 9.20\% | 4/29/2005 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | 1 Year Total Return | 5 Year Total Return | 5 Year <br> Annualized Return | 10 Year Total Return | 10 Year <br> Annualized Return | 20 Year Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5/31/2005 | 22434.39 | 2.69\% | 1.027 | 16.21\% | 13.00\% | 2.47\% | 156.63\% | 9.88\% | 472.71\% | 9.12\% | 5/31/2005 |
| 6/30/2005 | 23180.9 | 3.33\% | 1.033 | 18.04\% | 5.79\% | 1.13\% | 159.77\% | 10.02\% | 494.46\% | 9.32\% | 6/30/2005 |
| 7/29/2005 | 24412.18 | 5.31\% | 1.053 | 25.47\% | 9.11\% | 1.76\% | 168.15\% | 10.37\% | 510.07\% | 9.46\% | 7/29/2005 |
| 8/31/2005 | 25023.47 | 2.50\% | 1.025 | 29.66\% | 3.38\% | 0.67\% | 180.32\% | 10.86\% | 514.59\% | 9.50\% | 8/31/2005 |
| 9/30/2005 | 25877.61 | 3.41\% | 1.034 | 29.34\% | 15.73\% | 2.96\% | 188.24\% | 11.17\% | 578.46\% | 10.05\% | 9/30/2005 |
| 10/31/2005 | 24415.41 | -5.65\% | 0.943 | 19.13\% | 17.51\% | 3.28\% | 176.01\% | 10.69\% | 528.85\% | 9.63\% | 10/31/2005 |
| 11/30/2005 | 25494.03 | 4.42\% | 1.044 | 22.02\% | 33.95\% | 6.02\% | 175.15\% | 10.65\% | 513.28\% | 9.49\% | 11/30/2005 |
| 12/30/2005 | 26618.8 | 4.41\% | 1.044 | 24.13\% | 37.85\% | 6.63\% | 183.24\% | 10.97\% | 527.98\% | 9.62\% | 12/30/2005 |
| 1/31/2006 | 28232.24 | 6.06\% | 1.061 | 32.18\% | 40.04\% | 6.97\% | 184.78\% | 11.03\% | 578.70\% | 10.05\% | 1/31/2006 |
| 2/28/2006 | 27662.99 | -2.02\% | 0.980 | 23.14\% | 58.20\% | 9.61\% | 180.51\% | 10.87\% | 560.73\% | 9.90\% | 2/28/2006 |
| 3/31/2006 | 28742.03 | 3.90\% | 1.039 | 28.43\% | 74.16\% | 11.73\% | 188.45\% | 11.18\% | 540.67\% | 9.73\% | 3/31/2006 |
| 4/28/2006 | 28997.6 | 0.89\% | 1.009 | 32.73\% | 68.14\% | 10.95\% | 180.88\% | 10.88\% | 538.76\% | 9.72\% | 4/28/2006 |
| 5/31/2006 | 27964.06 | -3.56\% | 0.964 | 24.65\% | 57.68\% | 9.54\% | 165.23\% | 10.25\% | 506.33\% | 9.43\% | 5/31/2006 |
| 6/30/2006 | 27734.68 | -0.82\% | 0.992 | 19.64\% | 64.60\% | 10.48\% | 172.79\% | 10.56\% | 505.94\% | 9.43\% | 6/30/2006 |
| 7/31/2006 | 28298.01 | 2.03\% | 1.020 | 15.92\% | 68.86\% | 11.05\% | 184.57\% | 11.02\% | 548.84\% | 9.80\% | 7/31/2006 |
| 8/31/2006 | 28938.66 | 2.26\% | 1.023 | 15.65\% | 79.24\% | 12.38\% | 178.48\% | 10.78\% | 541.90\% | 9.74\% | 8/31/2006 |
| 9/29/2006 | 28267.15 | -2.32\% | 0.977 | 9.23\% | 89.02\% | 13.58\% | 163.77\% | 10.19\% | 534.97\% | 9.68\% | 9/29/2006 |
| 10/31/2006 | 29707.07 | 5.09\% | 1.051 | 21.67\% | 97.11\% | 14.54\% | 161.72\% | 10.10\% | 553.35\% | 9.84\% | 10/31/2006 |
| 11/30/2006 | 30752.95 | 3.52\% | 1.035 | 20.63\% | 89.01\% | 13.58\% | 151.72\% | 9.67\% | 573.19\% | 10.00\% | 11/30/2006 |
| 12/29/2006 | 31213.49 | 1.50\% | 1.015 | 17.26\% | 84.89\% | 13.08\% | 158.78\% | 9.97\% | 575.86\% | 10.03\% | 12/29/2006 |
| 1/31/2007 | 31573.54 | 1.15\% | 1.012 | 11.84\% | 87.85\% | 13.44\% | 153.72\% | 9.76\% | 525.26\% | 9.60\% | 1/31/2007 |
| 2/28/2007 | 31653.69 | 0.25\% | 1.003 | 14.43\% | 88.39\% | 13.50\% | 152.02\% | 9.68\% | 499.07\% | 9.36\% | 2/28/2007 |
| 3/30/2007 | 32025.58 | 1.17\% | 1.012 | 11.42\% | 85.03\% | 13.10\% | 167.75\% | 10.35\% | 465.14\% | 9.05\% | 3/30/2007 |
| 4/30/2007 | 32687.48 | 2.07\% | 1.021 | 12.72\% | 93.37\% | 14.10\% | 167.33\% | 10.33\% | 479.75\% | 9.18\% | 4/30/2007 |
| 5/31/2007 | 34319.04 | 4.99\% | 1.050 | 22.73\% | 102.94\% | 15.21\% | 162.39\% | 10.13\% | 512.62\% | 9.49\% | 5/31/2007 |
| 6/29/2007 | 34038.36 | -0.82\% | 0.992 | 22.73\% | 115.17\% | 16.56\% | 157.42\% | 9.92\% | 496.61\% | 9.34\% | 6/29/2007 |
| 7/31/2007 | 33995.28 | -0.13\% | 0.999 | 20.13\% | 132.24\% | 18.35\% | 140.50\% | 9.17\% | 452.21\% | 8.92\% | 7/31/2007 |
| 8/31/2007 | 33555.31 | -1.29\% | 0.987 | 15.95\% | 128.72\% | 17.99\% | 146.64\% | 9.45\% | 449.23\% | 8.89\% | 8/31/2007 |
| 9/28/2007 | 34714.92 | 3.46\% | 1.035 | 22.81\% | 152.52\% | 20.35\% | 139.19\% | 9.11\% | 479.80\% | 9.19\% | 9/28/2007 |
| 10/31/2007 | 36072.14 | 3.91\% | 1.039 | 21.43\% | 159.25\% | 20.99\% | 155.54\% | 9.84\% | 677.61\% | 10.80\% | 10/31/2007 |
| 11/30/2007 | 33830.05 | -6.22\% | 0.938 | 10.01\% | 130.95\% | 18.22\% | 151.44\% | 9.66\% | 637.06\% | 10.50\% | 11/30/2007 |
| 12/31/2007 | 34282.35 | 1.34\% | 1.013 | 9.83\% | 131.92\% | 18.32\% | 147.20\% | 9.47\% | 601.10\% | 10.23\% | 12/31/2007 |
| 1/31/2008 | 32665.06 | -4.72\% | 0.953 | 3.46\% | 122.18\% | 17.31\% | 135.31\% | 8.93\% | 589.49\% | 10.14\% | 1/31/2008 |
| 2/29/2008 | 33790.86 | 3.45\% | 1.034 | 6.75\% | 129.89\% | 18.11\% | 129.69\% | 8.67\% | 579.01\% | 10.05\% | 2/29/2008 |
| 3/31/2008 | 33307.55 | -1.43\% | 0.986 | 4.00\% | 133.55\% | 18.49\% | 112.06\% | 7.81\% | 544.71\% | 9.77\% | 3/31/2008 |
| 4/30/2008 | 34838.87 | 4.60\% | 1.046 | 6.58\% | 135.10\% | 18.65\% | 118.58\% | 8.13\% | 568.25\% | 9.96\% | 4/30/2008 |
| 5/30/2008 | 36857.32 | 5.79\% | 1.058 | 7.40\% | 138.42\% | 18.98\% | 133.28\% | 8.84\% | 624.39\% | 10.41\% | 5/30/2008 |

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| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | $\begin{aligned} & 10 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 10 Year <br> Annualized Return | 20 Year Total Return | 20 Year <br> Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6/30/2008 | 36335.84 | -1.41\% | 0.986 | 6.75\% | 130.31\% | 18.16\% | 136.45\% | 8.99\% | 571.63\% | 9.99\% | 6/30/2008 |
| 7/31/2008 | 34206.47 | -5.86\% | 0.941 | 0.62\% | 108.46\% | 15.83\% | 136.41\% | 8.98\% | 543.33\% | 9.75\% | 7/31/2008 |
| 8/29/2008 | 34734.66 | 1.54\% | 1.015 | 3.51\% | 104.27\% | 15.36\% | 200.47\% | 11.63\% | 568.41\% | 9.96\% | 8/29/2008 |
| 9/30/2008 | 29716.94 | -14.45\% | 0.856 | -14.40\% | 76.53\% | 12.04\% | 152.65\% | 9.71\% | 470.07\% | 9.09\% | 9/30/2008 |
| 10/31/2008 | 24763.48 | -16.67\% | 0.833 | -31.35\% | 40.31\% | 7.01\% | 90.23\% | 6.64\% | 358.64\% | 7.91\% | 10/31/2008 |
| 11/28/2008 | 23590.58 | -4.74\% | 0.953 | -30.27\% | 32.02\% | 5.71\% | 77.12\% | 5.88\% | 348.87\% | 7.80\% | 11/28/2008 |
| 12/31/2008 | 22967.98 | -2.64\% | 0.974 | -33.00\% | 22.61\% | 4.16\% | 68.28\% | 5.34\% | 322.85\% | 7.48\% | 12/31/2008 |
| 1/30/2009 | 22287.88 | -2.96\% | 0.970 | -31.77\% | 14.68\% | 2.78\% | 57.30\% | 4.63\% | 284.02\% | 6.96\% | 1/30/2009 |
| 2/27/2009 | 20881.33 | -6.31\% | 0.937 | -38.20\% | 4.06\% | 0.80\% | 56.93\% | 4.61\% | 263.44\% | 6.66\% | 2/27/2009 |
| 3/31/2009 | 22507.7 | 7.79\% | 1.078 | -32.42\% | 14.58\% | 2.76\% | 61.49\% | 4.91\% | 289.22\% | 7.03\% | 3/31/2009 |
| 4/30/2009 | 24141.96 | 7.26\% | 1.073 | -30.70\% | 27.88\% | 5.04\% | 62.80\% | 4.99\% | 311.21\% | 7.33\% | 4/30/2009 |
| 5/29/2009 | 26909.41 | 11.46\% | 1.115 | -26.99\% | 39.39\% | 6.87\% | 85.83\% | 6.39\% | 346.59\% | 7.77\% | 5/29/2009 |
| 6/30/2009 | 27002.03 | 0.34\% | 1.003 | -25.69\% | 37.50\% | 6.58\% | 81.65\% | 6.15\% | 339.89\% | 7.69\% | 6/30/2009 |
| 7/31/2009 | 28140.9 | 4.22\% | 1.042 | -17.73\% | 44.63\% | 7.66\% | 87.25\% | 6.47\% | 333.43\% | 7.61\% | 7/31/2009 |
| 8/31/2009 | 28407.39 | 0.95\% | 1.009 | -18.22\% | 47.20\% | 8.04\% | 91.80\% | 6.73\% | 332.12\% | 7.59\% | 8/31/2009 |
| 9/30/2009 | 29867.9 | 5.14\% | 1.051 | 0.51\% | 49.28\% | 8.34\% | 101.65\% | 7.27\% | 360.23\% | 7.93\% | 9/30/2009 |
| 10/30/2009 | 28660.23 | -4.04\% | 0.960 | 15.74\% | 39.84\% | 6.94\% | 85.40\% | 6.37\% | 343.45\% | 7.73\% | 10/30/2009 |
| 11/30/2009 | 30137.61 | 5.15\% | 1.052 | 27.75\% | 44.25\% | 7.60\% | 87.84\% | 6.51\% | 362.17\% | 7.95\% | 11/30/2009 |
| 12/31/2009 | 31019.4 | 2.93\% | 1.029 | 35.05\% | 44.65\% | 7.66\% | 72.55\% | 5.61\% | 370.52\% | 8.05\% | 12/31/2009 |
| 1/29/2010 | 29360.52 | -5.35\% | 0.947 | 31.73\% | 37.46\% | 6.57\% | 61.95\% | 4.94\% | 376.47\% | 8.12\% | 1/29/2010 |
| 2/26/2010 | 30820.61 | 4.97\% | 1.050 | 47.60\% | 37.20\% | 6.53\% | 57.81\% | 4.67\% | 401.45\% | 8.40\% | 2/26/2010 |
| 3/31/2010 | 31994.24 | 3.81\% | 1.038 | 42.15\% | 42.96\% | 7.41\% | 57.78\% | 4.67\% | 425.04\% | 8.64\% | 3/31/2010 |
| 4/30/2010 | 32527.15 | 1.67\% | 1.017 | 34.73\% | 48.89\% | 8.29\% | 62.32\% | 4.96\% | 480.59\% | 9.19\% | 4/30/2010 |
| 5/31/2010 | 31395.79 | -3.48\% | 0.965 | 16.67\% | 39.94\% | 6.95\% | 58.14\% | 4.69\% | 420.91\% | 8.60\% | 5/31/2010 |
| 6/30/2010 | 30229.89 | -3.71\% | 0.963 | 11.95\% | 30.41\% | 5.45\% | 37.96\% | 3.27\% | 404.64\% | 8.43\% | 6/30/2010 |
| 7/30/2010 | 31426.67 | 3.96\% | 1.040 | 11.68\% | 28.73\% | 5.18\% | 40.46\% | 3.46\% | 421.08\% | 8.60\% | 7/30/2010 |
| 8/31/2010 | 32022.8 | 1.90\% | 1.019 | 12.73\% | 27.97\% | 5.06\% | 32.30\% | 2.84\% | 463.15\% | 9.03\% | 8/31/2010 |
| 9/30/2010 | 33331.94 | 4.09\% | 1.041 | 11.60\% | 28.81\% | 5.19\% | 49.07\% | 4.07\% | 518.35\% | 9.54\% | 9/30/2010 |
| 10/29/2010 | 34235.4 | 2.71\% | 1.027 | 19.45\% | 40.22\% | 6.99\% | 64.77\% | 5.12\% | 549.79\% | 9.81\% | 10/29/2010 |
| 11/30/2010 | 35046.9 | 2.37\% | 1.024 | 16.29\% | 37.47\% | 6.57\% | 84.14\% | 6.30\% | 548.24\% | 9.80\% | 11/30/2010 |
| 12/31/2010 | 36480.62 | 4.09\% | 1.041 | 17.61\% | 37.05\% | 6.51\% | 88.93\% | 6.57\% | 549.47\% | 9.81\% | 12/31/2010 |
| 1/31/2011 | 36840.37 | 0.99\% | 1.010 | 25.48\% | 30.49\% | 5.47\% | 82.73\% | 6.21\% | 551.52\% | 9.82\% | 1/31/2011 |
| 2/28/2011 | 38474.92 | 4.44\% | 1.044 | 24.84\% | 39.08\% | 6.82\% | 120.03\% | 8.21\% | 541.26\% | 9.74\% | 2/28/2011 |
| 3/31/2011 | 38522.86 | 0.12\% | 1.001 | 20.41\% | 34.03\% | 6.03\% | 133.42\% | 8.85\% | 533.24\% | 9.67\% | 3/31/2011 |
| 4/29/2011 | 38129.27 | -1.02\% | 0.990 | 17.22\% | 31.49\% | 5.63\% | 121.08\% | 8.26\% | 530.15\% | 9.64\% | 4/29/2011 |
| 5/31/2011 | 37798.54 | -0.87\% | 0.991 | 20.39\% | 35.17\% | 6.21\% | 113.13\% | 7.86\% | 508.36\% | 9.45\% | 5/31/2011 |
| 6/30/2011 | 36539.76 | -3.33\% | 0.967 | 20.87\% | 31.75\% | 5.67\% | 116.86\% | 8.05\% | 498.78\% | 9.36\% | 6/30/2011 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \end{gathered}$ | Monthly Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Total Return } \end{gathered}$ | $\begin{gathered} 5 \text { Year } \\ \text { Annualized Return } \end{gathered}$ | $\begin{aligned} & 10 \text { Year } \\ & \text { Total Return } \end{aligned}$ | 10 Year Annualized Return | 20 Year <br> Total Return | 20 Year Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7/29/2011 | 35626.87 | -2.50\% | 0.975 | 13.37\% | 25.90\% | 4.71\% | 112.60\% | 7.83\% | 470.75\% | 9.10\% | 7/29/2011 |
| 8/31/2011 | 35196.21 | -1.21\% | 0.988 | 9.91\% | 21.62\% | 3.99\% | 118.00\% | 8.10\% | 465.82\% | 9.05\% | 8/31/2011 |
| 9/30/2011 | 32147.72 | -8.66\% | 0.913 | -3.55\% | 13.73\% | 2.61\% | 114.97\% | 7.95\% | 434.51\% | 8.74\% | 9/30/2011 |
| 10/31/2011 | 33950.26 | 5.61\% | 1.056 | -0.83\% | 14.28\% | 2.71\% | 125.26\% | 8.46\% | 443.23\% | 8.83\% | 10/31/2011 |
| 11/30/2011 | 33878.55 | -0.21\% | 0.998 | -3.33\% | 10.16\% | 1.95\% | 108.22\% | 7.61\% | 451.21\% | 8.91\% | 11/30/2011 |
| 12/30/2011 | 33302.95 | -1.70\% | 0.983 | -8.71\% | 6.69\% | 1.30\% | 97.27\% | 7.03\% | 429.30\% | 8.69\% | 12/30/2011 |
| 1/31/2012 | 34759.27 | 4.37\% | 1.044 | -5.65\% | 10.09\% | 1.94\% | 106.80\% | 7.54\% | 438.69\% | 8.78\% | 1/31/2012 |
| 2/29/2012 | 35340.93 | 1.67\% | 1.017 | -8.15\% | 11.65\% | 2.23\% | 110.34\% | 7.72\% | 448.55\% | 8.88\% | 2/29/2012 |
| 3/30/2012 | 34764.84 | -1.63\% | 0.984 | -9.76\% | 8.55\% | 1.65\% | 100.86\% | 7.22\% | 464.11\% | 9.04\% | 3/30/2012 |
| 4/30/2012 | 34557.53 | -0.60\% | 0.994 | -9.37\% | 5.72\% | 1.12\% | 104.44\% | 7.41\% | 469.41\% | 9.09\% | 4/30/2012 |
| 5/31/2012 | 32435.71 | -6.14\% | 0.939 | -14.19\% | -5.49\% | -1.12\% | 91.80\% | 6.73\% | 427.99\% | 8.68\% | 5/31/2012 |
| 6/29/2012 | 32792.83 | 1.10\% | 1.011 | -10.25\% | -3.66\% | -0.74\% | 107.29\% | 7.56\% | 431.48\% | 8.71\% | 6/29/2012 |
| 7/31/2012 | 33055.25 | 0.80\% | 1.008 | -7.22\% | -2.77\% | -0.56\% | 125.81\% | 8.49\% | 426.41\% | 8.66\% | 7/31/2012 |
| 8/31/2012 | 33930.46 | 2.65\% | 1.026 | -3.60\% | 1.12\% | 0.22\% | 131.28\% | 8.75\% | 445.40\% | 8.85\% | 8/31/2012 |
| 9/28/2012 | 35094.2 | 3.43\% | 1.034 | 9.17\% | 1.09\% | 0.22\% | 155.28\% | 9.83\% | 479.63\% | 9.18\% | 9/28/2012 |
| 10/31/2012 | 35469.14 | 1.07\% | 1.011 | 4.47\% | -1.67\% | -0.34\% | 154.92\% | 9.81\% | 478.43\% | 9.17\% | 10/31/2012 |
| 11/30/2012 | 35014.36 | -1.28\% | 0.987 | 3.35\% | 3.50\% | 0.69\% | 139.04\% | 9.11\% | 478.47\% | 9.17\% | 11/30/2012 |
| 12/31/2012 | 35696.72 | 1.95\% | 1.019 | 7.19\% | 4.13\% | 0.81\% | 141.49\% | 9.22\% | 475.59\% | 9.15\% | 12/31/2012 |
| 1/31/2013 | 36500.6 | 2.25\% | 1.023 | 5.01\% | 11.74\% | 2.25\% | 148.27\% | 9.52\% | 495.94\% | 9.34\% | 1/31/2013 |
| 2/28/2013 | 36958.9 | 1.26\% | 1.013 | 4.58\% | 9.38\% | 1.81\% | 151.44\% | 9.66\% | 476.85\% | 9.16\% | 2/28/2013 |
| 3/31/2013 | 36887.8 | -0.19\% | 0.998 | 6.11\% | 10.75\% | 2.06\% | 158.65\% | 9.97\% | 449.34\% | 8.89\% | 3/31/2013 |
| 4/30/2013 | 36123.8 | -2.07\% | 0.979 | 4.53\% | 3.69\% | 0.73\% | 143.77\% | 9.32\% | 410.87\% | 8.50\% | 4/30/2013 |
| 5/31/2013 | 36763.3 | 1.77\% | 1.018 | 13.34\% | -0.26\% | -0.05\% | 137.81\% | 9.05\% | 405.57\% | 8.44\% | 5/31/2013 |
| 6/29/2013 | 35382.2 | -3.76\% | 0.962 | 7.90\% | -2.62\% | -0.53\% | 124.27\% | 8.41\% | 374.59\% | 8.10\% | 6/29/2013 |
| 7/31/2013 | 36509.9 | 3.19\% | 1.032 | 10.45\% | 6.73\% | 1.31\% | 122.50\% | 8.33\% | 389.15\% | 8.26\% | 7/31/2013 |
| 8/31/2013 | 37075.1 | 1.55\% | 1.015 | 9.27\% | 6.74\% | 1.31\% | 118.04\% | 8.11\% | 375.43\% | 8.11\% | 8/31/2013 |
| 9/28/2013 | 37593.5 | 1.40\% | 1.014 | 7.12\% | 26.51\% | 4.81\% | 123.32\% | 8.37\% | 398.28\% | 8.36\% | 9/28/2013 |
| 10/31/2013 | 39369.5 | 4.72\% | 1.047 | 11.00\% | 58.98\% | 9.72\% | 123.07\% | 8.35\% | 388.89\% | 8.26\% | 10/31/2013 |
| 11/30/2013 | 39547.7 | 0.45\% | 1.005 | 12.95\% | 67.64\% | 10.89\% | 121.32\% | 8.27\% | 398.95\% | 8.37\% | 11/30/2013 |
| 12/31/2013 | 40334.4 | 1.99\% | 1.020 | 12.99\% | 75.61\% | 11.92\% | 115.32\% | 7.97\% | 390.67\% | 8.28\% | 12/31/2013 |
| 1/31/2014 | 40663.6 | 0.82\% | 1.008 | 11.41\% | 82.45\% | 12.78\% | 109.22\% | 7.66\% | 369.00\% | 8.03\% | 1/31/2014 |
| 2/28/2014 | 42260.2 | 3.93\% | 1.039 | 14.34\% | 102.38\% | 15.14\% | 110.61\% | 7.73\% | 400.95\% | 8.39\% | 2/28/2014 |


| S\&P Composite TR Index Date | $\begin{gathered} \text { Index } \\ \text { PX_LAST } \\ \hline \end{gathered}$ | Monthly <br> Return (\%) | Product Return | $\begin{gathered} 1 \text { Year } \\ \text { Total Return } \end{gathered}$ | 5 Year Total Return | 5 Year <br> Annualized Return | 10 Year Total Return | 10 Year Annualized Return | 20 Year <br> Total Return | 20 Year Annualized Return | Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Percentile | 1\% |  | Minimum Maximum |  | $\begin{gathered} -9.20 \% \\ 240.44 \% \end{gathered}$ | $\begin{array}{r} \hline-1.91 \% \\ 27.76 \% \end{array}$ | $\begin{array}{r} 32.30 \% \\ 494.05 \% \end{array}$ | $\begin{array}{r} 2.84 \% \\ 19.50 \% \\ \hline \end{array}$ | $\begin{array}{r} 234.36 \% \\ 1308.36 \% \end{array}$ | $\begin{array}{r} \hline 6.22 \% \\ 14.14 \% \\ \hline \end{array}$ |  |
|  |  |  |  |  |  | 5 Year <br> Total Return | 5 Year Annualized Return |  |  |  |  |
|  | 5 Year | 10 Year | 20 Year |  |  | 10 Year -2.48\% | 10 Year ${ }^{-0.50 \%}$ |  |  |  |  |
|  | -0.5\% | 3.9\% | 6.6\% |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | Total Return | Annualized Return |  |  |  |  |
|  |  |  |  |  |  | 20 Year | 20 Year |  |  |  |  |
|  |  |  |  |  |  | Total Return | Annualized Retu |  |  |  |  |
|  |  |  |  |  |  | 259.5\% | 6.6\% |  |  |  |  |

## CAC (MPI) 1-151 Reference: Volume 2, Investment Income, II.5.3,

Preamble: Total Return Assumptions, pages 35. "The large impact over the rating years can be explained by the timing of rebalancing"

Please provide an explanation of what the Corporation means by rebalancing and provide a simplified illustrative example.

## RESPONSE:

Please see Volume II Investment Income, Section 10 on Rebalancing. This section describes the rebalancing rules for each asset class.

Here is a simplified example of rebalancing for Canadian equities. The market value of the Canadian equity portfolio is above the $18 \%$ total portfolio limit for two quarters. In the third quarter, the Canadian equity portfolio is rebalanced to the $15 \%$ target weight for the asset class, with the surplus funds transferred to the marketable bond portfolio.

## CAC (MPI) 1-152

## Reference: Volume 2, Investment Income, II.5.3,

Preamble: Total Return Assumptions, pages 36."For historical information, the rolling five year return for the Corporation's Canadian equity managers is shown in the chart below."
a) What insight, if any, does the Corporation suggest should be drawn from the rolling five year return for the Canadian equity managers?
b) Are there any unique factors within the most recent five years which would suggest that caution should be used in interpreting the results? If yes, please identify these factors.

## RESPONSE:

a) The five year rolling performance graph smoothes out performance data and minimizes end date sensitivity. The graph shows five year performance over an extended period beginning in May 2003 to February 2014 ( 130 months) and maps performance over bull and bear market cycles. There are several insights that can be drawn from the graph:

- Canadian equity performance is volatile and extreme in relation to the forecast expectation (of $7.3 \%$ ). Over the last 130 months, the five year performance ranged from a high of $20.1 \%$ to a low of $-1.0 \%$. The standard deviation of the returns was $5.2 \%$.
- Canadian equity performance rarely earns the forecast expectation of 7.3\%. Over the last 130 months, the asset class outperformed the forecasted return $58 \%$ of the time and underperformed the forecast $42 \%$ of the time.
- The periods of outperformance and underperformance relative to the forecast expectations can last for a long time.
- Currently, the five year annualized Canadian equity performance is close to its high (of $20.1 \%$ in October 2007), earning 17.8\% over the five years ended at February 2014.
b) Yes, there are unique factors within the most recent five years which would suggest that caution should be used in interpreting the results. The factors are:
- Over the last five years (February 2009 to February 2014) the Canadian equity asset class underperformed the forecast expectation for the majority of time. The reason is because the equity asset class was negatively affected by the financial crisis of 2008.
- The performance from October 2013 to February 2014 is well above the forecasted return and may not be repeated in the near future.


## CAC (MPI) 1-153 <br> Reference: Volume I SM. 4 Projected Financial Results page 3

Preamble: "The first three pages contain the base forecast that supports the application for a $2.4 \%$ rate increase and a $1 \%$ RSR rebuilding fee".
a) The first three pages containing the base forecast are not included in this section. Please file a copy of the base forecast (excluding the 2.4\% proposed rate increase and the proposed 1\% RSR rebuilding fee) including the Income Statement, Balance Sheet and Statement of Retained Earnings.
b) Should the 1\% RSR rebuilding fee be approved by the PUB:
(i) Please describe, by way of an example, how the resulting net income would be accounted for on the Income Statement and Statement of Retained Earnings.
(ii) Please elaborate when the proposed 1\% RSR rebuilding fee would be returned to the rate payers, should it be approved by the PUB.

## RESPONSE:

a) See PUB (MPI) 1-98.
b) All income generated in the year will flow through the income statement and into retained earnings. Unless the RSR reaches the upper limit, total income including the $1 \%$ fee will be transferred to the reserve which is shown separately on the statement of equity.

## CAC (MPI) 1-154 Reference: Volume II Pro Formas

Please prepare a summary Basic Insurance Income Statement and Retained Earnings Statement (historical and projected) for the fiscal years 2010/11A through 2018/19P (One spreadsheet for the Income Statement and one spreadsheet for the Retained Earnings Statement).

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-155 Reference: Volume II Pro Formas

Please prepare the following sets of financial statements (Pro Formas):
a) Increase rates by $1 \%$
b) Increase rates by $2 \%$
c) No rate increase but applying the MPI "risk based interest rate forecasting methodology"
d) No rate increase but increase the basic deductible from $\$ 500$ to $\$ 750$.

## RESPONSE:

a) Please refer to PUB (MPI) 1-4 c).
b) Please refer to attachment.
c) Please refer to attachment.
d) The Corporation does not consider changes to Basic coverage and territories as this is the exclusive purview of the Legislature of Manitoba through amendments to The Manitoba Public Insurance Corporation Act and regulations thereunder. The Corporation administers the universal compulsory automobile insurance plan and implements changes as legislated by government.

# Manitoba Public Insurance <br> Multi-year Statements <br> For the Years Ended February, 

2015/16 - 2.0\% Rate Incr ease
(C\$ 000s, except where noted)

BASIC
Motor Vehicles
Drivers
Reinsurance Ceded
Total Net Premiums Written

Net Premiums Ear ned
Motor Vehicles
Drivers
Reinsurance Ceded
Total Net Premiums Ear ned
Service Fees \& Other Revenues
Total Ear ned Revenues
Net Claims Incurred
Claims Ex pense
Road Safety/Loss Prevention
Total Claims Costs

| For the Years Ended February, |  |  |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: | ---: | :---: |
| $\mathbf{\underline { \mathbf { 2 0 1 4 A } }}$ | $\underline{\mathbf{2 0 1 5 F}}$ | $\underline{\mathbf{2 0 1 6 P}}$ | $\underline{\mathbf{2 0 1 7 P}}$ | $\underline{\mathbf{2 0 1 8 P}}$ | $\underline{\mathbf{2 0 1 9 P}}$ |  |
|  |  |  |  |  |  |  |
| 756,642 | 795,233 | 847,509 | 885,417 | 924,904 | 966,062 |  |
| 41,520 | 46,992 | 51,284 | 55,427 | 59,418 | 62,982 |  |
| $(13,422)$ | $(13,661)$ | $(13,934)$ | $(14,213)$ | $(14,497)$ | $(14,787)$ |  |
| $\mathbf{7 8 4 , 7 4 0}$ | $\mathbf{8 2 8 , 5 6 4}$ | $\mathbf{8 8 4 , 8 5 8}$ | $\mathbf{9 2 6 , 6 3 1}$ | $\mathbf{9 6 9 , 8 2 5}$ | $\mathbf{1 , 0 1 4 , 2 5 7}$ |  |


| 741,077 | 769,872 | 822,939 | 867,600 | 906,345 | 946,718 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 37,015 | 44,330 | 49,138 | 53,355 | 57,422 | 61,201 |
| $(13,422)$ | $(13,722)$ | $(13,934)$ | $(14,213)$ | $(14,497)$ | $(14,787)$ |
| 764,670 | 800,480 | 858,143 | 906,742 | 949,270 | 993,132 |
| 20,384 | 19,799 | 21,079 | 22,736 | 24,586 | 26,694 |
| 785,053 | 820,279 | 879,222 | 929,478 | 973,856 | $\mathbf{1 , 0 1 9 , 8 2 6}$ |
|  |  |  |  |  |  |
| 747,435 | 624,776 | 672,137 | 725,236 | 748,691 | 826,750 |
| 114,552 | 116,249 | 120,486 | 126,010 | 127,314 | 138,319 |
| 12,816 | 11,350 | 10,514 | 10,564 | 10,606 | 10,648 |
| $\mathbf{8 7 4 , 8 0 3}$ | 752,376 | 803,137 | $\mathbf{8 6 1 , 8 1 0}$ | $\mathbf{8 8 6}, 610$ | $\mathbf{9 7 5 , 7 1 7}$ |

## Expenses

Operating
Commissions
Premium Tax es
Regulatory/Appea
Total Expenses

Underwriting Income (Loss)
Investment Income

Net Income (Loss) from Operations

| 67,982 | 73,568 | 74,791 | 79,063 | 81,043 | 87,298 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 32,057 | 33,496 | 34,007 | 35,573 | 37,036 | 38,559 |
| 23,342 | 24,426 | 26,162 | 27,629 | 28,913 | 30,238 |
| 3,766 | 3,261 | 3,314 | 3,380 | 3,447 | 3,516 |
| $\mathbf{1 2 7 , 1 4 7}$ | $\mathbf{1 3 4 , 7 5 1}$ | $\mathbf{1 3 8 , 2 7 4}$ | $\mathbf{1 4 5 , 6 4 5}$ | $\mathbf{1 5 0 , 4 3 8}$ | $\mathbf{1 5 9 , 6 1 0}$ |
|  |  |  |  |  |  |
| $\mathbf{( 2 1 6 , 8 9 7 )}$ | $\mathbf{( 6 6 , 8 4 8 )}$ | $\mathbf{( 6 2 , 1 8 9 )}$ | $\mathbf{( 7 7 , 9 7 6 )}$ | $\mathbf{( 6 3 , 1 9 2 )}$ | $\mathbf{( 1 1 5 , 5 0 1 )}$ |
|  |  |  |  |  |  |
| $\mathbf{1 4 7 , 7 3 5}$ | $\mathbf{2 8 , 8 0 7}$ | 49,899 | 84,769 | 76,668 | 126,278 |
|  |  |  |  |  |  |
| $\mathbf{( 6 9 , 1 6 2 )}$ | $\mathbf{( 3 8 , 0 4 2 )}$ | $\mathbf{( 1 2 , 2 9 1 )}$ | $\mathbf{6 , 7 9 3}$ | $\mathbf{1 3 , 4 7 6}$ | $\mathbf{1 0 , 7 7 7}$ |

Manitoba Public Insurance

## Manitoba Public Insurance <br> Multi-year Statements - Balance Sheet

## 2015/16-2.0\% Rate Increase

(C\$ 000s, except where noted)

## BASIC

Assets
Cash and investments
Equity investments
Investment property
Due from other insurance companies
Accounts receivable
Prepaid expenses
Deferred policy acquisition costs
Reinsurers' share of unearned premiums
Reinsurers' share of unearned claims
Property and equipment
Deferred development costs

| $1,424,341$ | $1,309,922$ | $1,251,014$ | $1,333,771$ | $1,358,001$ | $1,450,531$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 600,483 | 619,956 | 698,517 | 670,073 | 710,663 | 727,331 |
| 32,226 | 31,192 | 30,900 | 30,622 | 30,374 | 30,194 |
| 1,755 | - | - | - | - | - |
| 235,616 | 249,289 | 263,894 | 275,021 | 286,494 | 298,296 |
| 731 | 568 | 568 | 568 | 568 | 568 |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| 17,625 | - | - | - | - | - |
| 80,108 | 85,033 | 85,517 | 83,746 | 82,549 | 80,948 |
| 54,685 | 70,701 | 81,714 | 86,063 | 90,579 | 77,606 |
| $2,447,570$ | $2,366,661$ | $2,412,123$ | $2,479,862$ | $2,559,227$ | $2,665,474$ |

## Liabilities

| Due to other insurance companies |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Accounts payable and accrued liabilites | 1,213 | 1,596 | 1,596 | 1,596 | 1,596 | 1,596 |  |
| Financing lease obligation | 35,769 | 35,673 | 37,763 | 39,356 | 40,997 | 42,686 |  |
| Unearned premiums and fees | 2,841 | 3,079 | 3,020 | 2,956 | 2,887 | 2,814 |  |
| Provision for employee current benefits | 402,982 | 438,580 | 468,518 | 491,883 | 516,188 | 541,360 |  |
| Provision for employee future benefits | 15,389 | 16,544 | 17,653 | 18,782 | 19,931 | 21,103 |  |
| Provision for unpaid claims | 235,172 | 249,058 | 262,114 | 276,474 | 291,389 | 306,958 |  |
|  | $1,584,042$ | $1,489,392$ | $1,494,005$ | $1,520,011$ | $1,535,326$ | $1,592,538$ |  |
|  |  |  |  |  |  |  |  |

# Manitoba Public Insurance <br> Statement of Retained Earnings 

2015/16-2.0\% Rate Increase
(C\$ 000s, except where noted)

RATE STABILIZATION RESERVE (RSR)


Basic Insurance Rate Stabilization Reserve

| Beginning Balance | 149,800 | 99,878 | 61,836 | 49,546 | 56,339 | 69,815 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Transfer from(to) Basic Retained Earnings | $(49,922)$ | $(38,042)$ | $(12,291)$ | 6,793 | 13,476 | 10,777 |
| Ending Balance | 99,878 | 61,836 | 49,546 | 56,339 | 69,815 | 80,592 |
| MinimumRSR based on PUB rules | 78,500 | 82,900 | 88,500 | 92,700 | 97,000 | 101,500 |
| Maximum RSR based on PUB rules | 156,900 | 165,600 | 176,800 | 185,100 | 193,700 | 202,600 |
| MPI RSR Target | 172,000 | 194,000 | 194,000 | 194,000 | 194,000 | 194,000 |

## Retained Earnings

Beginning Balance
Net Income (Loss) fromannual operations
Retained Earnings Prior to Transfers
Transfer from(to) Rate Stabilization Reserve
Balance of Fund

| 19,240 | - | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $(69,162)$ | $(38,042)$ | $(12,291)$ | 6,793 | 13,476 | 10,777 |
| $(49,922)$ | $(38,042)$ | $(12,291)$ | 6,793 | 13,476 | 10,777 |
| 49,922 | 38,042 | 12,291 | $(6,793)$ | $(13,476)$ | $(10,777)$ |

Balance of Fund

| - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: |

TotalBasic Retained Earnings

| $\$$ | 99,878 | $\$$ | 61,836 | $\$$ | 49,546 | $\$$ | 56,339 | $\$$ | 69,815 | $\$$ | 80,592 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Manitoba Public Insurance<br>Multi-year Statements<br>For the Years Ended February,

2015/16-0\% Rate Incr ease with risk based inter est rate for ec asting methodology
(C\$ 000s, except where noted)

BASIC
Motor Vehicles
Drivers
Reinsurance Ceded
Total Net Premiums Wr itten

| Net Premiums Ear ned |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Motor Vehicles | 741,077 | 769,872 | 814,090 | 850,513 | 888,508 | 928,097 |
| Drivers | 37,015 | 44,330 | 49,138 | 53,355 | 57,422 | 61,201 |
| Reinsurance Ceded | $(13,422)$ | $(13,722)$ | $(13,934)$ | $(14,213)$ | $(14,497)$ | $(14,787)$ |
| Total Net Premiums Ear ned | 764,670 | 800,480 | 849,293 | 889,656 | 931,433 | 974,511 |
| Service Fees \& Other Revenues | 20,384 | 19,799 | 21,079 | 22,622 | 24,463 | 26,561 |
| Total Earned Revenues | 785,053 | 820,279 | 870,372 | 912,278 | 955,896 | 1,001,072 |
| Net Claims Incurred | 747,435 | 662,618 | 693,022 | 740,128 | 767,358 | 822,745 |
| Claims Ex pense | 114,552 | 116,249 | 120,612 | 126,258 | 127,687 | 138,715 |
| Road Safety/Loss Prevention | 12,816 | 11,350 | 10,525 | 10,587 | 10,640 | 10,683 |
| Total Claims Costs | 874,803 | 790,217 | 824,159 | 876,972 | 905,685 | 972,143 |
| Expenses |  |  |  |  |  |  |
| Operating | 67,982 | 73,568 | 74,861 | 79,207 | 81,264 | 87,526 |
| Commissions | 32,057 | 33,496 | 33,772 | 35,016 | 36,455 | 37,952 |
| Premium Taxes | 23,342 | 24,426 | 25,897 | 27,116 | 28,378 | 29,679 |
| Regulatory/Appeal | 3,766 | 3,261 | 3,315 | 3,380 | 3,447 | 3,516 |
| Total Expenses | 127,147 | 134,751 | 137,844 | 144,719 | 149,544 | 158,673 |
| Underwriting Income (Loss) | $(216,897)$ | $(104,690)$ | $(91,631)$ | $(109,413)$ | $(99,332)$ | $(129,744)$ |
| Investment Income | 147,735 | 50,025 | 60,422 | 86,321 | 76,620 | 107,264 |
| Net Income (Loss) from Operations | $(69,162)$ | $(54,665)$ | $(31,209)$ | $(23,092)$ | $(22,713)$ | $(22,480)$ |

# Manitoba Public Insurance <br> Multi-year Statements - Balance Sheet 

2015/16-0\% Rate Increase with risk based interest rate forecasting methodology
(C\$ 000s, except where noted)

## BASIC

Assets
Cash and investments
Equity investments
Investment property
Due from other insurance companies

Accounts receivable
Prepaid expenses
Deferred policy acquisition costs
Reinsurers' share of unearned premiums
Reinsurers' share of unearned claims
Property and equipment
Deferred development costs

## Liabilities

Due to other insurance companies
Accounts payable and accrued liabilites
Financing lease obligation
Unearned premiums and fees
Provision for employee current benefits
Provision for employee future benefits
Provision for unpaid claims

Equity

| 1,213 | 1,596 | 1,596 | 1,596 | 1,596 | 1,596 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 35,769 | 35,673 | 37,193 | 38,760 | 40,376 | 42,037 |
| 2,841 | 3,079 | 3,020 | 2,956 | 2,887 | 2,814 |
| 402,982 | 438,580 | 460,670 | 483,690 | 507,635 | 532,431 |
| 15,389 | 16,544 | 17,653 | 18,782 | 19,931 | 21,103 |
| 235,172 | 249,058 | 262,114 | 276,474 | 291,389 | 306,958 |
| $1,584,042$ | $1,527,234$ | $1,552,731$ | $1,593,629$ | $1,627,612$ | $1,680,818$ |
| $2,277,408$ | $2,271,765$ | $2,334,977$ | $2,415,887$ | $2,491,426$ | $2,587,758$ |

Retained earnings
Basic Insurance Retained Earnings
Rate Stabilization Reserve
Retained Earnings
Information Technology Optimization Fund

Accumulated Other Comprehensive Income
Total Equity

| 2014A |  |  |  |  |  |  | $\underline{\text { 2015P }}$ | $\underline{\text { 2016P }}$ | $\underline{\text { 2017P }}$ | $\underline{\text { 2018P }}$ | $\underline{\text { 2019P }}$ |
| ---: | ---: | ---: | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| $1,424,341$ | $1,330,940$ | $1,270,810$ | $1,340,727$ | $1,348,900$ | $1,418,253$ |  |  |  |  |  |  |
| 600,483 | 620,147 | 697,518 | 666,460 | 705,442 | 707,318 |  |  |  |  |  |  |
| 32,226 | 31,201 | 30,856 | 30,525 | 30,218 | 29,964 |  |  |  |  |  |  |
| 1,755 | - | - | - | - | - |  |  |  |  |  |  |
| 235,616 | 249,289 | 259,908 | 270,859 | 282,150 | 293,761 |  |  |  |  |  |  |
| 731 | 568 | 568 | 568 | 568 | 568 |  |  |  |  |  |  |
| - | - | - | - | - | - |  |  |  |  |  |  |
| - | - | - | - | - | - |  |  |  |  |  |  |
| 17,625 | - | - | - | - | - |  |  |  |  |  |  |
| 80,108 | 85,033 | 85,517 | 83,746 | 82,549 | 80,948 |  |  |  |  |  |  |
| 54,685 | 70,701 | 81,714 | 86,063 | 90,579 | 77,606 |  |  |  |  |  |  |
| $2,447,570$ | $2,387,880$ | $2,426,890$ | $2,478,949$ | $2,540,406$ | $2,608,418$ |  |  |  |  |  |  |

## Manitoba Public Insurance <br> Statement of Retained Earnings

2015/16-0\% Rate Increase with risk based interest rate forecasting methodology
(C\$ 000s, except where noted)
RATE STABILIZATION RESERVE (RSR)

Basic Insurance Rate Stabilization Reserve

| Beginning Balance | 149,800 | 99,878 | 45,213 | 14,004 | $(9,088)$ | $(31,800)$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Transfer from (to) Basic Retained Earnings | $(49,922)$ | $(54,665)$ | $(31,209)$ | $(23,092)$ | $(22,713)$ | $(22,480)$ |
|  |  |  |  |  |  |  |
| Ending Balance | $\mathbf{9 9 , 8 7 8}$ | $\mathbf{4 5 , 2 1 3}$ | $\mathbf{1 4 , 0 0 4}$ | $\mathbf{( 9 , 0 8 8 )}$ | $\mathbf{( 3 1 , 8 0 0 )}$ | $\mathbf{( 5 4 , 2 8 1 )}$ |
|  |  |  |  |  |  |  |
| Minimum RSR based on PUB rules | 78,500 | 82,900 | 86,900 | 91,000 | 95,300 | 99,700 |
| Maximum RSR based on PUB rules | 156,900 | 165,600 | 173,500 | 181,700 | 190,200 | 198,900 |
| MPI RSR Target | 172,000 | 194,000 | 194,000 | 194,000 | 194,000 | 194,000 |

## Retained Earnings

Beginning Balance
Net Income (Loss) from annual operations
Retained Earnings Prior to Transfers
Transfer from (to) Rate Stabilization Reserve
Balance of Fund

| 19,240 | - | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $(69,162)$ | $(54,665)$ | $(31,209)$ | $(23,092)$ | $(22,713)$ | $(22,480)$ |
| $(49,922)$ | $(54,665)$ | $(31,209)$ | $(23,092)$ | $(22,713)$ | $(22,480)$ |
| 49,922 | 54,665 | 31,209 | 23,092 | 22,713 | 22,480 |

Balance of Fund

TotalBasic Retained Earnings

| $\$$ | 99,878 | $\$$ | 45,213 | $\$$ | 14,004 | $\$$ | $(9,088)$ | $\$$ | $(31,800)$ | $\$$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## CAC (MPI) 1-156

Reference: Volume II Pro Formas

Please prepare a Pro Forma Income Statement and Statement of Retained Earnings for 2016 and 2017 accounting for the 2.4\% rate increase and the 1\% RSR rebuild fee separately. For example, the headings for the 2016 Income Statement would be as follows:

| Income Statement <br> 2016P |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Base (0\% rate <br> change) | 2.4\% rate <br> change | 1\% RSR <br> rebuild fee | Total |
| Basic |  |  |  |  |
| Motor Vehicles |  |  |  |  |
| Etc. |  |  |  |  |

## RESPONSE:

Please refer to PUB (MPI) 1-4 a).

## CAC (MPI) 1-157 Reference: Volume II Pro Formas Balance Sheet page 4.

a) Please explain and provide the rationale for the following:
(i) There are no values from 2015P to 2019P for Due from other insurance companies.
(ii) There are no values from 2014A to 2019P for deferred policy acquisition costs.
(iii) There are no values from 2014A to 2019P for Reinsurers' share of unearned claims.
(iv) There are no values from 2015P to 2019P for Reinsurers' share of unearned (unpaid) claims.
b) The Provision for unpaid claims decreased by $\$ 94,650,000$ from 2014A of $\$ 1,584,042,000$ to $\$ 1,489,392,000$ projected for 2015P. Please provide the reasons for this decrease.

## RESPONSE:

a) (i) Amounts due from other insurance companies arise from losses that have been reinsured and the paid losses exceed the retention limit. Reinsured losses are large natural catastrophes (e.g. hail event) or severe accidents with large bodily injury losses. As per page 43 of Volume II, Claims Incurred, section CI.5, the Corporation forecasts hail losses based on the historical claims incurred net of reinsurance recoveries and then charges customers the cost of the catastrophe reinsurance premiums as part of the Basic rate. For casualty reinsurance, the Corporation's $\$ 5$ million retention makes it highly unlikely that paid losses from such claims will exceed retention. Older casualty treaty years have been commuted or will be by year end 2016.
(ii) Deferrals of policy acquisition expenses were not included in the forecast because this treatment of expenses is not compatible with rate level assessments. Similarly, premium deficiencies were also excluded.
(iii) The reinsurance treaties are coincident with the Corporation's fiscal year. Therefore, all reinsured written premium is earned during the fiscal year.
(iv) Automobile liability claims are most likely to result in ceded reserves. As mentioned in the answer to (i), reinsurance retention limits increased in 2006 to $\$ 5$ million for casualty treaties. There is a very low likelihood that the total incurred losses for any one claim will exceed $\$ 5$ million. The Corporation recently commuted treaty years 1995 to 2002, so the ceded reserves for these years have been extinguished. The Corporation plans to commute treaty years 2003 and 2004 before the end of fiscal year 2015. This would leave only 2005 to be commuted by year end 2016.
b) The reduction in unpaid claims is primarily the result of the forecasted increase in interest rates. The claims discount rate is derived from the yields on fixed income securities. When these yields increase, the claims discount rate increases and reduces the present value of the claims liabilities.

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## CAC (MPI) 1-158

Reference: Application section page 3

Preamble: On page 3 of the Application section it states that "A range above the recommended minimum RSR target (based on the minimum DCAT amount) with the upper range based on a $100 \%$ MCT value" is requested. Reliance on the MCT to set the RSR is a change from the recommendation in the 2014 rate application.

Please give the Corporations rationale for the change this year.

## RESPONSE:

The Corporation's rationale for this change is described in detail in the Minimum Capital section of Volume II Rate Stabilization Reserve, RSR.1, pages 9 to 11.

## CAC (MPI) 1-159 Reference: MCT and DCAT

Please advise if there any revisions to the Minimum Capital Test and Dynamic Capital Adequacy Test guidelines in 2013/14. If there are any revisions please file a copy of the updated guideline(s) and explain the financial impact of these revisions relative to basic insurance.

## RESPONSE:

There were no changes to the Minimum Capital Test (MCT) for the February 2014 year end. The latest MCT guidelines were for year ends ending after January 1, 2013 and have remained in effect during 2014. Please refer to the Office of the Superintendent of Financial Institutions (OSFI) website for guidelines.

There were no changes to the Dynamic Capital Adequacy Testing (DCAT) guidelines that materially impacted the Basic DCAT report. The Canadian Actuarial Standards of Practice and the latest guidance material on DCAT reports are available on the Canadian Institute of Actuaries website at http://www.cia-ica.ca/publications.

## CAC (MPI) 1-160

## Reference: RSR. 1 page 3

a) The Corporation is suggesting that the RSR target be $\$ 194$ million in retained earnings based on the DCAT with a maximum RSR target equal to the MCT ratio of $100 \%$, which is $\$ 323$ million.
(i) This suggests that the Corporation is asking that no rebates be approved by the PUB until the RSR is over $\$ 323$ million. Please confirm this.
(ii) Given that the corporation is a Crown Corporation with the backing of the Provincial Government and given that it is a monopoly that can raise its rates if a once in 40 year event does occur, please explain that it is appropriate that the corporation hold between $\$ 194$ and $\$ 323$ million of the Manitoba taxpayers money to protect itself from this rare event. If yes, please explain.
b) With reference to page 27 of the DCAT report the Corporation has "assumed that the maximum combined rate increase and/or additional RSR rebuilding fee in a given rate application is $5.0 \%{ }^{\prime \prime}$
(i) Has the question been put before the Board what the maximum rate increase would be if the most adverse 1 in 20 year event did, in fact, occur? If so, please give a reference for this discussion. If not, why not?
c) With reference to page 42 of the 2014 DCAT report the Corporation is suggesting interest rate decline scenarios based on historical data from 1956 to present. An inflation-control target was adopted by the Bank and the Government of Canada in 1991 and has been renewed five times since then, most recently in November 2011 for the five years to the end of 2016. The target aims to keep total CPI inflation at the 2 per cent midpoint of a target range of 1 to 3 per cent over the medium term. The Bank raises or lowers its policy interest rate as appropriate, in order to achieve the target.
(i) Given this information how does the Corporation justify using data from 1956 to present to determine the 1 in 40 year interest rate decline scenarios?
(ii) Would the data from 1992 to present not be a more accurate representation of the possibilities going forward?
d) With reference to page 26 of the 2014 DCAT report:
(i) Please provide the tables given on this page at a 1 in 20 year probability level for the adverse events.
(ii) Please provide the tables given assuming a $10 \%$ rate increase in rates was approved for the 2016/17 year.
e) With reference to page 48 of the 2014 DCAT report it states that "Our simulation assumes that undiscounted claims are independent of interest rate and equity returns." Would it not be more appropriate to assume that inflation changes would be correlated with interest rate changes and that these inflation rate changes would impact undiscounted claims?
f) In regards to the Combined Scenario described on page 48 of the 2014 DCAT report
(i) Please give justification for the selection of this particular scenario.
(ii) Was research done into standard actuarial practice across the Canadian P\&C industry to determine what other companies use as their Combined Scenario in the DCAT report? If so, please provide this research. If not, why not?
g) In regards to the Decline in Equity Markets scenario described on page 29 of the 2014 DCAT report:

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(i) Would the Corporation agree that after a drop in the equity market there is a rebound within two years following the drop? If so, has this been considered and modeled? If not, please provide justification for the disagreement.

## RESPONSE:

a) Part (i):

The Corporation is proposing that (i) the Board approve the DCAT indication as the minimum capital target and (ii) the Board approve the $100 \%$ MCT as an upper target. The proposed capital 'range' was selected to be large enough for the Basic program to withstand a reasonable level of volatility (i.e. rate stability) without constantly falling below or above the established range. Also, the upper 100\% MCT target was proposed by the Corporation because it is a highly objective measure that the Board can utilize for comparing Basic capital requirements to other Canadian P\&C insurers and Crown Corporation insurers. The Corporation would not anticipate applying for a rebate if the actual RSR balance was between the lower and upper target.

## Part (ii)

The Corporation has worked collaboratively with the Board and the Consumers Association of Canada (CAC) to develop a risk-based minimum capital target (i.e. the DCAT) that is appropriate for the Manitoba Public Insurance Basic compulsory line of business. The CAC has had the opportunity to be an active part of this process at both the rate hearings and the DCAT Technical Conference. Over the past several years, the Corporation has revised its DCAT report to make the financial modeling, adverse scenarios, risk tolerance levels, and assumed management and regulatory actions to be as realistic as possible. In some cases, the Corporation has utilized direct recommendations from the CAC advisors (e.g. equity decline scenario assumptions). The CAC is also aware that the current and past DCAT based capital targets are much lower than those utilized by other public insurers like Saskatchewan Government Insurance (SGI) or the Insurance

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Corporation of British Columbia (ICBC), whom both use an MCT based target, and significantly lower than the capital target used by private insurance companies.

It is the Corporation's opinion that the DCAT report reflects the appropriate minimum capital amount for the Basic program. The recommended capital range is required to provide rate stability to Manitobans and operate the Corporation in a fiscally responsible manner.
b) The Corporation did not have direct discussions with the Board on this specific topic. The assumptions used by the Chief Actuary were based on historical Board Orders and discussions with MPI Management. However, the 2013 DCAT made similar assumptions on the level of management and regulatory action (e.g. maximum RSR rebuilding fee of $2.0 \%$ was used), which was discussed at the 2013 hearings.
c) Part (i):

One of the purposes of DCAT is to identify plausible threats to satisfactory financial condition. Twenty-two years of data from 1992 to 2013 is not a significant period of time. While inflation has remained mostly within the 1 to 3 percent bandwidth, it is not out of the realm of plausibility that severe global economic shocks due to an energy crisis or war could cause shocks to inflation, interest rates and/or equity returns.

The period from 1956 to present was chosen in order to match the same data period as the equity decline scenario. This time period from 1956 to present was based on conversations at the April 2013 DCAT technical conference.

Part (ii):
No. Please see part i) of this question for further explanation.
d) Part (i) The requested information is available in the tables supporting each individual DCAT scenario

Part (ii) The Corporation does not understand the rationale for the request, how a $10 \%$ rate increase would be considered a plausible management or regulatory action, or how the request meets the stated purpose of the RSR? If the DCAT report were to assume that a $10 \%$ rate increase was appropriate every time a significant financial event occurred, then clearly the indicated DCAT target would decrease. The purpose of the DCAT scenarios is to assess the financial outcomes from plausible adverse scenarios and plausible management and regulatory action.
e) We have assumed that the forecasted long term rate of inflation (used to calculate the long term real discount rate) would remain constant regardless of short term inflation variability.
f) Part (i): The justification for the Combined Scenario, along with all the individual adverse scenarios that make-up the Combined Scenario, are provided in detail in the DCAT report (RSR.2).

Part (ii): DCAT reports from other insurers are generally confidential. However, as part of the collaborative DCAT review process the Corporation would be open to reviewing any DCAT reports that are available to the PUB Actuary and the CAC Actuary if they are not confidential.

The Corporation has internal experts that have a deep understanding of the risks facing the Basic program and who are committed to operating the Basic program in a fiscally responsive manner on behalf of the ratepayers of Manitoba. The Corporation has openly shared the methods used by these experts in the modeling of the base scenario and DCAT adverse scenarios and has openly accepted feedback from the PUB and CAC on how to improve these methods.
g) Yes. The modeling of the equity decline scenarios over multi-year periods (including 'rebounds' after a significant equity decline) are clearly described in the DCAT report.

## CAC (MPI) 1-161 Reference: 2014 DCAT Report June 27, p. 13

Preamble: "The loss was caused mainly from net claims incurred, which was $\$ 104$ million over budget. A summary of the main impacts are as follows:

Adverse winter driving conditions resulted in approximately $3.0 \%$ more collision and property damage claims than expected in the forecast. Impact = (\$16 million).

Physical damage claims severity increased by $10 \%$ over the previous year mainly as a result of (i) new labour and material agreements with body shops, (ii) the 1\% Provincial Sales Tax increase, (iii) and higher total loss settlement values. Impact = (\$24 million).

A comprehensive review of existing injury claims that resulted in a significant increase in loss reserves for prior years' claims. Impact (net of interest rate adjustments) = (\$26 million). . ."
a) Please explain whether the "comprehensive review of existing injury claims" is a regular (e.g. annual) occurrence.
b) In terms of the high-loss scenario, what specific items on p. 13 are considered. In particular, is the item related to the "comprehensive review of existing injury claims" considered?
c) In view of the fact that the winter weather of 2013-14 was the worst (coldest) on record in a century, how does the claims loss compare to historical claims losses in terms of the high-loss scenario, i.e. is it a 1 -in-100 year for claims losses?

## RESPONSE:

a) The comprehensive review of existing injury claims was completed as a result of a particular issue identified in the October 2012 Appointed Actuary's report.

Therefore, updating all injury claims in this manner, along with the magnitude of this adjustment, are not considered a regular occurrence. The Injury Claims Management division has rectified this issue and going forward all case reserves will be maintained based on established reserving guidelines.
b) The high loss ratio scenario simulation can be considered a simulation of the variability of projected ultimate claims cost around the best estimate forecast based on the historical variability of Basic claims. This simulation would not predict any operational risks to claims costs (e.g. systems, processes, etc). Such operational risks are an example of risk factors that are 'not easily quantifiable' (per page 14, recommendation \#3 of the 2014 DCAT report).
c) Per page 36 of Volume II Claims Incurred, section CI.4, ultimate collision costs in 2013/14 are estimated to be $\$ 31.6$ million (or $+10.0 \%$ ) over budget. Per the stochastic modeling results in the DCAT report (pages 74 and 75); the Corporation's modeling predicts that the $95^{\text {th }}$ percentile of ultimate collision claims in a given year is approximately $10.6 \%$ higher than the $50^{\text {th }}$ percentile. Therefore, the Corporation estimates that the observed collision experience would occur about 1 in every 20 years, or $5 \%$ of the time.

## CAC (MPI) 1-162

Reference: 2014 DCAT Report
June 27, p.14,
Recommendations

Preamble: "If there is a significant increase in projected claims costs, management should be prepared to increase rates as quickly as possible"
a) Please explain how this recommendation provides a role for the RSR to stabilize rates
b) Please explain how a "significant increase in projected claims costs" would be determined. In particular, what data and methodology would be used to distinguish between trend growth in real (above inflation) claims costs and fluctuations about this trend (volatility)?

## RESPONSE:

a) By reacting quickly to an increase in projected claims costs, the Corporation can:

- Limit the impact to the RSR from inadequate rates
- Prevent relatively minor increases in rates from accumulating into more significant rate increases.
b) The Corporation would continue to update its best estimate claims forecast every year as part of the GRA. The Corporation would employ the same techniques as it does today to determine whether a significant increase in claims costs is a permanent increase or simply variation around the historical trend line. For example, the significant increase in collision frequency in 2013/14 was determined to not be a permanent increase based on the behaviour of the nonwinter collision frequency (which was below budget).

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## CAC (MPI) 1-163

Reference: 2014 DCAT Report June 27, p. 26

Preamble: "A summary of the projected Retained Earnings, Total Equity, and MCT scores for the selected plausible adverse scenarios (including management and regulatory action) are shown in the table below. The adverse scenarios listed below are considered to have the most significant financial impact to the Corporation's financial position."
a) Please explain what risk tolerance level ( $1 \%, 2.5 \%$ or $5 \%$ ) was used for these calculations.
b) What criteria for a monopoly crown corporation have been used to select this risk tolerance level as the most appropriate to present here?

## RESPONSE:

a) $2.5 \%$ (or $1-\mathrm{in}-40$ ).
b) The risk tolerance level was judgmentally selected by the Corporation's Chief Actuary. It is the Chief Actuary's opinion that the 1-in-40 risk tolerance is appropriate for a monopoly public automobile insurer, especially given that the Basic DCAT report already considers the unique management and regulatory action options available for the Basic program. It is also evident that the selected risk tolerance level is lower than that used by other insurers, as the proposed DCAT minimum target ranks significantly below the results produced based on a $100 \%$ MCT score (which is the basis for the minimum capital targets of other P\&C insurers in Canada, including SGI and ICBC).

The DCAT report also provides results at multiple risk tolerance levels in order for the Board to be informed on the results at various tolerance levels.

## CAC (MPI) 1-164

Reference: 2014 DCAT Report
June 27, pp.29-30

Preamble: "Based on the historical results above, the Corporation's selected equity decline scenarios are based on fitted distributions that best represent the historical data. The assumptions are shown as total return in the table [Selected Adverse

Scenarios by Percentile and Return Period (Cumulative)] below."
a) Would MPI agree that these results are evidence that 1 and 2 year equity declines are followed by recovery in equity values, or rebound, in years 3 and 4?
b) Is the rebound behavior of equities after declines of 1 or 2 years analyzed and incorporated into the high-loss and combined adverse scenarios?

## RESPONSE:

a) Yes. The Chief Actuary has recognized that this relationship exists and clearly states this assumption in the DCAT report:

Page 31: The highlighted cells indicate where the base forecast equity assumptions were used. We've identified these cells because the historical data indicates that equity returns are not independent from year-to-year (especially after large declines), and therefore, these results may not be plausible beyond the return period tested. The highlighted results are for information only and will not be used in the selection of the most adverse equity decline scenario.
b) Yes, the purpose of modeling separate distributions for 1, 2, 3, and 4 year cumulative equity returns is to specifically address the issue that year-to-year equity returns are not independent.

## CAC (MPI) 1-165 <br> Reference: 2014 DCAT Report June 27, p. 30

Preamble: "In calendar year 2008 and 2009, the Canadian equity turnover ratio was $31 \%$ and $16 \%$ respectively based on the current composition of the Canadian equity managers. The base Canadian equity turnover ratio was $20 \%$, which was based on the 5 year average of the turnover ratio. Therefore, for DCAT modeling purposes, it is assumed that Canadian equity unrealized gains/losses are realized at 20\% per year."
a) Please explain whether MPI has investigated the factors that determine the substantial variation in equity turnover over time.
b) Please explain whether MPI has investigated the role of market values in determining equity turnover. In particular, is there a positive statistical relationship between movements in equity values and equity turnover such that periods of equity decline are associated with lower equity turnover (i.e. lower than 20\% per year)?

## RESPONSE:

a) Yes, the Corporation is aware of the factors that can determine the variation in equity turnover. Manager A, B, and C's annual turnover ratios were within +/0.16 around the average 0.20 Canadian equity turnover ratio with two exceptions in 2013. The Corporation is aware of the factors that caused the turnover to be higher for these two exceptions.
b) There are not enough data points with the Corporation's managers to determine if there is a positive statistical relationship between movements in equity values and equity turnover. The five year average turnover used takes into account the equity decline in 2009. As shown at the bottom on Table 5.6.1 of Volume II Investment Income, the seven year average turnover of $22.5 \%$ includes the
decline in 2008, and the seven year average is not significantly different than the five year average.

## CAC (MPI) 1-166 Reference: 2014 DCAT Report June 27, p. 31

Preamble: "The highlighted cells indicate where the base forecast equity assumptions were used. We've identified these cells because the historical data indicates that equity returns are not independent from year-to-year (especially after large declines), and therefore, these results may not be plausible beyond the return period tested."
a) Please explain whether this statement refers to the rebound behavior of equity values after large declines.
b) Please explain whether this rebound behavior has been captured in the equity decline and combined scenarios.

## RESPONSE:

a) Yes, the statement refers to this behaviour. See CAC (MPI) 1-164.
b) Yes, this behaviour has been captured in these scenarios. See CAC (MPI) 1-164.

## CAC (MPI) 1-167

Reference: 2014 DCAT Report
June 27, pp.32-33

Preamble: "We selected the two year equity decline scenario to run through the financial model. The results for this scenario are shown in the table below and in Exhibit 2a to 2g."
a) Please explain what is assumed about the recovery (rebound) of equity values in years 3 and 4 in this scenario.
b) Please explain how the assumed behavior of equity values in years 3 and 4 is determined with respect to the historical data on equity declines over 3 and 4 years.

## RESPONSE:

a) The base scenario total equity return assumptions are used in years 3 and 4 of this scenario, which is why the report indicates that the results should not be used beyond the first two years. The Chief Actuary must determine the most significant plausible adverse events at all stages of the Corporation's forecast period.
b) The assumed behaviour of equities for 3 and 4 year periods is modeled based on the historical results of the cumulative equity return over 3 and 4 year periods. This information is provided in the scenario justification for the Equity Decline scenario of the DCAT report (Volume II RSR. 2 pages 29-30)

## CAC (MPI) 1-168

Reference: 2014 DCAT Report June 27, pp. 49

Preamble: "The correlation metrics from 1956-to-present and from 2004-to-present are provided below. [Correlation between Equity Returns and Interest Rate Movements]"

Please explain whether the correlations in this table are statistically significantly different from zero.

## RESPONSE:

Correlation between Equity Returns and Interest Rate Movements

|  | $\mathbf{2 0 0 4}$ to Present | $\mathbf{1 9 5 6}$ to Present |
| :---: | :---: | :---: |
| $1-$ Year | $\mathbf{0 . 2 8}$ | $\mathbf{- 0 . 1 2}$ |
| $2-$ Year | 0.09 | 0.03 |
| $3-$ Year | $\mathbf{- 0 . 2 3}$ | 0.04 |
| $4-$ Year | -0.13 | 0.05 |

Correlation coefficients in bold are statistically significantly different from 0 with an assumed Type 1 error of 0.05 .

## CAC (MPI) 1-169

## Reference: 2014 DCAT Report June 27, p. 60 (Appendix A: Stochastic Modeling)

Preamble: "In Board Order 122/10 the Public Utilities Board ordered the following: 'MPI shall use stochastic modeling of claims incurred for rate-setting purposes'."
a) Would MPI agree that stochastic modeling can also be extended to the assessment of the adequacy of a given RSR and would be a useful tool in this regard
b) Please indicate if any steps have been taken to use stochastic modeling to simulate a probability distribution for retained earnings under specified adverse conditions as the basis for assessing the adequacy of specified levels of the RSR in probabilistic terms.

## RESPONSE:

(a) and (b)

The description in part (b) is essentially the purpose of the DCAT report. See Volume II RSR, section RSR. 2 for the simulated probability distributions of retained earnings and total equity under specified adverse conditions at selected probability levels. The DCAT analysis is used to assess the adequacy of the RSR, which results in the minimum capital recommendations presented in the report.

## CAC (MPI) 1-170

Reference: 2014 DCAT Report June 27, p. 61

Preamble: "Stochastic modeling of claims incurred cannot be used 'for rate setting purposes' as the Corporation still requires a fixed best estimate forecast for setting rates.."

Please explain how the "fixed best estimate" would differ from the mean of the claims incurred probability distribution determined in the process of stochastic modeling.

## RESPONSE:

Regardless of how the forecast is calculated (e.g., stochastic model, five year average, judgment), the Corporation still must put forward its best estimate forecast to the Board for approval of Basic rates (i.e. the Board needs to approve a fixed overall rate change for Basic). Stochastic modeling, as used extensively in the DCAT analysis, provides the Board with information as to the expected variability around the best estimate forecast. This expected variability is the basis for the Corporation's proposed RSR and Total Equity targets in the DCAT report.

The mean of the stochastic model is generally very close to the best estimate forecast; however, there are often considerations in the Corporation's forecasts that result in different trends than those predicted by a stochastic model based purely on historical data (e.g. the Corporation expects future collision severity growth to be higher than historical averages; the Corporation gives more weight to recent hail experience).

# CAC (MPI) 1-171 Reference: 2014 DCAT Report June 27, p. 84 

Preamble: Cumulative Simulated Ultimate Losses \% Deviation from Base Forecast All Basic Coverages

Please explain whether the decline in ultimate loss \% in this table is indicative of a rebound or mean reversion pattern in claims losses that would at least partially rebuild the RSR in the absence of management action and the imposition of RSR rebuilding surcharges

## RESPONSE:

Since the Corporation's claims cost simulation assumes independence in the variability of loss costs between accident years, there is a mean reversion pattern that emerges as more loss years are simulated. A simulation that assumes some positive correlation between loss years would produce a greater range of variability around the best estimate forecast.

The Corporation recognizes that there is variability around the best estimate claims forecast and that this variability can result in favourable or unfavourable outcomes purely by chance.

## CAC (MPI) 1-172 Reference: DCAT Report page 5 and Exhibit 1a to 1f

Preamble: ".. we have restated the base forecast (as provided by the Corporation to the Public Utilities Board in the 2015/16 General Rate Application) to more accurately reflect the forecasted changes to future premium deficiencies and deferred policy acquisition cost write-downs."
a) Please elaborate as to which base financial statements should be consider and reviewed in the 2015 GRA-the financial statements presented in Volume II in the Pro Formas section or the "more accurately" prepared financial statements presented as Exhibits1a to 1 g in the 2014 DCAT report.
b) For the record, please review the headings on Exhibits 1a to 1 f in the 2014 DCAT report and, if necessary, re-filed them with the correct headings.
c) Please reconcile the Original Base Scenario net income for years 2014/15 through to 2018/19 on page 5 of the 2014 DCAT report to the net income line, for the same years, on page 3 of Volume II in the Pro Formas section and explain the differences.

## RESPONSE:

a) See PUB (MPI) 1-107.
b) The Corporation did not identify any errors with the exhibit headings.
c) The only difference in assumptions between the two scenarios is the change in the premium deficiency and DPAC write-down calculation as shown in Exhibit 1f of the DCAT report (RSR.2).

## CAC (MPI) 1-173 Reference: DCAT Report page 13

Preamble: "A comprehensive review of existing injury claims that resulted in a significant increase in loss reserves for prior years' claims. Impact (net of interest rate adjustments) = (\$26 million)."

Please elaborate on the corresponding offset in IBNR reserves of about $\$ 26$ million and provide the reference in the 2015 GRA.

## RESPONSE:

The referenced information is a summary of the PIPP 2013/14 fiscal year claims incurred experience relative to forecast. The main cause of the $\$ 26$ million deviation from forecast was the "comprehensive review of existing injury claims that resulted in a significant increase in loss reserves for prior years' claims". The impacts to the 2013/14 fiscal year claims incurred by coverage are provided in Volume II Claims Incurred (CI) in the rate application.

## CAC (MPI) 1-174 Reference: DCAT Report page 14

Preamble: "The Regulator should consider the balance of funds in both the RSR and Total Equity before making decisions on future rebates or RSR rebuilding fees."

Please elaborate on the circumstances, if any, the Regulator should consider the excess retained earnings of non-basic lines of business in approving rate changes, setting RSR levels and approving RSR rebuilding fees for basic insurance.

## RESPONSE:

Refer to Volume I CEO Pre-Filed Testimony, page 8.

## CAC (MPI) 1-175 Reference: DCAT Report page 14

Preamble: "Establish a range above the recommended minimum capital targets...A range could also protect the Basic program from other risk factors that are not easily quantifiable. Management should continue to monitor other important risk factors such as inflation, policy liability risk, and changes to International Financial Reporting Standards (IFRS)."

In addition to inflation, policy liability risk and changes to IFRS, please elaborate on the other risk factors contemplated that may not be easily quantifiable.

## RESPONSE:

In general, the statistical modeling utilized in the DCAT report relies on the historical behavior of key risk variables (e.g. equity returns, interest rates, claims costs). However, there may be cases when one-time operational, system, strategic, economic, or other risks result in deviations to the Corporation's forecasts that are not (and cannot) be predicted by historical patterns. The Corporation's recommended minimum DCAT target does not provide a 'load' for these other operational-type risks.

## CAC (MPI) 1-176 Reference: DCAT Report page 17

Preamble: Risk Control and Financial Forecasting Department

Please elaborate on the expertise brought to the table by staff members of the Risk Control and Financial Forecasting Department.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-177 Reference: DCAT Report page 11 and 59 and Volume III AI. 6 Part 1A page 7

Preamble: IAS 19 Employee Benefits. "The impact of this change was an increase in the balance in the Basic Rate Stabilization reserve of $\$ 27.6$ million to $\$ 99.9$ million as at February 28, 2014.
a) Please confirm that the total impact of $\$ 27.6$ million for basic insurance of IAS 19 relates to fiscal year 2012/13 (\$18,460,000) and 2013/14 (\$9,110,000).
b) Please confirm that the financial impact of IAS 19 was to move pension actuarial gains and losses from the operational income statement impacting net income (loss) to Other Comprehensive Income impacting Total Comprehensive Income (Loss) and had zero impact on the net equity of the basic insurance operations.
c) Please confirm that the MPI' actuary includes Accumulated Other Comprehensive Income in the conditions required to achieve satisfactory financial condition for basic insurance.

## RESPONSE:

a) Confirmed.
b) Confirmed, no impact on Total Equity on the Statement of Financial Position.
c) Confirmed.

# CAC (MPI) 1-178 Reference: Volume II RSR. 1 page 9 and Volume III AI. 6 <br> Part 1A page 1 

Preamble: The difference between Retained Earnings (RSR) and Total Equity.
a) Please confirm that the difference between Retained Earnings (RSR) and Total Equity is Accumulated Other Comprehensive Income (AOCI).
b) Please confirm that AOCI consists of the sum of the net unrealized gain or loss on financial assets classified as available for sale (AFS) and net actuarial gain or loss on employee future benefits and amounts to $\$ 70.3$ million, for basic insurance, as at February 28, 2014.
c) Please confirm that AFS assets consist of Cash and Short-term Investments, Other Investments and Equity Investments amounting to $\$ 517.6$ million, for basic insurance, as at February 28, 2014.
d) Please confirm that the AFS assets are highly liquid (in other words they can be sold at any time).

## RESPONSE:

a) Confirmed. Please refer to page 3 of the Universal Compulsory Automobile Insurance Annual Financial Statements for the year ended February 28, 2014. (Volume III AI.6)
b) Confirmed. Please refer to page 3 and Note 19 of the Universal Compulsory Automobile Insurance Annual Financial Statements for the year ended February 28, 2014. (Volume III AI.6)
c) Confirmed. Please refer to Note 3 of the Universal Compulsory Automobile Insurance Annual Financial Statements for the year ended February 28, 2014. (Volume III AI.6)
d) Most of the AFS assets are highly liquid, with the exception of the Other Investments, which are illiquid private equity investments.

## CAC (MPI) 1-179 Reference: Volume II RSR. 1 page 3.

Preamble: "That the Board approve a minimum (lower) RSR target of $\$ 194$ million in retained earnings based on the results of the 2014 DCAT report. That the Board approve a minimum (lower) RSR target of $\$ 213$ million in total equity based on the results of the 2014 DCAT report."

Please elaborate on the proposed requirement for an RSR target for total equity.

## RESPONSE:

See PUB (MPI) 1-85.

## CAC (MPI) 1-180

## Reference: Volume II RSR. 3 Minimum Capital Test page 2.

Please provide the detail amounts, by general ledger account, comprising the Balance Sheet Assets of $\$ 136,945,000$ as at February 28, 2014 compared to last year.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-181 <br> Reference: Volume III AI. 12 Benchmarking page 2.

Preamble: "An example of Application consolidation and standardization is the plan to move the management of physical damage claims to a standard claims management application that is currently in use for bodily injury claims."
a) During the evaluation process for selecting a claims management system to handle physical damage claims, please elaborate on the various systems that were examined before deciding on the bodily injury claims system.
b) Please file a copy of the evaluation analysis.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-182

Reference: Volume III AI. 12
Benchmarking page 17.

Preamble: "Manitoba Public Insurance is using a higher proportion of contractors than either its peers or the Insurance Industry as a whole."

Please elaborate on MPI's IT strategy, going forward, as it relates to the use of contractors as opposed to using internal staff to implement and/or develop IT applications for MPI.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-183

Reference: Volume III AI. 12 Benchmarking Appendix 4 page 3.

Preamble: "Despite a $2.3 \%$ reduction in the IT to Company FTE ratio, MPI spent $8 \%$ more on Personnel and 9\% more on Outsourcing and used 12\% more contractors than Peers."

Please elaborate on MPI's IT strategy to contain the Personnel, Outsourcing and contractors costs relative to MPI's peers in light of MPI basic insurance being a monopoly.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-184

Reference: Volume III AI. 12
Benchmarking Appendix 4 page 4.

Preamble: "On average, over a 15 year lifecycle, only $8 \%$ of an application's lifecycle costs occur during Development, so as you increase the footprint, you increase the support base"

Please elaborate on the lifecycle costs vs. development costs of an IT application (for example, the PD Re-engineering program -Volume III Charters page 8-is budgeted to cost $\$ 65.5$ million. Does this mean that the life cycle cost for this program are expected to be $\$ 819$ million $\{\$ 65.5$ million / 0.08$\}$ with annual projected savings of $\$ 13.3$ million for a payback period of 62 years $\{\$ 819$ million / $\$ 13.3$ million?)

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-185

To review the Basic Insurance allocation distribution of various financial account values, please complete the following schedule and explain any significant differences year over year:

| Account | 2011/12 <br> Actual | 2012/13 <br> Actual | 2013/14 <br> Actual | 2014/15 <br> Projected | 2015/16 <br> Projected | 2016/17 <br> Projected | 2017/18 <br> Projected |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Basic Net Premiums Written | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Net <br> Premiums Written |  |  |  |  |  |  |  |
| Basic Net Premiums Earned | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Net <br> Premiums Earned |  |  |  |  |  |  |  |
| Basic Net Claims Incurred | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Net <br> Claims Incurred |  |  |  |  |  |  |  |
| Basic Claims Expense | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Claims <br> Expense |  |  |  |  |  |  |  |
| Basic Loss prevention/Road <br> Safety | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Loss <br> prevention/Road Safety |  |  |  |  |  |  |  |
| Basic Operating expenses | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate Operating <br> expenses |  |  |  |  |  |  |  |
| Basic Investment income | $\$$ |  |  |  |  |  |  |
| Basic \% of Corporate <br> Investment Income |  |  |  |  |  |  |  |

## RESPONSE:

The allocation methodology for expenses is fully explained in Volume II Expenses, section E.3. Premium revenue and claims incurred are directly assigned; and therefore, not subject to allocation.

## CAC (MPI) 1-186 Reference: Pre-Filed Testimony page 19

Preamble: "...I propose that we move from discussing road safety to discussing a comprehensive loss prevention strategy."

In general terms, please elaborate on the content of a comprehensive loss prevention plan for the Basic line of business.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-187 Reference: SM. 3 Road Safety page 13.

Preamble: The Road Safety department has been reorganized in 2013 and a new Road Safety Manager has been hired.
a) Please file a copy of the new Road Safety organizational chart.
b) Please file copies of curriculum vitae for the Road Safety manager and senior Road Safety staff.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-188 Reference: SM. 3 Road Safety page 14.

Preamble: Services of an external firm have been retained to assist in developing a formal process to review current road safety priorities and establish a three-year Road Safety Strategic Plan.
a) Please file a copy of the Request for Proposal, Terms of Reference and service agreement relating to the external firm.
b) Please indicate when the three-year Road Safety Strategic Plan will be completed and filed with the PUB.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-189

Reference: SM. 3 Road Safety page 22.

Preamble: "With respect to the High School Redevelopment project, project scoping is underway and the Corporation expects to finalize terms of reference for the multiyear redevelopment project and release of RFP by the fall of 2014."
a) In general terms, please describe the project scoping completed to-date.
b) Please file a copy of the RFP when released in fall with the PUB.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-190

Reference: SM. 3 Road Safety page 26.

Preamble: "These maps demonstrate that motor vehicle collisions with vulnerable road users are broadly dispersed throughout Winnipeg and Brandon. Collision "hotspots" are generally associated to multi-lane intersections with high traffic volumes.....Other patterns are not readily apparent based on the broad dispersion of collision with vulnerable road users and the relative randomness of these occurrences. For this reason, the Corporation continues to focus its efforts primarily on broad public awareness campaigns aimed at educating both motorists and vulnerable road users on how to share the road safely."
a) Please describe the methodology applied to conclude that "other patterns are not readily apparent based on the broad dispersion of collision with vulnerable road users and the relative randomness of these occurrences".
b) Please reproduce the Map on page 1 and 2 of Attachment F enlarging and only highlighting occurrences on Portage Avenue. For reference please review the following open data video: http://youtu.be/War1pSs2LAM.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

Manitoba Public Insurance

# CAC (MPI) 1-191 <br> Reference: The Manitoba Public Insurance Corporation Act (MPIC Act) 

Please advise if there have been any amendments to the MPIC Act during 2014 relating to Road Safety or safety in general. If yes, please describe the amendments and the intent of the amendments.

## RESPONSE:

Please see response to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-192 <br> Reference: CAC (MPI) 1-55 from the 2014 GRA

Please review CAC (MPI) 1-55 from last year's GRA and provide updated responses to a), b) and c) for 2013/14.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

# CAC (MPI) 1-193 <br> Reference: PUB (MPI) 1-94 and CAC (MPI) 1-56 from the 2014 GRA 

Please provide a five year comparative history of actual vs. budgeted expenditures by road safety and loss prevention program category. Please explain any significant differences between budget and actual expenditures.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-194 Reference: CAC (MPI) 1-57 from the 2014 GRA

Please update the Inter-Jurisdictional Comparison for Casualty Rates table, included in the 2014 GRA, to current.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-195 Reference: CAC (MPI) 1-58 from the 2014 GRA

a) Please update the Road Safety Expenses - Basic Share table from the 2014 GRA to include 2013/14 actual, forecast for 2014/15, projected for 2015/16.
b) Please explain any significant changes year over year.

## RESPONSE:

a) Refer to the attachment.
b) The most significant changes through the projected period relate to Auto-Crime Prevention Strategies, and result from decreased costs related to the Immobilizer Incentive Program.

# Road Safety Expenses - Basic's Share 

|  | (\$ in thousands) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2009/10 <br> Actual | 2010/11 <br> Actual | 2011/12 <br> Actual | 2012/13 <br> Actual | 2013/14 <br> Actual | $\begin{gathered} 2014 / 15 \\ \text { Forecast } \end{gathered}$ | 2015/16 <br> Projected |
| Driver Education and Improvement | 2,929 | 3,006 | 3,444 | 3,102 | 3,200 | 3,520 | 3,605 |
| Impaired Driving Prevention Strategies | 419 | 445 | 806 | 877 | 932 | 1,090 | 1,115 |
| Speed Management Strategies | 280 | 391 | 313 | 330 | 357 | 297 | 305 |
| Occupant Safety Education Strategies | 293 | 424 | 269 | 357 | 123 | 325 | 333 |
| Auto-Crime Prevention Strategies | 15,522 | 7,772 | 5,023 | 4,190 | 4,007 | 2,509 | 1,444 |
| Motorcycle Safety Education | 104 | 96 | 106 | 108 | 67 | 105 | 108 |
| Vulnerable Road User Education Strategies | 112 | 163 | 240 | 135 | 255 | 215 | 221 |
| Safety Programming Other | 404 | 436 | 395 | 363 | 314 | 405 | 415 |
| Safety Grants and Sponsorships | 197 | 190 | 300 | 261 | 317 | 288 | 295 |
| Road Safety Production and Advertising | 205 | 290 | 371 | 347 | 466 | 356 | 365 |
| Program Evaluation | 203 | 74 | 140 | 103 | 5 | 18 | 18 |
| Cell Phone/Distracted Driver Advertising | 266 | 295 | 4 | 183 | 592 | 246 | 252 |
| Other | 53 | 57 | 29 | - | - | - | - |
| Departmental Expenses | 2,591 | 3,119 | 3,598 | 2,448 | 2,122 | 1,976 | 2,038 |
| Road Safety Initiatives (Driver Ed /Infrastructure) | - | - | - | 303 | 59 | - | - |
| Total | 23,578 | 16,758 | 15,038 | 13,107 | 12,816 | 11,350 | 10,514 |

## CAC (MPI) 1-196

## Reference: CAC (MPI) 1-48 from the 2014 GRA, Volume III AI. 6 Part 2 page 17.

Preamble: Goal 7 states "Manitoba Public Insurance will lead driver and vehicle safety initiatives that reduce risk and protect Manitobans, on our streets and in their neighbourhoods. Manitobans will recognize the Corporation is living its mission". Strategy 7.1 states "To develop an evidence-based road safety strategy with an aim to reduce automobile collisions, using a multi-faceted approach".
a) For fiscal years 2007/08 through 2013/14, please provide electronic copies of the annual province wide collision statistics reports available to MPI.
b) Please provide any province-wide program monitoring and evaluation studies or plans that consider the effectiveness with which MPI and other partners currently operate and integrate their loss prevention programming.
c) Please provide any published papers, conference proceedings that provide province-wide program overviews of loss prevention programs.

## RESPONSE:

a) to c

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-197 Reference: Volume 3, AI. 10 Charter HSDE

Preamble: CAC MB is interested in the expected outcome from the High School Driver Education and Redevelopment Program. The Project Charter, on page 3, states the following:
"...The program provides a unique opportunity to shape the long-term driving behaviors of approximately 12,000 new teen drivers annually. This is critically important to improving road safety given that young drivers in Manitoba, as in other jurisdictions, are over-represented in fatal, serious injury, and property damage collisions"

Please consider vulnerable road users (VRU) as a group (composed of pedestrians, cyclists, motor cyclists, other un-protected victims) rather than listing the particular victim types.
a) Please provide the statistical basis for the above statement.
b) Please provide the statistical basis for young drivers being over-represented in fatal and serious injury collisions that involve vulnerable road users as victims.
c) Please provide the age distribution of all drivers involved in fatal and serious injury collisions that involve vulnerable road users as victims.

## RESPONSE:

a) to c)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-198 Reference: 2015 GRA, Volume 2, Appendix D Claims Incurred

Preamble: CAC MB is interested in the number of injury claims based on the severity (ICD10) of injury for those who are inside a motor vehicle ("MVA") and those in the class or group of persons who are external to a motor vehicle ("vulnerable road users").

Please consider vulnerable road users (VRU) as a group (composed of pedestrians, cyclists, motor cyclists, other un-protected victims) rather than listing the particular victim types.

Please provide the chart in Volume 2, Appendix D - Claims Incurred regarding PIPP Claims Statistics by Injury Type (ICD10) for number of claims, \$ Incurred, and Severity (\$) with clear distinction of victim type as motor vehicle occupants or vulnerable road users, for each year from 2010 to 2014.

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-199

## Reference: Traffic Collision Statistics Report 2012

Preamble: CAC MB is interested in the contributing factors of drivers involved in traffic collisions for fatal and serious injuries and the distribution of the contributing factors when the victim is either a motor vehicle occupant or a vulnerable road user.

Please consider vulnerable road users (VRU) as a group (composed of pedestrians, cyclists, motor cyclists, other un-protected victims) rather than listing the particular victim types.
a) Please refer to Table 9-7 of the 2012 Traffic Collision Statistics Report, titled "Historical Summary of Contributing Factors Recorded for Victims of Collisions". Please list the contributing factor and total victims by year, but with clear distinction of the victims as either motor vehicle occupants, vulnerable road users or unknown.
b) Please refer to Table 9-9 of the 2012 Traffic Collision Statistics Report, titled "Summary of Speed, Distracted, and Impaired as Contributing Factors". Please make a clear distinction of the victims as motor vehicle occupants, vulnerable road users or unknown for each category of collisions, victims and driver involvement.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## CAC (MPI) 1-200

Reference: CAC/Bike Winnipeg
(MPI) 1-1 2014 GRA

Preamble: CAC MB seeks to continue reviewing long term MPI fatality and serious injury data in a disaggregated fashion to better understand trends relating to fatalities and serious injuries. CAC MB wishes to review the distribution of these fatalities and serious injuries amongst different road users including drivers, passengers and different categories of vulnerable road users including pedestrians, cyclists and motorcyclists.

In the request below, a working definition for the terms current and ultimate is:

Current (Current Fiscal Year Claims Incurred):

Current fiscal year claims incurred represent the accumulation or sum of all changes in claims dollar activity (paid, reserves, recoveries, IBNR, etc.) for all previous Insurance Accident Years.

Ultimate (Ultimate Claims Incurred):

Ultimate claims incurred for a year represent the sum of the dollar activity expected/projected/developed to be incurred for a particular Insurance Accident Year (for example what will be the ultimate claims incurred for collision for the Insurance Accident Year for 2012/13).

Please complete the tables provided in Attachment A, with regard to the victim type and classifications for fatalities and serious injuries.

1) MPI Fatalities - Count of Claims
2) MPI Serious Injuries - Count of Claims
3) MPI Fatalities - Cost - Current value - (\$000)
4) MPI Serious Injuries - Cost - Current value - (\$000)
5) MPI data - Fatalities -Cost per Claim - (\$000)
6) MPI data - Serious Injuries - Cost per Claim - (\$000)
7) MPI data - Serious Injuries - Ultimate value - (\$000)
8) MPI Ratios - Fatalities per Licensed Active Drivers
9) MPI Ratios - Fatalities per Registered Vehicle (Commercial and NonCommercial)
10) MPI Ratios - Serious Injuries per Licensed Active Drivers
11) MPI Ratios - Serious Injuries per Registered Vehicle (Commercial and Non-Commercial)

Please provide the formal definition of "serious injury" as used in the above statistics and reconciled with the Traffic Collision Report. Has the definition of serious injury been amended since last year?

## RESPONSE:

Please refer to CAC (MPI) 1-2 a) and b).

## Attachment A - MPI Claim and Cost Statistics

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | All <br> Fatalities | Unknown lerrors | Driver | Passe nger | Sub-total Vehicle Fatals | Motorcycle \& Mopeds Fatalities | $\mathrm{Pe}$ ds | Cyclists | Sub Total VRU Fatals | Motor Vehicle s/All Fatals | VRU/All <br> Fatals |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| Total 2000 - <br> 2014 <br> YTD |  |  |  |  |  |  |  |  |  |  |  |

## Attachment A - MPI Claim and Cost Statistics

| 2. MPI Serious Injuries - Count of Claims |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Motor | Vulnerable Road Users |  |  |  |  | Calculated | Ratio |  |
| Calendar Year | All <br> Serious Injuries | Unknown lerrors | Driver | Passe nger | Sub-total <br> Vehicle Serious Injuries | Motorcycle \& Mopeds Fatalities | $\begin{aligned} & \mathrm{Pe} \\ & \mathrm{ds} \end{aligned}$ | Cyclists | Sub Total <br> VRU <br> Serious <br> Injuries | Motor Vehicle s / All Serious Injuries | VRU/All <br> Serious <br> Injuries |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  | . |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000 \text { - } \\ & 2014 \\ & \text { YTD } \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

| 3. MPI Fatalities - Current Value (\$000) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| Calendar Year | All <br> Fatalities | Unknown lerrors | Driver | Passe nger | Sub-total Vehicle Fatals | Motorcycle \& Mopeds Fatalities | $\begin{aligned} & \mathrm{Pe} \\ & \mathrm{ds} \end{aligned}$ | Cyclists | Sub Total VRU Fatals | Motor Vehicle s / All Fatals | VRU/All <br> Fatals |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline 2014 \\ \text { YTD } \\ \text { (June 30) } \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{array}{\|l\|} \hline \text { Total } \\ 2000-1 \\ 2014 \\ \text { YTD } \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |  |  |  |

## Attachment A - MPI Claim and Cost Statistics

4. MPI Serious Injuries - Cost - Current value (\$000)

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar <br> Year | All Serious Injuries | Unknown lerrors | Driver | Passe nger | Sub-total <br> Vehicle Serious <br> Injuries | Motorcycle \& Mopeds Fatalities | $\begin{aligned} & \mathrm{Pe} \\ & \mathrm{ds} \end{aligned}$ | Cyclists | Sub Total <br> VRU <br> Serious <br> Injuries | Motor Vehicle s / All Serious Injuries | VRU/All <br> Serious <br> Injuries |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| Total 2000 - <br> 2014 <br> YTD |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | All Serious Injuries | Unknown lerrors | Driver | Passe nger | Sub-total Vehicle Fatals | Motorcycle \& Mopeds Fatalities | Pe ds | Cyclists | Sub Total VRU Fatals | Motor Vehicle s / All Fatals | VRU/All <br> Fatals |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 2014 \\ & \text { YTD } \\ & \text { (June 30) } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

## Attachment A - MPI Claim and Cost Statistics

6. MPI Serious Injuries - Cost per Claim

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar <br> Year | All Serious Injuries | Unknown lerrors | Driver | Passe nger | Sub-total <br> Vehicle Serious Injuriies | Motorcycle <br> \& Mopeds <br> Fatalities | $\begin{aligned} & \mathrm{Pe} \\ & \mathrm{ds} \end{aligned}$ | Cyclists | Sub Total VRU Serious Injuries | Motor Vehicle s / All Serious Injuries | VRU/All Serious Injuries |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 YTD (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000 \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

| 7. MPI Serious Injuries - Ultimate Value |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Motor | Vulnerable Road Users |  |  |  |  | Calculated | Ratio |  |
| Calendar <br> Year | All Serious Injuries | Unknown /errors | Driver | Passe nger | Sub-total <br> Vehicle Serious Injuries | Motorcycle \& Mopeds Fatalities | $\begin{aligned} & \mathrm{Pe} \\ & \mathrm{ds} \end{aligned}$ | Cyclists | Sub Total <br> VRU <br> Serious <br> Injuries | Motor Vehicle s / All Serious Injuries | VRU/All Serious Injuries |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000 \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

## 8. MPI Ratios - Fatalities per 1000 Licensed Active Drivers

|  |  |  |  | Motor Vehicles |  | Calculated | Vulnerable Road Users |  |  | Calculated | Ratio | Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | Number <br> Licensed Active <br> Drivers | All <br> Fatalities | Unknown/error <br> S | Driver | Passenge | Sub-total <br> Vehicle <br> Fatals | Motorcycle \& Mopeds Fatalities | Peds | $\begin{aligned} & \text { Cyclist } \\ & \text { s } \end{aligned}$ | Sub Total VRU Fatals | Motor Vehicles / All Fatals | VRU/ <br> All <br> Fatals |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June <br> 30) |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | All <br> Fatalities | Unknown lerrors | Driver | Passe nger | Sub-total Vehicle Fatals | Motorcycle \& Mopeds Fatalities | $\mathrm{Pe}$ ds | Cyclists | Sub Total VRU Fatals | Motor Vehicle s/All Fatals | VRU/All Fatals |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| Total 2000 2014 YTD |  |  |  |  |  |  |  |  |  |  |  |

Attachment A - MPI Claim and Cost Statistics

|  |  |  |  | Vul  <br>  ner <br> able  <br> Roa  <br> Roa  <br> d  <br> d  |  |  | Calculated |  |  |  | Ratio | Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | Numbe <br> r <br> License <br> d Active <br> Drivers | All <br> Serious Injuries | Unknown lerrors |  | Passe nger | Sub-total Vehicle Serious Injuriies | Motorcycle \& Mopeds Fatalities | Peds | Cyclists | Sub <br> Total <br> VRU <br> Serious <br> Injuries | Motor Vehicles / All Serious Injuries | VRU/A II Seriou s Injurie s |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  | Page 12 |  |  |  |  |  |  |

## Attachment A - MPI Claim and Cost Statistics

## 11. MPI Ratios - Serious Injuries per 1000 Registered Vehicles

|  |  |  |  | Motor Vehicles | Calculate <br> d | Vulnerabl e Road Users | Calculated |  |  |  | Ratio <br> Motor <br> Vehicles <br> / All <br> Serious <br> Injuries | Ratio <br> VRU/All <br> Serious <br> Injuries |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | Registered Vehicles | All Serious Injuries | Unknown lerrors | Driver | $\begin{aligned} & \text { Passenge } \\ & \text { r } \\ & \hline \end{aligned}$ | Sub-total Vehicle Serious Injuries |  <br> Mopeds <br> Fatalities | $\begin{aligned} & \text { Ped } \\ & \mathrm{s} \end{aligned}$ | Cyclists | Sub Total <br> VRU <br> Serious <br> Injuries |  |  |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \hline 2014 \\ & \text { YTD } \\ & \text { (June 30) } \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  | Page 13 |  |  |  |  |  |  |

## CAC (MPI) 1-201 Reference: CAC/Bike Winnipeg (MPI) 2-4 2014 GRA

Preamble: CAC MB is of the opinion that better informed consumers are an essential component in any effort to reduce the traffic social and economic costs arising from motor vehicle accidents.
a) Please complete the tables provided in Attachment B, with regard to the victim type and group of motor vehicle occupants and vulnerable road users, and indicate the actual annual total losses, including the count of claims and incurred costs, from 200 to 2014YTD.
b) Has MPI developed a projected (forecast or estimate) of claims or total annual losses (costs) for motor vehicle occupants and vulnerable road users into the future? If so, please provide the projection.

## RESPONSE:

a) and b)

Please refer to CAC (MPI) 1-2 a) and b).

## Attachment B - MPI Claim and Cost Statistics

|  |  |  | Motor Vehicle Occupants |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar <br> Year | All Victim Types | Unknown lerrors | Driver | Passe nger | Sub-total Vehicle Occupants | Motorcycle \& Mopeds | $\begin{array}{\|l\|} \mathrm{Pe} \\ \mathrm{ds} \end{array}$ | Cyclists | Sub Total VRU | Motor Vehicle s/All Victim Types | VRU/All <br> Victim <br> Types |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

## Attachment B - MPI Claim and Cost Statistics

|  |  |  | Motor Vehicles |  | Vulnerable Road Users |  |  |  | Calculated | Ratio |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | All Serious Injuries | Unknown /errors | Driver | Passe nger | Sub-total Vehicle Occupants | Motorcycle \& Mopeds | Pe ds | Cyclists | Sub Total VRU | Motor <br> Vehicle <br> s / All <br> Victim <br> Types | VRU/All <br> Victim <br> Types |
| 2000 |  |  |  |  |  |  |  |  |  |  |  |
| 2001 |  |  |  |  |  |  |  |  |  |  |  |
| 2002 |  |  |  |  |  |  |  |  |  |  |  |
| 2003 |  |  |  |  |  |  |  |  |  |  |  |
| 2004 |  |  |  |  |  |  |  |  |  |  |  |
| 2005 |  |  |  |  |  |  |  |  |  |  |  |
| 2006 |  |  |  |  |  |  |  |  |  |  |  |
| 2007 |  |  |  |  |  |  |  |  |  |  |  |
| 2008 |  |  |  |  |  |  |  |  |  |  |  |
| 2009 |  |  |  |  |  |  |  |  |  |  |  |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |
| 2011 |  |  |  |  |  |  |  |  |  |  |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |
| 2013 |  |  |  |  |  |  |  |  |  |  |  |
| 2014 <br> YTD <br> (June 30) |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Total } \\ & 2000- \\ & 2014 \\ & \text { YTD } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |

## CAC (MPI) 1-202 <br> Reference: Pre-Filed Testimony page 3

Preamble: An objective is stated as "Achieve an actuarial opinion of being in a satisfactory future financial condition."

Since the rate indication and proposal set forth by the Corporation is not determined using accepted actuarial practice is this not contradictory? Should the entire application not follow accepted actuarial practice for consistency and best practice?

## RESPONSE:

The statement is not contradictory. The Corporation has been calculating Basic rates using an actuarially sound and statistically driven ratemaking methodology for over two decades. The Corporation operates in a unique insurance and regulatory environment in which the methodology used to calculate both the Basic rate indication and the minimum capital requirement may need to be modified relative to what is used in the private sector; however, that does not imply that the methodologies used by the Corporation are not actuarially sound or do not follow best practice.

In terms of Basic rates, the Corporation has shown in AI.9.4 that if rates are balanced to achieve 'break-even' net income over the rating period then there is virtually no difference between rates calculated using the existing PUB approved ratemaking methodology and accepted actuarial practice. The balancing adjustment was first discussed by the Corporation in the 1992 Rate Application (RD.1, page 21) when it stated:
" Using this method, the resulting required premium is higher because only investment income earned from the current year's policies is accounted for. For example, investment income from retained earnings is not used as a premium offset. Due to the Corporation's non-profit mandate, this income should be used as a premium offset and therefore the method described
under Section 2.3.1 [i.e. the Corporation's current ratemaking methodology] is more consistent with the goals of the Corporation."

In terms of the Corporation's minimum capital requirements, the Corporation is actively working with the PUB and CAC to develop a DCAT report that complies with actuarial standards of practice, while still addressing the unique circumstances of the Basic compulsory insurance program.

## CAC (MPI) 1-203

## Reference: Exhibit 1 of Section AI. 9 there is reference in the notes to Appendix 2.

Please provide the appendices to which this refers.

## RESPONSE:

The note should read "From Exhibit 2".

## CAC (MPI) 1-204

Reference: Claims Incurred page 11

Preamble: The Ultimate claims costs for Weekly Indemnity shown on page 11 of the Claims Incurred section forecast for $2015 / 16$ is $\$ 61,553$. The figure shown on Exhibit 1 of Section AI. 9 is $\$ 61,792$. Similar mismatches exist for all coverages.

Please reconcile the ultimate forecasts shown in the Claims Incurred section to the figures shown on Exhibit 1 of Section AI. 9 for each coverage separately.

## RESPONSE:

The amount of $\$ 61,553$ represents the ultimate claims costs for accident year $2015 / 16$. The amount of $\$ 61,792$ represents the ultimate claims costs for policy/rating year 2015/16. The conversion of the accident year amount to the policy/rating year amount (for all coverages) is described in pages 10 and 11 of Volume III AI.9, Actuarial Standards Compliance, with the derivation presented in Exhibit 2.

## CAC (MPI) 1-205 Reference: AI.9 page 11

Preamble: The interest rate used appears to be $4.15 \%$. This is inconsistent with the discount rate used in the Actuary's report of 3.90\%.

Please explain this inconsistency.

## RESPONSE:

Per page 11, the discount rate of $4.15 \%$ is the "projected duration weighted interest rate of the Corporation's fixed income portfolio as at March 1, 2015". The 3.90\% is the corresponding figure as at October 31, 2013.

# CAC (MPI) 1-206 Reference: Exhibit 2 of Section AI.9, Column 8 

Please give the formula for the calculation of the discount factor of $103.62 \%$ for 2015/16 and explain how a discount factor could be above $100 \%$ for the year in which rates are to be forecast for.

## RESPONSE:

Per page 11 of AI.9, "Payments were discounted from the midpoint of the development quarterlyear to the end of rating year 2015/16 (i.e. February 28, 2016)". The midpoint of the first quarter (Q1) of 2015/16 is April 15, 2015. Payments in Q1 were brought forward by 10.5 months from April 15, 2015 to February 28, 2016. At an interest rate of $4.15 \%$, this is equivalent to a discount factor of $103.62 \%$ i.e. $(1+4.15 \%) \wedge(10.5 / 12)$.

## CAC (MPI) 1-207 <br> Reference: With reference to Exhibit 2 of Section AI. 9

Please explain why the Corporation split 2015/16 through 2017/18 into quarters for ratemaking purposes.

## RESPONSE:

Claim payments in the first two development years of the accident year are not uniformly distributed. As such, we divided the first two development years of the accident year into quarters to more accurately reflect the actual distribution. Beyond the first two development years, claim payments are assumed to be uniformly distributed.

## CAC (MPI) 1-208 Reference: Section AI. 9 page 4

Please give the calculation of the $\$ 1054$ proposed average rate for Private Passenger giving the sources of the figures used to calculate this figure. Please include the breakdown of the claims incurred forecasts used in the calculation by coverage.

## RESPONSE:

The methodology used to calculate the $\$ 1,054$ proposed average rate for Private Passenger is similar to the methodology presented in Volume II Ratemaking, section RM. 4 .

## CAC (MPI) 1-209 Reference: Page 6 of Section AI. 9

Please explain how the $-5.1 \%$ profit provision was determined. Was it set at the percentage required to make the two sets of rates equal or was there a calculation behind it?

## RESPONSE:

See Volume III Actuarial Standards Compliance, section AI.9.4. Page 6 explains the calculation/rationale for the -5.1\% profit provision.

## CAC (MPI) 1-210

Reference: October 31, 2013
Actuary's Report

Preamble: With reference to Appendix E Page 6 of the October 312013 Actuary's Report it is noted that the 116 - ultimate factor has increased from 0.996 in the February 282013 Actuary's report to 1.010 on this report, driven by the tail factor from 212-ultimate.

Please give the calculation, including all figures used and their source, of the 212ultimate tail factor of 1.0356 .

## RESPONSE:

The 116 -Ultimate factor of 1.0100 was selected to reflect actual experience observed, specifically the 'Latest 6 Volume Weighted' average of 1.0095. 12-month development factors for 116 months and thereafter were also selected if there were at least five observed factors. In particular, 12-month development factors were selected for the 116-128 factor to the 176-188 factor. The 212-Ultimate factor of 1.0356 was then derived as noted in Appendix E, Page 5 i.e. "212-Ult Factor $=$ [Tab Rsv 116-Ult] / Product [116-128 Factor to 200-212 Factor]". This ensures that the product of the factors will result in a 116-Ultimate factor of 1.0100 .

## CAC (MPI) 1-211 Reference: October 31, 2013 <br> Actuary's Report

Preamble: With reference to Exhibit 4 Sheet 6, Accident Benefits - Other (Indexed), of the October 312013 Actuary's Report it is noted that using the factors from the February 2013 Actuary's report from 116 months of development through the tail decreases the IBNR by approximately $\$ 7$ million.
a) Please confirm the $\$ 7$ million reduction in IBNR given the assumed change in assumptions.
b) Please give the reasoning behind the increase in factors for this coverage beyond 116 months of development.

## RESPONSE:

a) Confirmed.
b) The factors were revised to reflect actual observed experience. For example, the reported 140-152 factor was increased from 0.9950 to 1.0000 since actual observed experience for the last three observations were greater than 1.0000 (i.e. factors of $1.0042,1.0105$ and 1.0237).


[^0]:    ${ }^{1}$ Source: The Handbook of Fixed Income Securities fourth Edition Edited by Frank J. Fabozzi and T.Dessa Fabozzi, Page 901

