CAC (MPI)

CAC (MPI) 1-1

Part and Chapter:	Part I, LA, OV	Page No.:	LA, page 2, OV, page
PUB Approved Issue No:	1. Requested vehicle rate and any changes to other fees and discounts 14. Risk assessment and risk management 20. Capital Maintenance Provision 21. Asset Liability Management Study		
Topic:	Consumer/ratepayer engagement		
Sub Topic:			

Preamble to IR (If Any):

In the 2019 GRA, MPI has requested:

A 2.2% overall increase in Basic vehicle premium revenue (including Vehicles for Hire rates for service) comprised of:

i. 0.1% increase to the break-even cost of policies
ii. 2.1% increase for a Net Capital Maintenance Provision to maintain MPI's capital position through the rating year, as measured by the Minimum Capital Test. The Capital Maintenance Provision accounts for the positive impact of investment income on Basic's Rate Stabilization Reserve, and collects only the residual amount required to maintain Basic's capital position

Question:

Please describe in detail all steps taken to engage with Manitoba consumers/ratepayers including, but not limited to, focus groups, stakeholder conversation, quantitative surveys and direct consumer conversations, related to:

a) the overall rate increase sought;
b) the concept of the capital maintenance provision; and

c) risk tolerances related to the basic and pension investment portfolios.

Rationale for Question:

To understand the extent and type of consumer engagement conducted by MPI prior to filing the 2019 GRA.

RESPONSE:

a) through c)

The Corporation did not consult ratepayers/consumers on any of the above noted issues for the following reasons:

- The General Rate Application is an open and public process. Anyone wishing to voice support or opposition to the requested rate change can do so through the PUB's online comment tool, in writing, or in person at the public hearing itself. Anyone wishing to test the rate request can apply for standing as an intervener or, presumably, seek to have an existing intervener advance any concerns on their behalf.

- The rate indication is itself generally treated as confidential by MPI until the time of filing, which necessarily precludes public consultation in advance of filing.

- Technical topics such as actuarial pricing, capital adequacy and investment risk tolerances are unlikely to garner constructive feedback through a public consultation process.

- The regulatory process affords an opportunity for the advancement of the interests of lay members of the public by subject matter experts. The Corporation has focused its effort on the regulatory process, and has taken steps to make its Application content more accessible to the public.

- The Corporation has also participated in technical conferences on matters related to Accepted Actuarial Practice (AAP) and a Capital Maintenance Provision (CMP), that were attended by registered interveners from prior proceedings (please see CAC (MPI) 1-72 for a discussion of the consensus reached at these technical conference).

- The Manitoba Government appointed a Board of Directors who have established the risk tolerance related to the Corporation's investments.

CAC (MPI) 1-2

Part and Chapter:	PART V, Revenues	Page No.:	10
PUB Approved Issue No:	4. Revenue Forecasts		
Topic:	Upgrade Factors		
Sub Topic:			

Preamble to IR (If Any):

"After remaining very stable at approximately 2.60% per year from 2011/12 to 2015/16, the vehicle upgrade factor fell to 2.23% in 2016/17 and 2.32% in 2017/18. The main cause of the decrease in vehicle upgrade is a drop in the number of customers that 'upgraded' their vehicles (i.e. purchased newer vehicles). From 2011/12 to 2015/16 the average age of an HTA vehicle was stable at approximately 9.92 years; however, in 2016/17 and 2017/18 the average age increased to 10.05 years and 10.21 years respectively. If the 'age of vehicle' distribution had remained the same in 2017/18, then the upgrade factor would have been approximately 2.55%. The Corporation does not anticipate vehicle age to continue this upward trend in future years."

MPI adjusted (decreased) the Upgrade Factor by 0.05% due to vehicle age increasing judgmentally (page 11)

Question:

a. Please provide MPI's rationale for "not anticipat(ing) vehicle age to continue this upward trend in future years".
b. Please assume that the average vehicle age trend will continue at the 2016/17 and 2017/18 pace into the forecasting periods, recalculate and reforecast the Upgrade Factor Forecast and compare to Figure Rev 7 on page 8 or Figure Rev

9 (whichever is correct) and calculate the financial impact based on the revised Upgrade Factor.

c. Please reconcile Figure Rev 7 to Figure Rev 9 and explain any differences.

Rationale for Question:

With improved vehicle technology it may be likely that the age of vehicles may increase and accordingly may impact projected basic insurance premiums due to a lower upgrade factor.

RESPONSE:

a) Throughout MPI's history, the average age of the vehicle fleet has generally fluctuated around 10 years. The Corporation believes that it is inappropriate, for this year's forecast, to assume that, after only a few years of increases in vehicle age, the current trend will continue indefinitely. This assumption would increase the average vehicle age to 11+ years, a figure not previously observed.

b) To model an assumed increase in the average vehicle age upward trend similar to 2016/17 and 2017/18, we have used an approximation of the recent two year average of 2.27% throughout the forecasting period. **Figure 1** below compares the revised upgrade factor to the original form figure Rev-7.The financial impact is a reduction to net income of approximately $4.9 million per year over the 2019/20 and 2020/21 rating years. Please see *Appendix 1* for the Statement of Operations with the revised upgrade factor.

Figure 1:

	Revised Total Upgrade	REV 7 Total Upgrade	Difference
2018/19	2.21%	2.39%	-0.18%
2019/20	2.36%	2.54%	-0.18%
2020/21	2.40%	2.58%	-0.18%
2021/22	2.33%	2.51%	-0.18%
2022/23	2.36%	2.54%	-0.18%

c) The figure REV 7 is the total upgrade factor, which is the sum of the vehicle upgrade factor and the DSR upgrade factor in REV 9. **Figure 2** below shows the relationship between these two tables.

Figure 2:

	(1) Vehicle Upgrade in REV 9	(2) DSR Upgrade in REV 9	(3)=(1)+(2) Total upgrade in REV 7
2018/19	2.45%	-0.06% *	2.39%
2019/20	2.45%	0.09%	2.54%
2020/21	2.45%	0.13%	2.58%
2021/22	2.45%	0.06%	2.51%
2022/23	2.45%	0.09%	2.54%

* Note: The 2018/19 DSR upgrade was adjusted to recognize the introduction of DSR discounts for taxi VFH, limousine VFH, and accessible VFH. The reduction is 0.1%.

PF.1 STATEMENT OF OPERATIONS – 2019/20 Basic Premium Rate Change of +2.2% with Revised Vehicle Upgrade Factor throughout the forecast

Manitoba Public Insurance

Multi-year - Statement of Operations

Line No.	*2019 GRA - 2019/20 Basic Premium Rate Change of +2.2% with revised Vehicle Upgrade Factor as per CAC 1 - 2(b)*						
	(C$ 000s, rounding may affect totals)	*For the Years Ended February,*					
1		2018A	2019BF	2020F	2021F	2022F	2023F
2	BASIC						
3	Motor Vehicles	955,941	1,017,408	1,081,141	1,124,063	1,167,816	1,213,584
4	Drivers	49,946	68,902	70,903	72,885	74,723	76,565
5	Reinsurance Ceded	(11,294)	(11,196)	(11,420)	(11,648)	(11,881)	(12,119)
6	**Total Net Premiums Written**	**994,593**	**1,075,114**	**1,140,624**	**1,185,300**	**1,230,658**	**1,278,030**
7	Net Premiums Earned						
8	Motor Vehicles	922,617	990,052	1,051,659	1,104,208	1,147,576	1,192,412
9	Drivers	48,819	59,546	69,896	71,887	73,798	75,638
10	Reinsurance Ceded	(11,294)	(11,196)	(11,420)	(11,648)	(11,881)	(12,119)
11	**Total Net Premiums Earned**	**960,142**	**1,038,402**	**1,110,135**	**1,164,447**	**1,209,493**	**1,255,931**
12	Service Fees & Other Revenues	22,849	23,799	25,768	27,498	29,357	31,389
13	**Total Earned Revenues**	**982,991**	**1,062,201**	**1,135,903**	**1,191,945**	**1,238,850**	**1,287,320**
14	Claims Incurred	783,040	853,863	896,982	943,502	992,469	1,044,611
15	DPAC \ Premium Deficiency Adjustment	-	(27,695)	(4,484)	(3,318)	5,024	9,085
16	(a) Claims Incurred - Interest Rate Impact	(15,801)	(8,213)	8,598	11,481	10,108	10,058
17	**Total Claims Incurred**	**767,239**	**817,955**	**901,096**	**951,665**	**1,007,601**	**1,063,754**
18	Claims Expense	143,337	137,168	135,440	139,216	144,345	146,795
19	Road Safety/Loss Prevention	13,146	13,606	12,694	12,818	13,004	13,281
20	**Total Claims Costs**	**923,722**	**968,729**	**1,049,230**	**1,103,699**	**1,164,950**	**1,223,830**
21	Expenses						
22	Operating	70,201	75,060	73,613	76,313	80,005	82,915
23	Commissions	37,378	40,312	42,600	44,677	46,380	48,135
24	Premium Taxes	29,143	31,488	33,647	35,283	36,641	38,042
25	Regulatory/Appeal	4,443	4,669	4,840	4,998	5,114	5,233
26	**Total Expenses**	**141,165**	**151,529**	**154,700**	**161,271**	**168,140**	**174,325**
27	**Underwriting Income (Loss)**	**(81,896)**	**(58,057)**	**(68,027)**	**(73,025)**	**(94,240)**	**(110,835)**
28	Investment Income	111,731	191,769	82,093	84,786	87,658	90,436
29	(b) Investment Income - Interest Rate Impact	4,589	(0)	(1)	(0)	(0)	0
30	**Net Investment Income**	**116,320**	**191,769**	**82,092**	**84,786**	**87,658**	**90,436**
31	**Net Income (Loss)**	**34,424**	**133,712**	**14,065**	**11,761**	**(6,582)**	**(20,399)**
32	Total net Impact due to interest rate change (b) - (a)	20,390	8,213	(8,598)	(11,481)	(10,108)	(10,058)

CAC (MPI) 1-3

Part and Chapter:	Part VIII, Annual Reports, Universal Compulsory Automobile Insurance Annual Report	Page No.:	6, 30
PUB Approved Issue No:	16. Other matters		
Topic:	Gross unearned premiums		
Sub Topic:			

Preamble to IR (If Any):

For 2018, on page 6 of the Compulsory Automobile Insurance Annual report, it indicates a decrease in gross unearned premiums of $34,451,000. Per Note 13 on page 30, it indicates that the gross unearned premiums as at February 28, 2018 are $468,613,000 and at February 28, 2017 it is $434,162,000, an increase year over year of $34,451,000.

Question:

Please clarify the disclosure description in the Compulsory Automobile Insurance Statement of Operations.

Rationale for Question:

To clarify the disclosure description of unearned premium changes in the Statement of Operations.

RESPONSE:

On the Statement of Operations at page 6, the line in question should read:

"(Increase) decrease in gross unearned premiums"

CAC (MPI) 1-4

Part and Chapter:	**Part IV, INV.2.3.1**	**Page No.:**	**29, Fig INV-11**
PUB Approved Issue No:	**4 c. and 4d. Interest Rate Forecast**		
Topic:	**Historical Analysis of the Naive, 50 50 and SIRF Forecasts**		
Sub Topic:			

Preamble to IR (If Any):

Question:

a) Please confirm that the standard error of the naïve interest rate forecast is 0.015 for the period 2005-18 while the standard error of the 50/50 forecast is only marginally higher at 0.016.

b) Please confirm that the forecast differences for the SIRF and 50/50 forecasts are lower than the forecast difference for the naïve forecast for the 2017 GRA and 2018 GRA.

c) Please explain why the historical period from the 2005 GRA to the 2018 GRA was used to assess forecasting performance.

d) Please provide the results for any other historical periods considered to assess forecasting performance.

Rationale for Question:

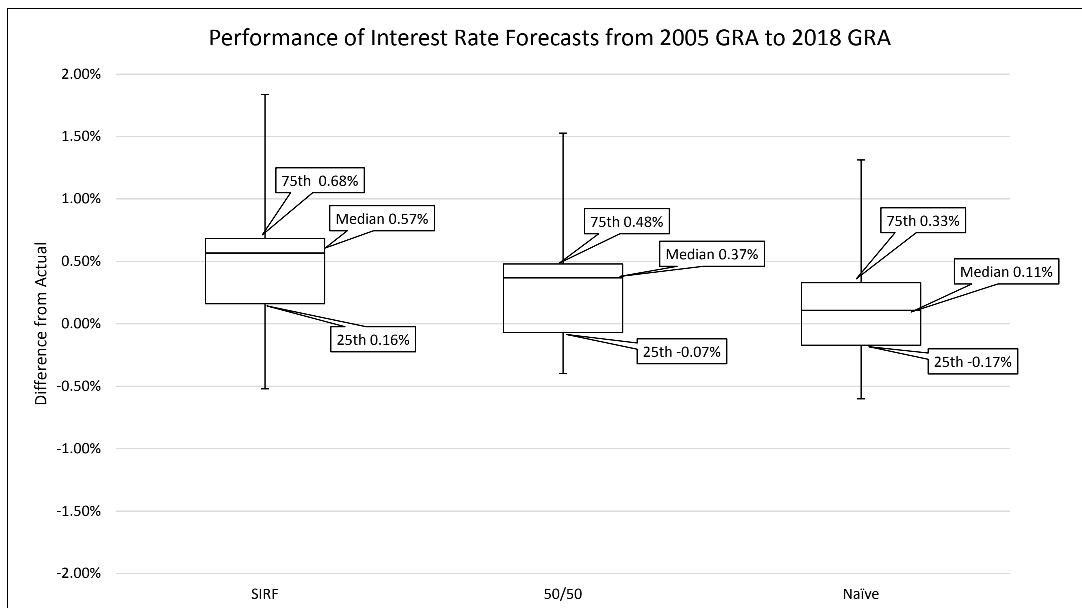
The interest rate forecast is an important component of the ratemaking process and the naïve forecast would replace the conventional practice of relying on a consensus forecast of financial institutions (SIRF), at least partially (50/50).

RESPONSE:

a) The standard error is a measure of variance of a sample. A similar forecast that is always 500 basis points higher than the naive forecast will produce a similar standard error as the naive forecast, even though it is an extremely biased forecast. Please also see the Corporation's response to *PUB (MPI)1-11 (a)*.

The figure below shows how each of the three interest rate forecasts differ from the actual. As indicated, there is marginal difference in the variance between the 50/50 and naïve forecast (as seen by the overall length of the 'whisker' in the box and whisker plot below). However, the naïve forecast is less biased than the 50/50 forecast (given the range of differences of the naïve forecast plots closer to the 'zero difference' line – that is, the 'box' in the box and whisker plot is more centered around the zero difference line) and, as seen in the Corporation's response to *PUB (MPI) 1-11 (a)*, the naïve forecast is statistically less biased than the 50/50 forecast.

Further, the middle line of the 'box', the median, is closest to 0.00% in the naïve forecast, while the 50/50 forecast produced forecasts that are at least 37 basis points higher than actual, 50% of the time.



b) While this is true, it should be noted that between the 2005 and 2018 GRA, the average difference between 1) the SIRF and actual; and 2) 50/50 and actual, is significantly higher than the average difference between the naïve forecast and actual. Specifically, the average difference is 0.54% for the SIRF and 0.34% for the 50/50 forecasts while only 0.15% for the naïve forecast.

c) The Corporation used the historical period from the 2005 GRA to the 2018 GRA to assess forecasting performance, because the Standard Interest Rate Forecast (consensus forecast from the Banks) was not available for the period prior to the 2005 GRA.

d) The Corporation cannot provide the results for any other historical periods considered to assess forecasting performance, as no other historical periods were available. As indicated above, this is because the data determining the Standard Interest Rate Forecast is unavailable for the period prior to the 2005 GRA.

CAC (MPI) 1-5

Part and Chapter:	RSR.4	Page No.:	4
PUB Approved Issue No:	4 c. and 4d. Interest Rate Forecast		
Topic:	Best interest rate forecast estimate		
Sub Topic:			

Preamble to IR (If Any):

"Further, the PUB ordered a 50/50 interest rate forecasting methodology which the Corporation cannot demonstrate to be a best estimate (based on the evidence observed to date)"

Question:

Please explain what steps MPI has taken to demonstrate that the 50/50 interest rate methodology does not produce a best estimate beyond Fig INV-11.

Rationale for Question:

An assessment of the best forecasting methodology should be robust to the choice of historical period.

RESPONSE:

The Corporation provides the following facts to support its position that the naïve forecast is a best estimate and, conversely, that the 50/50 interest rate methodology is not a best estimate:

1. In the 2017 GRA hearings, the Corporation presented Dr. Sean Cleary, CFA, as an expert witness. A principal finding of his analysis was that "Naïve forecasts

using existing 10-year Canada yields would have improved forecasting accuracy significantly, reducing percentage forecast error by close to 60%." (See 2017 GRA, MPI Exhibit 7, page 4);

2. There is no principled basis to use the 50/50 interest rate methodology over any other judgmentally based blending of the Naïve and SIRF forecasts;

3. In response to *PUB (MPI) 1-11 (a)*, the Corporation demonstrates that the Naïve forecast produces a statistically significant forecast with less error at a 99% confidence level, which the 50/50 forecast does not. In other words, the Naïve forecast produces an estimate that is not statistically different from the actual forecast;

4. The 50/50 forecast produces a forecast with statistically more bias than the Naïve forecast; and

5. MPI's external actuary, Mr. Joe Cheng, endorses the use of the naïve forecast for DCAT base case scenario and has stated that it is the most common approach amongst his property and casualty insurance clients.

CAC (MPI) 1-6

Part and Chapter:	DCAT.1.7.4	Page No.:	16
PUB Approved Issue No:	4 c. and 4d. Interest Rate Forecast		
Topic:	Naïve interest rate forecast		
Sub Topic:			

Preamble to IR (If Any):

"In my opinion, a naïve interest rate assumption is appropriate for the base scenario. Notwithstanding the two recent rate hikes by the Bank of Canada (BoC), I do not see any material risk in assuming a naïve interest rate as a base case. My initial guess is an increase in interest rates should strengthen the financial position of Basic.
Response: MPI agrees with this assessment."

Question:

a. Please explain whether MPI considers "two recent hikes by the Bank of Canada" to be immaterial to the choice of the naïve interest rate forecast, i.e. that interest rates will not rise again for the next four years.
b. Please explain whether MPI considers the interest rate increase by the Bank of Canada on July 11, 2018 (see: https://www.bankofcanada.ca/2018/07/fad-press-release-2018-07-11/) to be immaterial to the choice of the naïve interest rate forecast, i.e. that interest rates will not rise again for the next four years (even though they just have for the third time).
c. Please confirm that MPI considers the naïve interest rate forecast to be an unbiased forecast, i.e. that interest rates are as likely to fall as to rise over the next four years.

Rationale for Question:

The naïve interest rate forecast is no longer appropriate as interest rates begin to rise.

RESPONSE:

The rationale to this Information Request assumes facts not in evidence and is largely anecdotal. MPIC will confine its answer to the germane portion of the question, in a fair and accurate manner, while making note of the prejudicial effect of the premise.

a. Actual or expected changes in the BOC overnight rate are not material considerations in the selection of a best estimate interest rate forecast. Increases in the Bank of Canada (BoC) overnight rate do not necessarily result in increases in Government of Canada (GoC) 10-year bond yields. To illustrate, the Naïve forecast uses the February 28, 2018 GoC 10-year bond yield (2.24%). The BoC has increased the overnight rate once since then, from 1.25% to 1.50% on July 11, 2018. As of July 20, 2018 (the date of this writing), the GoC 10-year bond yield was 2.18%, 0.06% lower than it was on February 28, 2018 and is so despite the fact that the BoC increased the overnight rate.

   The reasons for selecting the naïve forecast as a best estimate are provided chiefly in *PUB(MPI) 1-11*, *CAC(MPI) 1-4*, and *CAC(MPI) 1-5*, among others.

b. The Naïve forecast is a *neutral* forecast – going forward, the GoC 10-year bond yield could increase, decrease or remain flat. As mentioned in the response to question a) above, it does not necessarily follow that increases in the BoC overnight rate result in increases in the GoC 10-year bond yield.

c. For the purposes of setting rates, the Corporation considers the naïve forecast to be an unbiased forecast. Using the last 14 years of interest rate forecasts as provided in the response to Information Request *PUB (MPI) 1-11*, the naïve forecast produces an estimate that is statistically the same as the actual forecast. That is, the average difference of the naïve to the actual forecast is between 0.48% and -0.17%, with 95% confidence. Contrast this to the 50/50 forecast,

which produces a rate forecast that is significantly more biased than the naïve forecast.

CAC (MPI) 1-7

Part and Chapter:	**PART VI, Investments**	**Page No.:**	**8, 27**
PUB Approved Issue No:	**4.d. Naïve interest rate forecast**		
Topic:	**Naïve interest rate forecast**		
Sub Topic:			

Preamble to IR (If Any):

"The Minimum Capital Test (MCT) ratio will increase by 16% at the end of 2018/19 from 54% to 69% because of lower capital requirements on the Basic line of business investment assets. Interest income is forecasted to increase by approximately $18.5 million on average from 2019/20 to 2021/22 as there will be more fixed income assets in the portfolio supporting the Basic line of business. These projections are based on a Naive interest rate forecast."

"11.19. The 50/50 interest rate forecast shall be used for rate-setting and target capital purposes." PUB Order #130/17 page 96.

Question:

a) Please explain and provide the rationale for MPI believing it has complied with PUB Order 130/17 order 11.19.
b) Please define "best estimate".

Rationale for Question:

To better understand MPI's rationale for not using the 50/50 interest rate forecast in the 2019 GRA

RESPONSE:

a) The Corporation's position is that by Order 130/17, the PUB approved the Corporation's application for driver premiums under the Driver Safety Rating System for the year ending February 28, 2019 and provided specific directions for the Corporation to follow. One of these directions is 11.19, which is reproduced in the preamble above. The Corporation complied with the directions provided, including direction 11.19, as acknowledged by the PUB in Order 134/17, approving MPI's compliance filing to Order 130/17 The Corporation submits that directive 11.19 of PUB Order 130/17 pertains to the rate increase to Basic compulsory motor vehicle premiums for the 2018/2019 insurance year, and that year alone. This is because:

   i. Order 130/17 expressly states (see pages 5 and 94 thereof) that the approval of a rate increase for the 2018/2019 insurance year is based on the 50/50 interest rate forecast;

   ii. Order 130/17 does not expressly direct the Corporation to use the 50/50 interest rate forecast for any insurance year other than 2018/2019;

   iii. Order 134/17 confirms that the Corporation complied with direction 11.19 in Order 130/17; and

   iv. Given the unpredictability and dynamic nature of interest rates, use of the 50/50 interest rate forecast beyond 2018/19, it would not be reasonable to interpret direction 11.19 in Order 130/17 as applying indefinitely.

   v. The onus to demonstrate that a request for rates is just, reasonable and in the public interest resides with the Applicant, and it follows that an applicant must be able to bring an application with the form and substance it sees fit

b) Best estimate means an unbiased forecast.

CAC (MPI) 1-8

Part and Chapter:	INV.2.3	Page No.:	26-29
PUB Approved Issue No:	4 c. and 4d. Interest Rate Forecast		
Topic:	Naive interest rate forecast		
Sub Topic:			

Preamble to IR (If Any):

On page 26 of 87 of the Investment Chapter of the GRA, MPI states the following:

> MPI is required to base its rate application on best estimates, and for the 2019 GRA, MPI's management and Board of Directors continue to maintain that the naïve forecast is the best estimate.

Question:

a) Please provide any authority from the Bank of Canada or the United States Federal Reserve upon which MPI relies in support of its use of the naive interest rate forecast as best estimate.
b) Please provide any statements from the Bank of Canada or the United States Federal Reserve over the past 12 months which were considered by MPI in developing its interest rate forecast for the current General Rate Application.
c) Please provide any peer reviewed literature upon which MPI relies in support of its use of the naive interest rate forecast as best estimate.

Rationale for Question:

To understand the basis for MPI's choice to rely on the naive interest rate forecast.

RESPONSE:

a) MPI does not rely on any authority from the Bank of Canada or the United States Federal Reserve to provide support for the Government of Canada (GoC) 10-year bond yield forecast. The Bank of Canada sets the overnight rate, which is not highly correlated with the GoC 10 year bond yield (please see *CAC (MPI) 1-6* for a case in point).

b) In developing its interest rate forecast for the 2019 GRA, MPI considered no statements over the past 12 months from either the Bank of Canada or the United States Federal Reserve. Please also see part a) above.

Dr. Sean Cleary, CFA, the Corporation's expert witness, testified at the 2017 GRA hearing, "Naïve forecasts using existing 10-year Canada yields would have improved forecasting accuracy significantly, reducing percentage forecast error by close to 60%". The Corporation relies on the analysis and findings of Dr. Cleary in support of its position on the use of the naïve interest rate forecast, as well as on updates to this analysis - see *Figure INV-8*. Please also see the response to *PUB (MPI) 1-11 (a)* where the Corporation states that the naïve forecast produces a statistically significant forecast with less bias than the 50/50 forecast, at the 99th confidence level.

c) Please see part b above.

CAC (MPI) 1-9

Part and Chapter:	Part I, Overview	Page No.:	3
PUB Approved Issue No:	5. Corporate Strategic Plan – new direction		
Topic:	New Mission Statement		
Sub Topic:	Achieving the new mission of MPI		

Preamble to IR (If Any):

"The Board of Directors approved a new mission statement focusing on and guiding the core business of MPI:

Exceptional coverage and service, affordable rates and safer roads through public auto insurance.

Benjamin Graham was hired by the Board of Directors as the new President and CEO to lead MPI in achieving this mission. Upon Mr. Graham's appointment, the Minister of Crown Services stated:

"Mr. Graham's international experience will bring new perspectives to the organization and ensure the Crown Corporation is delivering industry best-practice solutions within the public insurance context that we are so proud to offer to Manitobans.""

Question:

Please contrast, in a value added context, MPI's current insurance practices to that of "industry best practice solutions within the public insurance context".

Rationale for Question:

To better understand any short comings relating to MPI's current operations and understand the financial and strategic impact of MPI's new direction and potential impact on basic insurance rates.

RESPONSE:

The new mission statement identifies **where** MPI will be focusing its efforts – coverage, service, affordable rates and safer roads. Applying best practices is **how** MPI will focus its efforts in these areas by leveraging the experience of others in identifying areas for improvement in the MPI and Manitoba context. These comparisons should be done across a broad spectrum – national and international / public and private insurance.

MPI is an insurance company. At the core of any insurance company are three fundamentals of the business supported by operational components:

- Underwriting
- Claims
- Investments

Achieving the revised mission of MPI will be accomplished through focusing on core business and applying best practices to the core business where fiscally prudent to do so. For 2018/19, MPI has identified 8 strategic priorities. Each one of these priorities directly relate to at least one of the 3 core elements of an insurance company. The strategic priorities and the core they relate to are:

- Broker negotiations (claims)
- Repair Trade negotiations (claims)

- Customer Experience (underwriting, claims)
- Product Suite Review (underwriting)
- ALM Implementation (investments)
- Claims Cost Control (claims)
- Capitalization (investments)
- Risk Appetite (underwriting, claims, investments)

Over the past year, MPI has, at a more granular level, taken a number of actions focused on improving the management of the core insurance business. See *Part IV(i)01 Service Delivery Model* for a detailed explanation of the various initiatives that have taken place over the past year that are based upon thorough reviews designed to find solutions that add value and improve customer experience. The Value Management Process has been central to improving the management of the core insurance business.

The cancelation of the Customer Claims Reporting System (CCRS) is a tangible example of the efficacy of the Value Management Process for facilitating appropriately measured decisions concerning the future of an IT project.

As stated above, underwriting and claims are core to any insurance company. Best practice requires the insurance company's Chief Actuary to be a member of the Executive with dotted line reporting to the Board's Audit, Finance and Risk Committee. This was implemented within months of Mr. Graham commencing employment at MPI.

An area of concern has been the increase in the number of long-tail bodily injury claims. By focusing on this core issue, staff have identified a two-pronged approach for addressing the problem. As a result, improved reserving process/methodologies have been developed and a PIPP triaging initiative was implemented to identify, at an earlier stage, claimants who maybe in need of specialized medical treatment. The

primary benefit of triaging is that claimants are getting the medical care they need quicker; an ancillary benefit is a reduction in claims costs.

What was a best practice yesterday may not be today. However, it will always be a best practice to have a corporate culture where staff are empowered to continually seek improvement. The culture at MPI is for staff to collaborate, be innovative and accountable. Living this culture requires staff to question existing practices and adopt best practices be it in any of the contexts mentioned earlier. In doing so, MPI will attain its mission of *Exceptional coverage and service, affordable rates and safer roads through public auto insurance.*

That corporate culture applies to all MPI staff, including those involved in the regulatory process. As such, staff will work collaboratively with the PUB and intervenors to be innovative in identifying efficiencies for these hearings. Doing things the same way but expecting different results will not work. Only questioning the status quo and applying best practices will bring about positive change.

CAC (MPI) 1-10

Part and Chapter:	Part II, Corporate Mission	Page No.:	3
PUB Approved Issue No:	5. Corporate Strategic Plan		
Topic:	Investing in People		
Sub Topic:			

Preamble to IR (If Any):

"Investing in People

- *We empower our employees to provide excellent service. We work together with business, community and road safety partners to fulfil our mission."*

In the past 3 to 5 years MPI engaged in excess of 100 consultants who appeared to have all kinds of excellent skills, but may be lacking in the nuts and bolts skills of running MPI business operations. While these consultants were put in charge of leading MPI business projects and even operations, MPI employees seemed to operate on the side lines.

MPI should be commended that in 2018 Senior Management and the Board of Directors of MPI are, once again, investing in and empowering their employees to run the business of MPI.

Question:

a) Please file a copy of the most recent employee opinion survey, if available, and comment on the results of this survey. If the survey has not taken place, please advise when it may take place and if MPI is willing to share an executive summary of the results.

b) Please provide a brief commentary on the types of investments MPI is making or is planning on making in its employees, the expected results from these investments, and the impact on the need of external consultants.

Rationale for Question:

The employees of MPI, properly trained, provide excellent service to customers and have intimate underwriting and claims field (physical vehicle damage and personal injury adjudication) knowledge. The wisdom gained from this knowledge is input to premium and claims forecasting and cost control and ultimately can positively impact basic insurance rates. To better understand MPI investment in their employees and the expected results going forward.

RESPONSE:

The preamble and rationale to this Information Request assume facts not in evidence and is largely anecdotal. MPI will confine its answer to the germane portion of the question, in a fair and accurate manner, while making note of the prejudicial effect of the premise.

a) MPI has partnered with IBM Kenexa to deliver three surveys between 2015 and 2019. The first survey, completed in 2015, showed an employee participation rate of 86% and an employee engagement rate of 68%. Though positive, management sought to increase employee engagement in order to enhance employee experience and organizational effectiveness. The Corporation enacted a plan to accomplish this and completed a follow up survey in fall of 2016. The results of this survey were outstanding. Employee participation rose to 91% while employee engagement rose to 73%.

b) MPI strives to create and renew a culture of excellence in an effort to attract, retain and motivate top talent. Investment in talent management strategies are designed to ensure the Corporation maintains a complement of employees with the required skills and abilities to meet the changing needs of the business. The need for external consultants depends on the capital

expenditure and the Corporation limits the use of external consultants to situations where the demand for specialized talent is higher than expected or cannot be met through our current workforce or even in the current labour market.

CAC (MPI) 1-11

Part and Chapter:	Part III, Basic Autopac Coverage and Benefits	Page No.:	17
PUB Approved Issue No:	5. Corporate Strategic Plan/ 2018/19 Annual Business Plan		
Topic:	Corporate Priority Review		
Sub Topic:	Product Suite Review		

Preamble to IR (If Any):

"• Product Suite Review
  - o A comprehensive product review is underway, still in its infancy. This review will look for opportunities within the Basic Compulsory, Autopac Extension and SRE insurance products and will specifically consider:
    - o PIPP entitlements and coverage
    - o Basic deductible, TPL, First-Party all-perils coverage MIV
- Appeal Process Review (PIPP and Physical Damage)
  - o A comprehensive review to simplify and improve the various appeal processes for physical damage claims
  - o A review to create efficiencies in the PIPP appeal process."

Question:

Please file a copy of the Project Charter relating to the Product Suite Review.

Rationale for Question:

To better understand the details of the Product Suite Review and the potential impact on basic insurance claims incurred going forward.

RESPONSE:

The Corporation does not have a Product Suite Review Project Charter at this time. The Corporation will file the Project Charter within this proceeding, if possible.

CAC (MPI) 1-12

Part and Chapter:	RSR.4	Page No.:	4
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	RSR lower threshold		
Sub Topic:			

Preamble to IR (If Any):

"The methodology ordered by PUB in the 2018 GRA produces a 2019 lower RSR target of $120 million, which is below the amount of $143 million required for satisfactory financial condition."

Question:

a) Please explain the term "satisfactory financial condition" in the context of the lower RSR target and the RSR purpose "to protect motorists from rate increases that would otherwise have been necessary due to unexpected variances from forecasted results and due to events and losses arising from non-recurring events or factors"
b) Please explain why the 2019 lower RSR target of $120 million is unsatisfactory in the context of the RSR purpose.

Rationale for Question:

The concept of satisfactory financial condition in the context of the RSR/DCAT methodology needs to be clarified.

RESPONSE:

a) The Corporation's Chief Actuary has determined that Basic requires an absolute minimum RSR balance of $143 million as of the beginning of the 2019/20 fiscal year in order for it to remain in satisfactory financial condition. In this context, the term "Satisfactory financial condition" means that, under the base scenario:

- the insurer meets the PUB's assumed minimum Rate Stabilization Reserve (RSR) target; and
- in all plausible adverse scenarios, the statement value of the insurer's assets is greater than the statement value of its liabilities. Scenarios of which were modelled in accordance with accepted actuarial practice in Canada.

The $143 million minimum RSR required for Basic to remain in a satisfactory financial condition is not the "optimal" amount to satisfy the purpose of the RSR. Maintaining anything less than this amount would require the Corporation to report that Basic insurance is in an unsatisfactory financial condition. Should this occur, MPI would either need to request RSR rebuilding fees from Basic rate payers, or consider other options (i.e. transferring funds from other lines of business). Maintaining the RSR at minimum levels does not protect rate payers against rebuilding fees. With no buffer to absorb rate volatility, the RSR is rendered ineffective.

The lower RSR target methodology previously ordered by the PUB (Order 130/17) establishes an RSR target that is already below what is required for satisfactory financial condition. This Order was understood to say that the PUB accepts it is appropriate to (i) report unsatisfactory financial condition for Basic and (ii) reject an RSR rebuilding fee (in some cases) despite the Corporation having unsatisfactory financial condition. The Corporation cannot support this position.

b) See part a).

CAC (MPI) 1-13

Part and Chapter:	RSR.4	Page No.:	5
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	The minimum RSR target		
Sub Topic:			

Preamble to IR (If Any):

"In order for the RSR to be effective, and reduce the incidence of RSR rebuilding fees, the total equity balance of the RSR cannot be at or about the minimum RSR target for a material period of time."

Question:

a) Please explain what is meant by "a material period of time"
b) Please explain why the minimum RSR target level does not provide effective protection again risk as defined by the purpose of the RSR.

Rationale for Question:

To clarify MPI's statement in the preamble.

RESPONSE:

a) Please see CAC (MPI) 1-12.

The purpose of the RSR is:

To protect motorists from rate increases that would otherwise have been necessary due to unexpected variances from forecasted results

and due to events and losses arising from non-recurring events or factors

In this context, the term "material period of time" means that the RSR balance would be expected to move away from the minimum RSR level toward the 'optimal' target RSR over a pre-determined period of time that balances both the need for adequate capital and the potential for rate shock. It should never be the 'plan' for the RSR to remain at the minimum RSR balance for any period of time within the Corporation's control (e.g. within the time period that MPI is able to apply for rate changes or apply rebuilding fees). Operating at the lower RSR target (as opposed to further within the range of the lower and upper RSR target), would not permit MPI to effectively manage the inherent volatility of the business. Operating at the lower RSR target level also offers no protection from the risk the RSR seeks to avoid, that is, falling below the lower RSR target triggering the requirement for RSR rebuilding fees.

The amount of time that it takes to move toward the 'optimal' RSR target, along with the proposed definition of 'optimal RSR target', will be determined as part of MPI's Capital Management Plan. For example, the Capital Management Plan would propose that it is reasonable to build or release capital to the target level over 'X' years subject to a maximum annual RSR build or release of 'Y' percent. MPI will provide a Capital Management Plan in the 2020/21 GRA.

b) See part a) and *CAC (MPI) 1-12*.

CAC (MPI) 1-14

Part and Chapter:	Part VI, RSR	Page No.:	9
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	Establishing a MCT ratio as a dynamic RSR target		
Sub Topic:			

Preamble to IR (If Any):

"This calculated minimum Total Equity balance is then converted to a Minimum Capital Test ratio of 34% for the purposes of establishing a dynamic RSR target. The selected 1-in-40 year risk tolerance is supported by MPI and the PUB based on Board Order 128/15.

Question:

a) Please clarify whether a 34% MCT ratio represents "a dynamic RSR target" going forward, i.e. beyond 2019?
b) Please explain how a 34% MCT ratio would necessarily reflect a minimum Total Equity balance based on a 1-in-40 year risk tolerance beyond 2019.

Rationale for Question:

The 34% MCT ratio does not reflect the risk assessment provided by the DCAT. Rather, it is a result of the lower RSR target calculation derived from the DCAT.

RESPONSE:

a) The Corporation does not suggest that a 34% MCT ratio will necessarily 'dynamically' respond to changes in the Basic risk profile in future years (i.e. beyond 2019). However, absent any significant changes in the risk profile, the

Corporation believes that using the MCT ratio as a means to express the dollar estimates of the minimum RSR target results in a best estimate. The MCT ratio will adjust the capital targets in future years based on growth in the balance sheet, producing a more appropriate forecast. Despite this, the Corporation intends to continue performing the DCAT analyses in each GRA to confirm the most appropriate target for the rating year.

b) A 34% MCT ratio may not reflect a minimum Total Equity balance based on a 1-in-40 year risk tolerance beyond 2019. The Corporation believes however that the MCT ratio is a "best estimate" assumption. As indicated in *Part VI RSR 4.6 Figure RSR-11*, there is a strong directional linkage between the estimated 1-in-40 DCAT-based minimum RSR target and the capital required for 100% MCT. Both estimates declined by approximately 30%, based on the forecasted implementation of the Corporation's new investment portfolio.

CAC (MPI) 1-15

Part and Chapter:	DCAT.1.8	Page No.:	18
PUB Approved Issue No:	**7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17**		
Topic:	Recommendation #3		
Sub Topic:			

Preamble to IR (If Any):

"The Corporation should convert their proposed dollar-based RSR targets into MCT-based RSR targets. MCT-based targets create a dynamic RSR target that responds to changes in risk level and can be more directly compared with other insurers."

Question:

Please explain how any specific MCT ratio would necessarily reflect the minimum Total Equity balance based on a 1-in-40 year risk tolerance consistent determined by the current DCAT methodology for the calculation of the RSR target range in 2020 and beyond.

Rationale for Question:

The MCT ratio does not reflect the risk assessment provided by the DCAT. Rather, it is a result of the lower RSR target calculation derived from the DCAT.

RESPONSE:

Please also see the Corporation's response to Information Request *CAC (MPI) 1-14*. The Corporation uses the MCT ratio as a means to forecast future DCAT-based RSR target calculations. The Corporation does not take the position that the MCT ratio can

replace the DCAT exercise in 2020 and beyond. The 34% MCT ratio is derived from the 1-in-40 DCAT scenario.

CAC (MPI) 1-16

Part and Chapter:	DCAT.1.8	Page No.:	18
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	Significant adverse claims costs event		
Sub Topic:			

Preamble to IR (If Any):

"If there is a significant increase in projected claims costs, management should be prepared to increase rates as quickly as possible."

Question:

a) Please explain how this condition differs from, and is not captured by, the high-loss adverse scenario in the DCAT.
b) Please explain how the DCAT methodology might be adapted to capture this risk if it is not captured by the current high-loss scenario.

Rationale for Question:

Risks to MPI should be captured in the DCAT methodology and the RSR determination as much as possible.

RESPONSE:

a) MPI views the recommendation from the Chief Actuary (that the Corporation be very responsive to the latest claims trends in its pricing, specifically in light of the break-even pricing of the Basic product) as the natural response to adverse claims trends or events. Notwithstanding its use of the high-loss adverse scenario in the

DCAT, MPI would still be expected to make best estimate forecasts and apply for break-even rates per Accepted Actuarial Practice, in each GRA.

b) The DCAT captures the management response to adverse claims trends, specifically in the 3 and 4 year adverse scenarios. This is one of the main reasons why the 3 and 4 year adverse scenarios are the most significant *before* management action (i.e. because assumed rate increases are applied in years 3 and 4). The most adverse scenario *after* management actions is the two-year scenario. Given the period of time between the Corporation's rate application and the earning of the Basic policy revenue, MPI cannot immediately respond to sudden, unexpected increases in claims costs. Generally, a minimum 12-36 month delay period can be expected (i.e. if the 2018/19 actual results are poor, MPI will apply for rate changes in 2020/21, which will earn over 2020/21 and 2021/22).

CAC (MPI) 1-17

Part and Chapter:	DCAT.6	Page No.:	72
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	Maximum Capital Target		
Sub Topic:			

Preamble to IR (If Any):

"The DCAT-based minimum capital target utilized by the PUB is, by definition, calculated to be the absolute minimum amount of capital *including* management action that Basic can hold to withstand all 1-in-40 adverse scenarios. This minimum amount should never be considered an optimal capital level for a financially prudent entity. A capital range above the minimum amount is needed for the Corporation to be fiscally responsible and to allow the Rate Stabilization Reserve to achieve its purpose."

Question:

a) Please clarify that the minimum capital target is calculated from the DCAT determination of the Total Equity required to withstand all 1-in-40 adverse scenarios, i.e. it is derivative of the DCAT calculation of the lower RSR target threshold.
b) Please explain the time horizon over which "the minimum capital target should never be considered an optimal capital level"? Any one year?
c) Please explain the value of the minimum capital target to the determination of sufficient Total Equity if the minimum is never optimal.

Rationale for Question:

To clarify the concept of a minimum capital target and its relationship to the RSR lower threshold level.

RESPONSE:

a) The minimum capital target methodology, *as proposed by MPI* is a calculation from the DCAT analysis to determine the minimum amount of Total Equity required such that Basic can withstand all 1-in-40 year adverse scenarios *including* management actions. MPI's lower RSR target should be considered a the minimum capital target because any amount below this level would place the Corporation in an unsatisfactory financial condition and require rate increases, RSR rebuilding fees, or transfers from other lines of business to restore it to a satisfactory financial condition.

Assuming a completely unbiased forecast and approval of the Capital Maintenance Provision, if the Corporation had an RSR balance exactly equal to the lower RSR target, there would be an approximately 50% chance that the balance will fall below that lower target within the next 12 months. Assuming the same scenario except with a biased (not best estimate) interest rate forecast, and no Capital Maintenance Provision (i.e. the conditions present in the last 3-5 years), the possibility that the RSR balance will fall below the lower RSR target would greatly exceed 50%. The Corporation's position is that managing the RSR in the same manner as the recent past, is far from optimal, inconsistent with its purpose of the RSR, and is of no benefit to rate payers.

b) The purpose of having an RSR range above the minimum capital requirement is to manage normal financial volatility *without* triggering frequent rate increases and/or RSR rebuilding fees. The likelihood of the RSR balance falling below the minimum RSR target depends on the position of the current RSR balance within the RSR range. Adverse financial events will cause the RSR balance to fall below the minimum target. As per the DCAT report, the Corporation assumes that, if the RSR balance falls below the minimum target, the RSR will be 'rebuilt' using 2% incremental RSR rebuilding fees. The time required to rebuild the RSR will be situational, and based on the specific adverse financial conditions. While severe financial events may warrant significant management action, for the purposes of DCAT modeling, and based on historical events, the Corporation believes it is appropriate to assume a 2% rebuilding fee. The minimum capital target should

never be considered as the equivalent of an optimal capital level under any time horizon.

c) Every other P&C insurer in Canada has minimum capital requirements, whether they be regulatory or internally set. These minimum capital requirements are just that: 'minimums', which are not optimal requirements and must not be viewed as such by regulators, boards, or other stakeholders. The Corporation's minimum capital target represent the absolute minimum amount of capital required to maintain the Corporation in a satisfactory financial condition. It is not an 'optimal' or desired target.

CAC (MPI) 1-18

Part and Chapter:	RSR.4.5.1.1	Page No.:	11
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17		
Topic:	DCAT Modified Base Scenario and Treatment of Capital Maintenance Provision (CMP)		
Sub Topic:			

Preamble to IR (If Any):

Figure RSR- 1: Base Scenario: Includes proposed 0.1% rate increase in 2019/20.

Question:

Please provide the Base Scenario using the 50/50 interest rate forecast.

Rationale for Question:

The naïve interest rate forecast biases the Base Scenario and is not robust to expected interest rate hikes.

RESPONSE:

The Corporation does not accept as accurate the stated rationale for this question. Indeed, the available evidence supports an opposite conclusion, namely, that the naïve interest rate forecast is an unbiased best estimate, consistent with accepted actuarial practice, and does not bias the base scenario. While the Corporation produces the requested information below, it does so without endorsing the results as a best estimate.

Figure 1: Base Scenario with 50-50 Forecast: Includes proposed 0.1% rate increase in 2019/20

Line No.		2018/19	2019/20	2020/21	2021/22	2022/23
1	*(in millions)*					
2	Net Income	$145	$5	$7	($9)	($20)
3	Retained Earnings	$263	$277	$293	$294	$286
4	AOCI[1]	($52)	($44)	($35)	($25)	($13)
5	Total Equity[2]	$263	$277	$293	$294	$286
6	MCT Ratio[3]	72.73%	69.42%	67.51%	64.05%	58.04%
7	1. Accumulated Other Comprehensive Income					
8	2. Total Equity = Retained Earnings + AOCI					
9	3. Minimum Capital Test Ratio based on the 2017 MCT Guideline					

CAC (MPI) 1-19

Part and Chapter:	Part I, Overview	Page No.:	16 and 17
PUB Approved Issue No:	7. DCAT and RSR		
Topic:	Investment risk tolerance		
Sub Topic:			

Preamble to IR (If Any):

"Given the purpose of the RSR, the investment risk tolerance can vary. There will be minimal investment risk tolerance when the RSR balance is below the DCAT minimum; however, there will be moderate investment risk tolerance when the RSR is within the approved range."

Question:

For greater clarity, please explain why the investment risk tolerance is lower if the RSR balance is below the DCAT minimum and higher if the RSR is within the approved range.

Rationale for Question:

To obtain clarity on the investment risk tolerances at different RSR balances.

RESPONSE:

If the RSR balance were to fall below the minimum amount required to maintain an actuarially-determined satisfactory financial condition, the Corporation would be more financially vulnerable than it would be if Basic were sufficiently capitalized (i.e. the risk of total equity falling to zero, rate increases and RSR rebuilding fees would increase in

this scenario). It would be imprudent in such circumstances for the Corporation to exacerbate its downside risk by increasing its appetite for investment risk.

Notwithstanding the above, the Corporation could re-evaluate its tolerance for risk if:

- the RSR target methodology were known, predictable, and stable from year to year,
- the RSR target methodology were based on best estimates and produced a range above the minimum capital required for satisfactory financial condition;
- rates for Basic were set using best estimates (specifically the interest rate forecast); and
- Basic were able to maintain adequate capital within the RSR range, through a capital maintenance and a build/release provision.

For a further discussion on risk tolerance, please see *CAC (MPI) 1-96*.

CAC (MPI) 1-20

Part and Chapter:	Part I, Overview	Page No.:	17 and 18
PUB Approved Issue No:	7. DCAT and RSR		
Topic:	RSR amount as at February 28, 2018 for 2018/19		
Sub Topic:			

Preamble to IR (If Any):

"The Board of Directors has determined that the minimum amount of the RSR is **$201** million, as of February 28, 2018 **for the 2018/19 fiscal year**. In order to provide a greater buffer to the capital reserve so that it is not sitting at $1 above unsatisfactory financial status, the Board of Directors transferred funds to raise the RSR to $211 million. Determination of the range for the RSR is based upon risks facing MPI. The recent changes to how the Corporation manages investments has significantly reduced the risks its faces. Accordingly, MPI is seeking for the 2019/20 fiscal year approval of an RSR range of 34% to 85% MCT (**forecast equivalent to $143 million to $305 million as at February 28, 2019).** MPI is forecasting that as of February 28, 2020 it will have an RSR of 70% ($280 million)." **emphasis added**

Question:

Please clarify whether MPI needs a minimum RSR amount of $201 million or $143 million as at February 28, 2019 based on the DCAT analysis.

Rationale for Question:

To clarify the required minimum RSR amount as at February 28, 2019.

RESPONSE:

MPI's lower RSR target is estimated at 34% MCT ($143 million) as of March 1, 2019 based on the 2018 DCAT report. This target amount reflects the planned implementation of the new Basic investment portfolio in the 2019/20 fiscal year, which is why the target is lower in dollar terms than the 2018/19 target.

CAC (MPI) 1-21

Part and Chapter:	Part VI, Rate Stabilization Reserve	Page No.:	4
PUB Approved Issue No:	7. Update of DCAT and target capital analysis		
Topic:	Lower RSR target, satisfactory financial condition and best estimates		
Sub Topic:			

Preamble to IR (If Any):

"The Lower RSR Target must be greater or equal to the minimum capital required to achieve satisfactory financial condition. MPI cannot support any methodology that produces an RSR target that is lower than the amount required for satisfactory future financial condition. The methodology ordered by PUB in the 2018 GRA produces a 2019 lower RSR target of $120 million, which is below the amount of $143 million required for satisfactory financial condition. For this reason, the Corporation will not be using the 2018 PUB Order methodology. MPI is applying for a lower RSR target of $143 million based on the minimum amount for satisfactory future financial condition"

"Any RSR target methodology must be based on best estimates."

Questions:

a) Please provide, based on best estimates, a chart listing the 'satisfactory financial condition' RSR targets for the last five fiscal years and the next three forecasted fiscal years along with the supporting documentation and calculations.
b) Please file a copy of the Actuarial Standards of Practices (the related sections) describing and defining 'best estimates' and satisfactory financial condition'.

Rationale for Question:

To clarify the potential range of the lower RSR target based on 'satisfactory financial condition' and 'best estimates' and review the related actuarial obligation documentation.

RESPONSE:

a) A chart listing the 'satisfactory financial condition' RSR targets for the last five fiscal years and the next three forecasted fiscal years is reproduced at Figure 1 below.

   The minimum amount required to maintain the Corporation in a satisfactory financial condition, set out in each of the DCAT reports, reflects the DCAT methodologies, company risk profile and best estimate forecasts available at the time the respective reports were created. For example, the DCAT reports from 2013 through 2015 use the Standard Interest Rate Forecast as a 'best estimate,' because the PUB ordered the use of that rate forecast. In those years, the minimum amount required to place the Corporation in a satisfactory financial condition was higher because the DCAT model correctly indicated that the Standard Interest Rate Forecast was more risky (i.e. more likely to turn out unfavorably) than a naïve interest rate forecast. The Corporation will no longer use a interest rate forecast in its DCAT reports if it believes the forecast is not a best estimate MPI cannot cede control of its forecasts.

Figure 1: Historical Targets for Satisfactory Financial Condition

Line No.	DCAT Report	Fiscal Year	Minimum for Satisfactory Financial Condition
1	**2013**	2013/14	$172M[1]
2	**2014**	2014/15	$213M
3	**2014**	2015/16	$213M[2]
4	**2015**	2016/17	$231M
5	**2016**	2017/18	$159M
6	**2017**	2018/19	$201M
7	**2018**	2019/20	$143M
8	**2019**	2020/21	$155M[3]

9 [1] Prior to the 2014 DCAT, targets were set based on RSR balance not Total Equity
10 [2] Starting with the 2015 DCAT, the Corporation set targets a year later
11 [3] An estimate based off of the 2018 DCAT maintaining 34% MCT Ratio

b) Please find below a link to the Canadian Institute of Actuaries Standards of Practice. Section 1120.12 thereof defines the term 'best estimate' while Section 2520.09 defines the term 'satisfactory financial condition'.

http://www.cia-ica.ca/docs/default-source/standards/sc030119e.pdf

CAC (MPI) 1-22

Part and Chapter:	Part VI, Rate Stabilization Reserve	Page No.:	8
PUB Approved Issue No:	7. Update of DCAT and target capital analysis		
Topic:	MCT		
Sub Topic:			

Preamble to IR (If Any):

"As described in DCAT.1.4 and RSR.4.5.1.3, application of the PUB methodology from the 2018 Order would require MPI to set the *lower RSR target* using:

(i) A DCAT-based iterative modelling approach
(ii) Over a two-year time horizon
(iii) At a 1-in-40 year (97.5th percentile) outcome level
(iv) Using a 50/50 interest rate forecast, and
(v) After routine management / regulatory actions.

This methodology produces a lower RSR target of $120 million (27% MCT) for the 2019/20 year. For reasons outlined above, MPI has not adopted this methodology. The methodology applied for by MPI (described below in *RSR.4.5.1.2*) produces a lower RSR target of $143 million (34% MCT) for the 2019/20 year. MPI has also proposed that this lower RSR target be converted to an MCT ratio of 34% rather than a dollar amount."

Question:

Please explain why it is important to convert the RSR amount, determined by the DCAT modeling approach, into an MCT ratio.

Rationale for Question:

To understand the rationale and purpose for converting the RSR amount into an MCT ratio.

RESPONSE:

MPI has historically established lower (and more recently upper) RSR targets as a static total equity amount, which was determined and supported by DCAT modelling. As the total equity amount required is determined at a particular point in time and on certain assumptions existing at that point in time, that amount may not be adequate or reasonable for purposes of measuring the Corporation's capital adequacy in the future (as circumstances may have changed in the interim). For example, if the Corporation's business grew at a faster pace than anticipated, the Corporation would need to hold additional capital. Additionally, the amount of capital required would necessarily change if the Corporation's balance sheet characteristics changed as a result of a shift in the mix of its investment assets.

Utilizing an MCT-based target (rooted in DCAT modelling), provides a dynamic target that adapts with the business and ensures a target capital level that is truly sufficient and responsive to the risks of the Corporation on each date the metric is calculated.

Additionally, while the capital required expressed as a total equity dollar amount can change substantially from year to year, the associated MCT percentage target should fluctuate much less and provide a more consistent yearly target.

CAC (MPI) 1-23

Part and Chapter:	Part VI, Dynamic Capital Adequacy	Page No.:	Pages 11 and 16
PUB Approved Issue No:	7. Update of DCAT		
Topic:	Maximum Capital Target		
Subtopic:			

Preamble to IR (If Any):

PUB Order 130/17 directive 11.21 states that "For fiscal year 2017/18, the upper threshold for Basic Total Equity will be $325 million, based on the iterative modelling of a 1-in-40 scenario over a two-year time horizon after routine management/regulatory actions." (From Page 16 of DCAT report). Yet on page 11 of the DCAT report the Corporation indicates that the maximum was proposed based on modeling results before management action.

Question:

a) Please provide the justification for calculating the maximum proposed level of the RSR based on modeling results before management action while the PUB Order clearly indicates the results should be after management actions
b) Can the Corporation confirm that the maximum proposed level of the RSR based on modeling results after management action would be $283 million? Please give the correct figure if this is not confirmed.

Rationale for Question:

To understand why the Corporation did not follow the direction of the PUB order and the impact of not using the after management action scenarios.

RESPONSE:

The rationale to this Information Request assumes facts not in evidence and is largely anecdotal. MPIC will confine its answer to the germane portion of the question, in a fair and accurate manner, while making note of the prejudicial effect of the premise.

a) The Corporation followed the above-mentioned direction of the PUB contained in Order 130/17 (the "Direction"), as it pertained to the 2018 GRA and fiscal year 2017/18, and set the upper threshold for Basic Total Equity to $325 million. The Corporation outlined its reasons for not adopting the approach in the 2019 GRA in *Part VI DCAT.1.7.3*.

b) Confirmed.

CAC (MPI) 1-24

Part and Chapter:	Part VI, DCAT	Page No.:	70, 71
PUB Approved Issue No:	7. Update of DCAT 10. Claims forecasting		
Topic:	IFRS 17		
Sub Topic:			

Preamble to IR (If Any):

"International Financial Reporting Standards (IFRS)

In May 2017, the IASB issued IFRS 17 on the accounting for insurance contracts. The changes under IFRS 17 would come into effect in 2021/22, but could potentially be implemented earlier by the Corporation. From a DCAT perspective, the most significant financial risk from IFRS is from changes in the discounting of policy liabilities. Currently, the policy liabilities are discounted based on the assets backing the liabilities (MPI uses fixed income assets) plus a provision for adverse deviation (PfAD) on the assumed investment return. However, under IFRS 17 the liabilities will be discounted using a risk-free rate plus a liquidity premium. The provision for adverse deviation will be removed or reduced under IFRS 17. As of May 31, 2018, if the yield on the Corporation's government bond portfolio was used as a proxy for the 'risk free rate', then the discount rate used in the valuation of Basic claims liabilities would decrease by approximately 50 basis points. However, the actuarial PfAD (which is being eliminated under IFRS) is currently set at 50 basis points, so the two amounts would largely offset (in theory). A liquidity premium would then increase the discount rate, which would decrease the present value of the claims liabilities with no offsetting impact from the fixed income portfolio, causing a favourable impact to net income. If the Corporation increases its allocation to higher yielding bonds, then there is greater risk that these amounts will not offset."

Question:

a) Please confirm that the provision for adverse deviation will be removed or reduced under IFRS 17. Please explain the reasons for the removal or reduction of the PfAD under IFRS 17.
b) Please advise whether MPI has performed a preliminary IFRS 17 financial impact analysis. If yes, please elaborate on the results of this preliminary assessment.

Rationale for Question:

It appears from the Preamble MPI does not expect a significant negative financial impact from the implementation of IFRS 17 to the bottom line for basic insurance. The questions are meant to clarify these expectations.

RESPONSE:

a) MPI cannot confirm the handling of provision for adverse deviation under IFRS 17. However, if claims liabilities were discounted based on a risk-free rate consistent with the expected timing of the liability cash flows, then the need for a provision for adverse deviation, under IFRS 17 or current actuarial Standards of Practice, would be greatly reduced.

b) MPI has not conducted an IFRS 17 financial impact analysis.

CAC (MPI) 1-25

Part and Chapter:	**Part VI, DCAT**	**Page No.:**	**1974-1975**
PUB Approved Issue No:	**7. DCAT**		
Topic:	**DCAT**		
Sub Topic:	**Impact of IFRS Changes on DCAT**		

Preamble to IR (If Any):

Pages 1974-1975 say:

In May 2017, the IASB issued IFRS 17 on the accounting for insurance contracts. The changes under IFRS 17 would come into effect in 2021/22, but could potentially be implemented earlier by the Corporation.

From a DCAT perspective, the most significant financial risk from IFRS is from changes in the discounting of policy liabilities. Currently, the policy liabilities are discounted based on the assets backing the liabilities (MPI uses fixed income assets) plus a provision for adverse deviation (PfAD) on the assumed investment return. However, under IFRS 17 the liabilities will be discounted using a risk-free rate plus a liquidity premium. The provision for adverse deviation will be removed or reduced under IFRS 17.

As of May 31, 2018, if the yield on the Corporation's government bond portfolio was used as a proxy for the 'risk free rate', then the discount rate used in the valuation of Basic claims liabilities would decrease by approximately 50 basis points. However, the actuarial PfAD (which is being eliminated under IFRS) is currently set at 50 basis points, so the two amounts would largely offset (in theory). A liquidity premium would then increase the discount rate, which would decrease the present value of the claims liabilities with no offsetting impact from the fixed income portfolio, causing a

favourable impact to net income. If the Corporation increases its allocation to higher yielding bonds, then there is greater risk that these amounts will not offset.

More research is required on this topic over the next fiscal year; however, the Corporation appears to be well positioned financially to make this transition, especially relative to insurance companies that are discounting their liabilities using assets with much higher assumed returns.

Question:

a) What is the "scope" of the research being taken related to this topic over the next fiscal year? (i.e. What major questions would be asked, and which ones will not be asked?)

    i. Is the basis (formula) for the DCAT calculation open for discussion, for example?
    ii. For the RSR?

b) Explain why and how MPI is "well positioned financially" to make this transition.

Rationale for Question:

The proposed IFRS accounting policy changes may have a material impact on key metrics, and key decisions. It is important to understand the nature, materiality, and timing of both the accounting changes and their implications on key metrics and key decisions.

RESPONSE:

a) MPI does not have a position on these matters at this time. The scope of the research from an actuarial perspective will require MPI to work with an externally-appointed actuary to determine how the policy liability valuation will be impacted by the changes from IFRS 17 (e.g. conduct a comparative October 31, 2018 liability valuation using assumed IFRS 17 rules). As the Corporation comes to

better understand these impacts, it will develop a formal recommendation on potential impacts to the DCAT or RSR methodologies.

b) MPI believes it is well positioned to handle the potential IFRS 17 impacts related to policy liabilities because these liabilities are currently discounted based on a duration and dollar matched, low risk, fixed income portfolio. Insurers who match their claims liabilities against more risky asset types (i.e. equities) would be expected to have a larger financial impact from a move to a risk-free (or close to risk free) discount rate. However, MPI is still working toward fully understanding the potential IFRS 17 impacts.

<u>**CAC (MPI) 1-26**</u>

Part and Chapter:	**Part III, Basic Autopac Coverage and Benefits**	**Page No.:**	**6**
PUB Approved Issue No:	**9. Cost of operations and cost containment measures**		
Topic:	**Cost avoidance and cost control**		
Sub Topic:			

Preamble to IR (If Any):

"A single public administrator of the public auto insurance plan delivers certain efficiencies that further contribute to the mission of comprehensive coverage with affordable rates, namely:

- Consistent interpretation and application of plan and the coverage provided under it
- Avoidance of extraneous administrative costs
- The ability to improve the plan and make it more responsive to the needs of the public with greater ease
- A better control of costs by leveraging synergies with repair shops, medical clinics and business partners"

Question:

a) Please provide an explanation and details of extraneous administrative costs that are being avoided as they relate to basic insurance.

b) Please provide examples of costs that are being controlled by leveraging synergies with repair shops, medical clinics and business partners. Please explain how these cost synergies are reflected in the operating and/or claims incurred forecasts used for rate making purposes.

Rationale for Question:

To better understand the management and control of costs (operating and claims) by MPI leveraging its single public auto insurer status.

RESPONSE:

a) The Corporation, as the single public administrator of the public insurance plan in the Province, is able to achieve lower costs (which includes avoidance of extraneous or duplicate administrative costs) in a number of functional areas as compared to other Canadian automobile insurers including those in a multi-insurer, private insurance environment. These lower costs are a result of the Corporation's business model and economies of scale from being the sole public auto insurer, as reflected in the benchmarking results (see: *Part IV(i) 02 BMK Benchmarking*). Specific areas where MPI incurs lower administrative costs include:

- Sales, Marketing and Distribution Management, including:
  - No marketing of compulsory products is required
  - Training of direct sales agents (MPI employees engaged in renewal and new insurance processing)
  - Market research analysis, development of advertising campaigns and external communications materials for public and brokers
  - Broker training, support and analysis

- Costs associated with Development and Maintenance of the Basic line of business, (i.e. Product Development, Underwriting and Policy Processing), including:
  - Conducting product research
  - Determining underwriting rules and policy development
  - Monitoring product performance
  - Updating and maintaining policy information
  - Responding to policy holder enquiries

- Claims processing costs (i.e. Adjusting and Appraising and Legal support of Claims), including:
    - Verifying policy coverages and limits, setting and maintaining reserves
    - Confirming entitlement, negotiating and settling and paying claims
    - Providing legal advice to adjusting staff, providing legal opinions
    - Legal research, preparing and taking cases to trial, litigation, negotiating out-of-court settlements, managing attorney represented and claim files in litigation

b) Examples of costs that are being controlled by leveraging synergies with repair shops, medical clinics and business partners include the following:

- Bodily injury claims costs
- Physical damage claims costs
- Overall claims costs (frequencies).

Claims (and transaction) costs are controlled in part by maintaining minimum standards/agreements/guidelines (e.g. accreditation programs, fee schedules,) with repair shops and medical clinics, against which the quality and cost of repairs, as well as health and rehabilitation services, are measured.

The Corporation also collaborates with Manitoba's collision repair industry to ensure that it and the Corporation are able to effectively and efficiently respond to the emerging trends and significant changes underway within the industry. For example, the Corporation created and opened the state-of-the-art J.W. Zacharias Physical Damage Research Centre. The Centre enables technicians to work closely with the repair industry to provide training on new and emerging repair techniques and equipment. This results in cost savings for the repair industry and helps to ensure Manitoba vehicles are repaired to manufacture specifications, protecting the safety of all road users. See: *Part VII, LP Loss Prevention*.

As another example, recovery from injury is maximized using multi-disciplinary teams (health practitioners) in the management of bodily injury claims, which in turn helps to minimize costs incurred under PIPP.

In addition, partnerships with community groups and law enforcement agencies to promote road safety and implement safety and loss prevention initiatives, are formed to reduce collisions, claims and claims costs (e.g. External Stakeholder Committee on Loss Prevention; MADD Canada; Provincial Road Safety Committee).

Cost savings achieved via leveraged partnerships are reflected in claims costs incurred. Service and fee agreements and compensation controls help to stabilize future claim costs and increase predictability. The cost savings and the increase in the predictability of future claims costs are factored in the operating and claims incurred forecasts used in ratemaking.

For additional comments reinforcing MPI's strategic importance of collaborating with business partners, see: *Part VIII, AR Annual Reports*:

- Manitoba Public Insurance 2017 Annual Report
- 2017 -2021 Corporate Strategic Plan

CAC (MPI) 1-27

Part and Chapter:	**PART V, Expenses**	**Page No.:**	**23**
PUB Approved Issue No:	**9. Cost of Operations**		
Topic:	**Staffing and Economic negotiated salary increases**		
Sub Topic:	**Retention of skilled staff**		

Preamble to IR (If Any):

On page 23 Part V, Expenses in Figure EXP – 11, it lists negotiated salary rate increase ranging from as low as 0.00% to as high as 2.75%. The Normal Staffing compliment is listed in Figure EXP – 12 and is at 1,860.9 FTEs at February 28, 2018 and is forecasted to be 1,874.1 FTEs as at February 28, 2019 and is expected to decrease to 1,853.1 FTEs in 2022/23.

On page 15 Part V, Expenses Exp.3.2, it states that MPI exceeded its cost containment target for 2017/18 by $1.3 million for total expense savings of $3.9 million.

Question:

a) Please confirm MPI does not pay performance bonuses to employees and management.
b) Please elaborate whether MPI is considering performance based compensation plans for its employees going forward.
c) Please elaborate on MPI's skilled employee retention strategy going forward as MPI focuses on its core business operations.

Rationale for Question:

With changing demographics, including transitioning to the millennium cohort, it is important to understand whether MPI has an employee retention and engagement

strategy going forward to deliver on its core business goals and objectives. The employee skill set may impact future operation and claims incurred costs.

RESPONSE:

a) The Corporation does not pay performance bonuses to employees or management. MPI has updated its Pay Bands and compensation practices to an annual merit increase on the achievement of performance outcomes. All employees are eligible for performance based merit adjustment of up to a maximum of 5% which is applied to their base salary. However if the employee is at the top of their band and their superior performance warrants a merit increase, merit increase is paid in lump sum. Employees who do not achieve performance outcomes do not receive an annual merit increase.

b) The wages and benefits of the Corporation's unionized employees are determined through the collective bargaining process. The compensation model for the Corporation's non-unionized and management employees ensures that these employees are fairly compensated and recognized for their professional abilities as well as their achievement of goals and objectives. An aspect of the compensation model is the annual merit increase based on the achievement of performance outcomes of the year. Eligibility for a merit increase is dependent on the outcome of a performance review.

c) The overall talent management strategy of the Corporation is to attract, retain, recognize and reward high performing employees through fair wages, the employee recognition program, training and development opportunities, and employee engagement. Employees are recognized and rewarded for achievement of individual objectives, corporate objectives and for professional competency (meeting our corporate values, driving organizational success, and displaying the key behaviours).

CAC (MPI) 1-28

Part and Chapter:	PART V, Expenses	Page No.:	32
PUB Approved Issue No:	9. Cost of Operations		
Topic:	Special Services		
Sub Topic:			

Preamble to IR (If Any):

Per PART V, page 32, Expenses, Special services expense for 2017/18 are reported to be $6,867,000 and forecasted for 2018/19FB to be $7,790,000.

Question:

Please prepare, by expense account category, a detailed analysis comparing the 2017/18 actual to the 2018/19FB amounts with explanations and rationale for each significant expenditures.

Rationale for Question:

To better understand the purpose of each special services expenditures and how it benefits basic insurance.

RESPONSE:

Please see below.

Figure 1: List of Major Special Services Category - Total Corporate

Line No.	Special Services Category	2017/18A	2018/19FB	Difference
1	*(C$000s, except where noted)*			
2	Special Services - Other	4,421	4,574	153
3	PIPP Mediation Pilot	431	576	145
4	Surveys/Evaluations-Corporate	314	243	(71)
5	Employee Opinion Survey	-	150	150
6	Customer Service Standard	-	314	314
7	Surveys/Eval-Ext Products	-	56	56
8	Safety Survey - Traffic Safety Culture	-	150	150
9	Other	1,701	1,727	26
10	Total Special Services	6,867	7,790	923

Included in the Special Services – Other $4.6M for 2018/19FB is $1.5M for the CEO for executive strategic planning purposes to allow the new CEO to implement any strategic plans as desired through consultation with and direction from the Board of Directors. This was included in the budget in order to allow the CEO to effectively manage the Corporation and bring long-term success to Basic. Also included in the $4.6M for 2018/19FB is $400,000 for the Finance Division relating to consulting services for International Financial Reporting Standards, a significant and required accounting standard policy change, to be researched and implemented over the next several years.

Customer Research projects account for the increase of $314,000 relating to Customer Service Standards and $150,000 relating to Traffic Safety Culture Surveys.

Figure 2: (Ref. Figure 1, line 2) Special Services - Other predominately relates to consulting services. Key examples include:

Line No.		2017/18A	2018/19 FB
1	*(C$000's except where noted)*		
2	Projects	1,439	1,406
3	Buildings *	144	137
4	MNP - Acting CFO	971	-
5	Strategic Planning	-	1,500
6	Pension Actuary	41	-
7	Investment Strategies	440	100
8	Gartner	530	661
9	IBA Agreement	250	250
10	IFRS	-	400
11	**Total**	**3,814**	**4,454**
12	** Fire protection & property tax appeals*		

Figure 3: (Ref. Figure 1, line 9) Other

Line No.		2017/18A	2018/19 FB
1	*(C$000's except where noted)*		
2	Auction Fees	33	31
3	Auditor Fees	217	212
4	Actuary Fees	113	90
5	Credit Rating Services	18	14
6	Security	836	804
7	Diversity	207	225
8	Misc. Surveys	66	103
9	Misc. Services	211	247
10	**Total**	**1,701**	**1,726**

CAC (MPI) 1-29

Part and Chapter:	PART V, Expenses	Page No.:	33
PUB Approved Issue No:	9. Cost of Operations		
Topic:	Building closures		
Sub Topic:			

Preamble to IR (If Any):

"Forecasting Assumptions

Annually, MPI assesses its physical capacity to run operations in determining the optimum levels for cost containment and customer service. As presented in last year's GRA, it was expected the Corporation would close the Flin Flon Claims Centre and the Pacific Avenue Service Centre. These closures have both been completed with savings to occur in the 2018/19 fiscal year. For the Pacific Service Centre this is one year sooner than expected. Most other expenses related to building costs have a 0% CPI increase for 2018/19, with CPI increases applied in 2019/20 and onward."

Question:

Please prepare and file the building disposition analysis relating to the Flin Flon and Pacific Avenue centres.

Rationale for Question:

In addition to reducing building expenses due to the closure of these facilities, obtain an understanding, that on disposition of these buildings, did MPI generate a capital gain or loss.

RESPONSE:

The reductions in the building budgets for 2018/19 for the corporate operation of the Pacific and Flin Flon buildings were (in $000):

Pacific – $324
Flin Flon - $88

In order to determine a capital gain or loss, upon disposition MPI adjusted the sale prices of these Service Centres to account for the costs associated with their sales.

Sale of Pacific Avenue Service Centre:

	($000)
Sale Price	2,535
Costs associated with sale	(83)
Asset Cost	(723)
Gain on Sale of Property	1,729

Sale of Flin Flon Service Centre:

	($000)
Sale Price	90
Costs associated with sale	(8)
Asset Cost	(52)
Gain on Sale of Property	30

CAC (MPI) 1-30

Part and Chapter:	PART V, Expenses, Figure EXP 42	Page No.:	62, 63
PUB Approved Issue No:	9. Cost of Operations		
Topic:	Basic capital expenditures by project		
Sub Topic:			

Preamble to IR (If Any):

Question:

a) Please elaborate on the reasons for the Technology Risk Management project, in an amount in excess of $3 million per year, appears each year for 5 years in Figure EXP 42.

b) The Finance Re-engineering project projected costs add up to $11,364,000 from LTD actual to 2020/21. Please provide the Value Management business case supporting the $11.4 million project costs or an explanation detailing the derivation of this amount.

c) The Legacy Systems Modernization projected costs add up to $58,608,000 from 2018/19 to 2022/23. Please provide the Value Management business case supporting the $58.6 million project costs or an explanation detailing the derivation of this amount.

Rationale for Question:

To better understand the source of the projected values for the projects listed in the question and to understand the rationale for the Technology Risk Management project being budgeted for each of the next five years.

RESPONSE:

a) The Technology Risk Management (TRM) Program regularly invests in technology systems and processes, ensuring that existing technologies stay on supported versions and that technology risks are addressed through process and technology improvements. Investments are identified and prioritized annually. For the amounts noted in *Figure EXP-42*, the 2018/19 program budget is spread across 4 key areas: Application Risk Management, Infrastructure Risk Management, Information Security Risk Management and Risk Registry Remediation.

   TRM aligns to the following implications and recommendations made by Gartner and included in the latest Benchmarking Findings and Recommendations – Executive Report; "With the accomplishment of modernization and technical updates, MPI should maintain IT assets and continue to invest in technology refreshes to avoid significant capital outlays in future years" (please see *BMK Attachment A, pdf page 6*)

   For budgeting and forecasting purposes, the Corporation includes TRM in subsequent fiscal years with the capped amount noted in *Figure EXP-42* and subject to an annual review of investments (Value Management process).

b) As noted in the *Part IV VM.1.17*, one of the current year project objectives is to complete the detailed business case for the full Finance Re-engineering project. The detailed business case (being developed in 2018/19) will support the future project costs. The $11.4 million figure includes funds expensed in prior years relating to the initial project work and referenced in the value management section of the Application along with Basic's portion of the current year project work. The remaining future amounts relate to initial estimates of the cost of the project (estimated in 2015 by Deloitte) and the Corporation will update them once the detailed business case is completed in the current fiscal year.

c) The Legacy Systems Modernization forecast is a placeholder for project costs at this time. The 2018/19 Technology Modernization Assessment project will be

developing a detailed business case to present to the Corporation's Planning and Technology Committee in February 2019.

CAC (MPI) 1-31

Part and Chapter:	PART V, Expenses, EXP Appendix 7	Page No.:	5
PUB Approved Issue No:	9. Cost of Operations		
Topic:	Impairment of Various Projects		
Sub Topic:			

Preamble to IR (If Any):

"c) **Data Processing –** $18.7 million increase compared to the 2018 GRA is primarily due to the following:

- Impairment of various project costs totaling approximately $20.3 million occurred during the 2017/18 fiscal year. These projects no longer met the criterion to be classified as deferred development capital costs and thus were expensed.
- Partially offsetting the above expenses were approximately $1.6 million of less than expected external labor expenses. This is primarily related to external labor for CARS and AOL of about $1.7 million."

Question:

a) Please provide a list, by project, of the projects that were impaired and written off in 2017/18 in the amount of $20.3 million including the rationale for write-off.

b) In addition to the current Value Management discipline, has MPI put in place additional mitigation measures to assess projects, at an earlier stage, to determine to discontinue or continue a project?

c) Please file a copy of MPI's project capitalization policy and indicate any changes from previous years. Also please provide a copy of the Board of Directors Minute approving the most recent project capitalization policy.

Rationale for Question:

To better understand the cost of project failures and impact on basic insurance rates.

RESPONSE:

a) Please see the response for *PUB (MPI) 1-63 (a)*.

b) Please refer to 2018 GRA Volume I Value Management for details on the Business Transformation Office Project Delivery approach, methodology and governance. Within each project phase stated, the Corporation will continuously apply its value management process and discipline to ensure the realization of overall project value. If, through this ongoing assessment, it is determined that a project's expected net benefit, return on investment and overall value is being impaired, the Corporation will consider canceling the project to limit the financial investment incurred.

c) Please refer to 2018 GRA Information Request – *Round 1 CAC 1-41 (a) Appendix 1*, and for the minutes see *PUB (MPI) 1-1*.

<u>**CAC (MPI) 1-32**</u>

Part and Chapter:		**Page No.:**	
PUB Approved Issue No:	**9. Cost of operations**		
Topic:	**2017 Compensation report**		
Sub Topic:			

Preamble to IR (If Any):

Per the *Public Sector Compensation Disclosure Act* the corporation prepares a compensation report.

Question:

Please file a copy of the public compensation report as of December 1, 2017 prepared in accordance with the *Public Sector Compensation Disclosure Act* together with the Auditor's report.

Rationale for Question:

To assess and understand compensation costs paid, by the corporation, in 2017 to employees.

RESPONSE:

Please see <u>*Attachment A*</u>.

Manitoba Public Insurance

SCHEDULE OF COMPENSATION IN ACCORDANCE WITH THE PUBLIC SECTOR COMPENSATION DISCLOSURE ACT TOGETHER WITH AUDITOR'S REPORT

FOR THE CALENDAR YEAR ENDED DECEMBER 31, 2017

COMPENSATION DISCLOSURE FOR 2017

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, 2017.

For the 2017 income tax year, Manitoba Public Insurance issued 2,235 T4 slips to full-time, part-time and temporary employees and officers. Manitoba Public Insurance had a monthly average of 1,898 employees during 2017. This schedule lists the compensation paid to 1,464 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 2017 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 17, 2018

Independent Auditor's Report

To the Board of Directors of Manitoba Public Insurance Corporation

We have audited Manitoba Public Insurance Corporation's (the Corporation) compliance as at December 31, 2017 with the criteria established by C.C.S.M c. P265 and described in Sections 1 to 11 inclusive of The Public Sector Disclosure Act dated September 1, 2011 with respect to all public sector bodies operating in Manitoba as defined in the act. Compliance with the criteria established by the provisions of the agreement is the responsibility of the management of the Corporation. Our responsibility is to express an opinion on this compliance based on our audit.

We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the Corporation complied with the criteria established by the provisions of the agreement referred to above. Such an audit includes examining, on a test basis, evidence supporting compliance, evaluating the overall compliance with these criteria and, where applicable, assessing the accounting principles used and significant estimates made by management.

In our opinion, as at December 31, 2017 the Corporation is in compliance, in all material respects, with the criteria established by The Public Sector Disclosure Act described in Sections 1 to 11 of this agreement.

PricewaterhouseCoopers LLP

Chartered Professional Accountants

PricewaterhouseCoopers LLP
One Lombard Place, Suite 2300, Winnipeg, Manitoba, Canada R3B 0X6
T: +1 204 926 2400, F: +1 204 944 1020, www.pwc.com/ca

"PwC" refers to PricewaterhouseCoopers LLP, an Ontario limited liability partnership.

Name	Position Title	Total Compensation	
Abbott, D	Broker Services Administrator	67,783.57	
Abraham, A	Manager, IT Service Management	92,388.53	
Abrey, W	Business Relationship Manager	110,513.79	
Adams, B	Reviewing Officer	64,559.41	
Adams, S	Sr Case Manager	82,446.69	
Addison, I	Adjuster	66,295.63	
Addison, K	Manager, Special Accounts & Subrogation	134,077.93	
Adolphe, L	Supervisor, Claims Processing	75,676.61	
Adviento, L	Adjuster	60,587.06	
Agnew, R	Manager, Service Centre	109,817.85	
Aguilar-Manalo, A	Accountant 1	60,618.99	
Ahlbaum, C	Manager, Vehicle Safety	105,190.32	
Ahmad, A	Sr Analyst	89,974.62	
Alarie, M	Sr Business Analyst	84,166.22	
Alarie, R	Adjuster	54,490.63	**
Albig, J	Sr IT Support Analyst	60,635.64	
Alcantara, S	Data Steward	50,357.91	
Alexander, R	Sr Case Manager	80,696.91	
Ali, H	Sr IT Support Analyst	71,773.50	
Allard, L	Sr Adjuster	71,809.32	
Allardyce, D	Service Centre Representative	57,601.55	
Allarie, G	Estimator-City	68,972.97	
Allen, J	Commercial Registrations Representative	56,537.94	
Almosnino, R	Director, Internal Audit & Enterprise Risk Management	71,615.50	**
Amante, C	Contact Centre Supervisor	70,040.94	
Andersen, G	Director, Injury Claims Management	134,643.98	
Anderson, L	Analyst	77,566.85	
Anderson, L	Case Manager 2	67,942.53	
Anderson, M	Research & Traninig Technician - Autobody	84,002.87	
Andres, R	Supervisor, Rural Service Centre	93,035.85	
Angers, D	Associate Driver Examiner	55,899.28	
Angus, C	Special Investigator	88,168.08	
Antle, J	Subrogation Adjuster	60,148.81	
Appelt, B	Driver Examiner	62,607.69	
Apperley, K	Purchasing Agent	64,310.64	
Aquino, P	Sr IT Administrator - Operations	67,707.81	
Arabsky, H	Manager, Service Centre	109,470.84	
Arendt, E	Supervisor, Application Services	100,632.14	
Armour, T	Supervisor, Driver Testing	74,423.07	
Armstrong, F	Strategic Communications Coordinator	72,948.29	
Armstrong, J	Sr Case Manager	84,908.07	
Arnold, J	Customer Relations Officer	73,872.74	
Arvidson, B	Supervisor, Rural Service Centre	83,269.31	

Name	Position Title	Total Compensation	
Asif, S	Analyst	64,438.31	
Asselstine, C	Supervisor, Salvage Yard	71,471.35	
Atienza, D	Digital Media Developer	51,435.29	
Audette, M	Payroll Administrator	54,187.77	
Avila, G	IT Security Administrator	59,801.13	
Awoyemi, O	Advanced Analytics Specialist	84,821.42	
Backstrom, J	Estimatics Coordinator	87,841.64	
Backstrom, J	Estimator-City	55,817.86	
Baerr, P	Adjuster	50,284.03	
Bailer, K	HR Business Partner	83,480.58	
Bailey, S	Director, Corporate Strategic Planning & Analytics	126,427.08	**
Bailey, W	Driver Examiner	65,035.95	**
Bains, R	IT Administrator	56,040.64	
Baker, I	Business Analyst	82,163.92	**
Baker, L	Subrogation Specialist	63,287.48	
Ballance, S	Injury Claims Adjuster	69,885.90	
Balmer, R	IT Service Delivery Lead	77,321.10	
Bannon, T	Special Investigator	79,451.63	
Baran, T	Supervisor, Driver Testing	76,230.96	
Barbour, G	Sr Case Manager	84,040.87	
Barbour, M	Accountant 2	72,224.18	
Barker, D	Manager, Contact Centre Operations	108,403.10	
Barkley, C	Sr Case Manager	64,652.40	
Barnett, P	Special Advisor	111,651.43	
Barr, B	Estimator-Rural	73,808.26	
Barrault, S	Accountant 2	78,758.50	
Barron, M	Adjuster	58,269.73	
Barske, B	Driver Training Administrator	64,331.43	
Bartlett, J	Customer Care Agent 1	52,464.44	
Bautista, R	Business Analyst	70,044.57	
Beare, R	Sr Case Manager	83,856.85	
Beaudoin, G	Sr Case Manager	84,643.80	
Beaudry, T	Systems User Analyst	58,592.37	
Beaumont, R	Business Analyst	78,008.89	
Beckel, R	Customer Care Agent 1	51,595.55	
Bedard, M	Adjuster – FLS	59,166.08	
Bedi, B	Associate Driver Examiner	52,016.50	
Bell, R	Fair Practices Analyst	78,958.52	
Beltran, L	IRI Analyst	74,802.58	
Bender, D	Adjuster	60,924.23	
Bercier, T	Service Centre Representative	52,930.40	
Bergen, B	Research Engineer	66,638.75	
Berkis, A	Claims Supervisor	60,370.42	

Name	Position Title	Total Compensation
Bernardin, J	Case Manager 2	73,523.81
Bernardin, M	Supervisor, Driver Testing Quality Assurance	72,806.74
Bernhardt, D	Reviewing Officer	64,631.18
Bernier, M	Research & Training Technician Lead - Autobody	88,002.81
Berriault, L	Estimator-City	68,125.02
Berry, D	Commercial Adjuster	62,723.56
Best, C	Estimator-City	69,252.88
Betker, A	Case Manager 2	66,085.06
Betker, C	Analyst	75,224.34
Betker, J	Analyst	80,189.18
Betker, L	Tech Communications Officer 1	60,181.01
Bettencourt, C	Sr Adjuster	67,619.29
Beyer, A	Solicitor 2	94,929.23
Bielinski, J	Accredited Repair Inspector	80,811.45
Bileski, J	Culture & Engagement Specialist	88,448.27
Billard, D	Systems User Analyst	64,567.82
Bilonozhko, A	Commercial Adjuster	62,435.79
Birch, G	Manager, Service Centre	115,667.50
Birss, S	Facilities/Premises Administrator	86,260.87
Bissessar, E	Associate Commercial Adjuster	55,171.30
Bittner, S	Service Centre Representative	55,569.73
Bjore, L	Sr Case Manager (Secondment)	84,340.87
Bjornson, V	Premises Coordinator	69,010.55
Black, C	Vehicle Standards Officer	72,972.54
Blackman, B	Driver Ed Liaison Officer	65,242.76
Blackmon, W	Administrative Officer	65,237.34
Blain, S	Contact Centre Supervisor	70,503.84
Blerot, G	Case Manager 2	73,157.54
Blue, B	Licensing Services Analyst	62,372.39
Boak, C	Service Centre Representative	51,011.17
Boblinski, T	Director, Human Resources	125,475.85
Bodanski, M	Payroll Administrator	56,017.72
Bodnarchuk, G	Estimator-City	66,979.41
Bodz, V	Manager, Serious & Long Term Case Management	101,074.68
Bohemier, C	Community Relations Specialist	66,514.81
Bohm, K	Adjuster	58,647.05
Bohonos, M	Supervisor, Customer Service Centre	69,488.13
Boisjoli, J	Sr IT Analyst	99,386.88
Bonan, S	Executive Assistant	74,252.25
Borowski, P	IT Support Analyst	66,197.62
Bouchard, A	Estimator-City	55,598.92
Bouchard, J	Instructional Designer	60,270.15
Bouchard, K	Sr Adjuster	66,773.92

Name	Position Title	Total Compensation	
Bouchard, R	Estimating Supervisor	84,497.16	
Bouchard, R	Sr Case Manager	83,790.87	
Bourgeois, S	Estimator-City	69,251.71	
Bourgouin, C	Sr IT Analyst	90,542.73	
Bourrier, M	Subrogation Adjuster	59,280.10	
Boutet, K	Case Manager 2	63,830.61	
Bouvier, S	Underwriter 1	59,651.57	
Bowering, J	Project Manager	96,108.39	
Boyd, G	Business Analyst	79,290.72	
Boyd, J	Sr Case Manager	68,363.59	
Bozek, R	Internal Review Officer	138,909.99	**
Bradford, K	Manager, Administrative Services	156,288.92	**
Brajczuk, K	Case Manager 2	51,184.18	
Brannan, S	Tech Communications Lead	70,578.25	
Brantitsas, G	Customer Care Agent 1	52,095.92	
Bratton, V	Identity Interview Coordinator	53,543.21	
Braun, J	Customer Care Agent 2	57,719.85	
Braun, K	Programmer/Analyst	57,325.07	
Breedon, E	Supervisor, Rural Service Centre	88,469.51	
Breland, L	Adjuster	60,352.57	
Brennan, T	Special Investigator	85,917.72	
Brezden, W	Vehicle Standards Officer	75,850.52	
Brin, W	Adjuster	58,209.69	
Briscoe, A	Internal Review Officer	83,693.04	
Brisson, P	Special Investigator	83,559.21	
Brooker, D	Research & Traninig Technician - Autobody	84,562.30	
Brown, A	Injury Management Coordinator	90,523.08	
Brown, A	Claims Supervisor	80,655.93	
Brown, E	Sr Collection Officer	59,119.41	
Brown, G	Case Manager 2	61,913.73	
Brown, J	Accountant 2	66,349.75	
Brown, K	Case Manager 2	71,308.33	
Brown, T	Legal Specialist	122,143.12	
Brown, T	Customer Care Agent 1	53,179.60	
Bruce, D	Security Services Technician	78,650.61	
Bruce, G	Adjuster/Driver Examiner	70,811.31	
Bryden, S	Sr IT Analyst	91,694.08	
Buchanan, M	Sr Organizational Development Consultant	88,767.99	
Buchberger, K	Sr Case Manager	89,522.51	
Budgell, D	Customer Relations Officer	114,254.84	**
Buenviaje, A	KMS Administrator	52,132.40	
Buizer, K	Special Investigator	89,825.20	
Buller, E	Sr Analyst	94,809.30	

Name	Position Title	Total Compensation	
Bunko, B	Vice President, IT & Business Transformation and CIO	223,569.34	
Bunkowsky, S	Director, Loss Prevention	114,466.14	
Bunston, G	Manager, Investments	118,047.66	
Burbella, D	KM Portfolio Manager	106,894.94	**
Burdz, M	Sr Business Analyst	66,268.51	
Burke, J	Corporate Application Architect	92,229.30	
Burns, D	Manager, Licensing Services	106,493.91	
Burns, G	Multimedia App Developer	55,315.86	
Burns, K	IRI Analyst	78,020.67	
Burns, N	Clerk Typist 4	53,562.17	
Burt, J	Director, Special Risk Extension	117,244.30	
Burtniak, S	Fleets Administrator	56,233.21	
Byrnes, J	Programmer/Analyst	58,706.02	
Cabral, L	Sr Case Manager	81,750.77	
Cabrera, H	Customer Care Agent 1	52,653.79	
Caillier, T	Sr Case Manager	77,883.91	
Calas, P	Auditor 1	69,086.77	**
Caligiuri, C	Sr Business Analyst	78,021.05	
Cameron, E	Premises Coordinator	73,903.14	
Cameron, K	Manager, Vehicle Safety	117,688.46	**
Campbell, A	Customer Care Agent 1	53,027.52	
Campbell, C	Corporate Controller	169,914.63	
Campbell, P	Customer Service Representative	56,448.12	
Campbell, S	Senior Applications Architect	127,114.25	
Campbell, T	Driver Examiner	58,070.22	
Campeau, R	Facial Recognition Analyst	50,821.10	
Carbotte, C	Customer Care Lead	60,376.81	
Cardillo, M	Sr Investment Analyst	79,134.53	**
Carias, H	Payroll Coordinator	86,822.44	
Carter, K	Sr Adjuster	60,601.50	
Carter, T	Customer Care Agent 2	56,176.32	
Carton, V	Underwriting Supervisor	89,890.88	
Casar, J	Adjuster/Driver Examiner	65,819.77	
Castaneda, Y	Sr Analyst	77,701.45	
Castro, E	Analyst	65,315.98	
Caufield, A	PIPP Benefits Administrator	57,162.67	
Cawson, M	Driver Records Coordinator	59,113.06	
Celones, E	Adjuster	59,504.96	
Chalmers, C	Sr Adjuster	67,655.79	
Chalmers, J	Service Centre Representative	55,425.34	
Chamberlain, C	Accredited Repair Coordinator	87,841.64	
Chambers, W	Tech Communications Officer 1	54,556.64	
Champagne, S	Service Centre Representative	54,348.53	

Name	Position Title	Total Compensation	
Chandonnet, L	Service Centre Representative	55,876.74	
Charles, D	Commercial Specialist	78,982.61	
Charriere, J	Claims Audit Administrator	51,839.76	
Chartier, N	Service Centre Representative	55,917.60	
Chartier, N	Adjuster	53,704.70	
Chartrand, B	Estimator-Rural	69,740.50	
Chartrand, M	Sr Case Manager	80,160.39	
Chastko, D	Compensation Analyst	96,388.86	
Chaudhuri, A	Business Analyst	78,496.81	
Cheadle, A	Sr Business Analyst	84,284.99	
Chen, C	Underwriter 2	56,882.91	
Chernecki, P	Estimator-City	67,034.33	
Chestley, D	Sr Case Manager	121,878.45	**
Cheung, M	Business Analyst	66,936.97	
Chicoine, C	Sr IT Analyst	96,252.28	
Chimuk, D	Director, PDC Claims Operations	131,724.00	
Chochinov, C	Injury Claims Analyst 2	71,452.57	
Choi, J	Accounting Clerk 2	53,335.56	
Cholod, D	Injury Management Coordinator	90,005.92	
Cholod, H	IT Administrator	51,648.05	
Chomski, A	Sr Investment Analyst	87,960.86	
Chorney, J	Service Centre Representative	55,661.57	
Christoph, J	PC Claim Audit Coordinator	84,735.29	
Chuatoco, B	Functional Support Analyst - Payroll	76,928.57	
Churley, J	Adjuster/Driver Examiner	62,229.58	
Cielen, B	Adjuster	59,363.81	
Cielen, K	Service Centre Representative	55,748.95	
Claridge, D	Service Centre Representative	55,559.41	
Clark, L	Case Manager 2	72,396.80	
Clarke, D	Adjuster	54,692.06	
Clearwater, T	Actuarial Analyst	82,188.91	
Clemens, D	Sr IT Analyst	97,653.95	
Clow, K	Adjuster	51,653.83	
Coker, A	Case Manager 2	61,332.74	
Cole, K	Manager, Service Centre	91,496.86	
Coleman, C	Adjuster	59,951.36	
Colomy, C	Community Program Coordinator	54,736.35	
Conley, M	SRE Administrator	83,209.04	**
Cook, T	Programmer	51,395.35	
Cooke, R	Business Analyst	64,706.03	
Cooke, T	Incident & Problem Management Specialist	88,900.39	
Cookson, R	Commercial Estimator	56,266.42	
Cordeiro, S	Clerk Typist 2	53,406.29	

Name	Position Title	Total Compensation	
Corley, J	Commercial Specialist	74,423.33	
Cormier, C	Special Advisor	61,085.30	**
Cormier, V	Project Manager	71,616.25	
Correia, K	Service Centre Representative	59,886.52	
Cortens, P	Sr Case Manager	73,063.55	
Costa, M	Claims Processor	50,683.27	
Cosyns, P	IT Change Management Specialist	81,123.87	
Coulson, C	Shop Relationship Advisor	87,841.64	
Courchene, S	Accountant 2	66,845.63	
Court, T	Assistant Manager, Special Investigation Unit	89,723.66	
Cowley, T	Assistant Manager, Special Investigation Unit	84,400.55	
Craig, C	Driver Examiner	64,982.97	
Crittenden, R	Director, IT Infrastructure	124,212.04	
Crocker, K	Commercial Specialist	53,513.74	
Crocker, W	Shop Relationship Advisor	92,459.57	
Croker, B	Customer Service Representative	53,193.95	
Crowe, M	Vehicle Standards Officer	65,764.57	
Crozier, A	Estimate Auditor	62,854.68	
Crozier, J	Director, Regulatory Affairs	122,520.14	
Cruz, R	Associate Business Analyst	50,540.84	
Cruz, S	Sr Adjuster	67,849.17	
Cudden, F	IRI Analyst	78,028.16	
Cullen, C	Manager, Service Centre	98,196.31	
Cumming, L	Director, Special Risk Extension	56,890.91	**
Cummings, E	SME - Sr Instructional Designer	75,750.44	
Cupples, J	Case Manager 2	73,939.74	
Curtaz, J	Sr Business Analyst	87,321.15	
Cyrenne, R	Reviewing Officer	64,606.55	
da Silva, L	Adjuster	57,979.00	
Dabu, R	Customer Care Agent 1	52,632.88	
Daley, D	Reviewing Officer	64,506.97	
Dalman, J	Community Relations Specialist Lead	77,026.64	
Damasco, M	Business Analyst	79,217.95	
Danais, A	Sr Analyst	105,665.66	
D'Andrea, C	Medical Fitness Administrator	83,235.66	
Dash, J	Analyst	65,151.08	
Dattero, G	Sr Adjuster	67,695.65	
Dattero, L	Service Centre Representative	55,288.72	
Davey, P	Fleet Vehicle Administrator	74,924.38	
Davis, L	Benefits & HRMS Administrator	52,950.72	
Davis, T	Estimator-City	73,115.65	
Dayman, C	Supervisor, Rural Service Centre	81,235.29	
Dayman, R	Vehicle Standards Supervisor	78,782.96	

Name	Position Title	Total Compensation	
Dayne, J	Adjuster	59,693.15	
De Cruyenaere, A	Driver Testing Policy Analyst	65,683.18	
de Denus, M	Employee & Labour Relations Specialist	64,134.42	
de Jesus, E	IT Analyst	92,350.50	
de Souza, L	Sr Information Security Risk Analyst	91,952.46	
De Viet, B	Accounts Receivable Representative	57,283.68	
Debeuckelaere, T	Special Investigator	88,746.45	
Decock, T	Claims Supervisor	75,836.65	
DeFolter, A	Manager, Estimating & Salvage Operations	146,455.72	**
Degrave, A	Driver Examiner	64,357.44	
Deighton, T	Workplace Safety Coordinator	58,777.05	
Delamater, N	Accredited Repair Inspector	82,093.86	
Deluca, C	Systems User Analyst	62,975.02	
Deluna, D	Customer Relations Officer	74,064.61	
Demianiw, M	Supervisor, Rural Service Centre	82,030.53	
Deogun, A	Sr Sharepoint Analyst	101,202.88	
DeRuddere, P	Service Centre Representative	55,598.69	
Desautels, A	Driver Examiner	59,363.81	
Dessler, G	Corporate System Architect	173,459.90	
Deveau, Y	French Language Services and Accessibility Coordinator	66,629.07	
Devodder, J	Sr IT Analyst	109,163.32	
Dheilly, L	Clerk 3	50,291.79	**
Diduch, C	Sr Case Manager	84,747.05	
Dion, D	Estimator-City	70,550.27	
Dirks, P	Manager, Service Operations Policy & Control	100,232.00	
Disbrowe, C	IRI Calculator	50,294.26	
Dittmar, W	Injury Management Coordinator	90,305.88	
Dixon, B	Analyst	91,026.22	
Dixon, N	Autopac Program Coordinator	68,910.02	
Doell, B	Business Analyst	50,393.87	
Doherty, V	Sr Case Manager	83,743.15	
Domish, C	Sr Case Manager	84,540.87	
Donaldson, D	Buyer	56,282.84	
Donay, M	Contact Centre Supervisor	69,178.39	
Doskoch, M	Accountant 2	71,955.04	
Doucette, D	Programmer/Analyst	68,258.50	
Douglas, M	HRMS Coordinator	88,922.64	
Douglas, S	Estimate Auditor	71,262.58	
Douglass, T	Community Relations Specialist	74,153.84	
Downey, C	Director, Organizational Development	127,991.10	
Downie, K	Adjuster	61,856.11	
Dreesen, L	Customer Care Agent 2	56,734.58	
Drosdoski, J	Adjuster	60,195.75	

Name	Position Title	Total Compensation	
Drummond, R	Sr IT Support Analyst	69,805.49	
Druwe, A	Case Manager 2	57,840.74	
Du, R	Business Analyst	70,253.06	
Dubowits, J	Estimate Auditor	68,125.02	
Duda, R	Customer Account Representative	93,802.80	**
Dueck, P	Organizational Development Consultant	70,364.03	
Dufault, J	Driver Ed Liaison Officer	64,273.16	
Dufault, L	Sr Case Manager	70,154.93	
Dundas, I	Sr IT Analyst	89,491.51	
Dunlop, D	Vehicle Registrations Coordinator	82,067.30	
Dunstone, D	KM Service Delivery Manager	104,510.86	
Dunstone, D	Assistant Manager, Reinsurance & Forecasting	104,074.62	
Durand, B	Adjuster	63,191.60	
Dutka, C	Sr Policy Analyst	76,929.50	
Duval, J	Supervisor, Salvage Administration	72,340.67	
Dvorak, J	Manager, Production Support	119,180.25	
Dyck, J	Investigator	87,192.32	
Dyck, T	Associate Commercial Adjuster	55,529.44	
Dyer, G	Analyst - COTS Applications	86,636.60	
Eckberg, B	Commercial Registrations Representative	56,455.21	
Eden, C	Manager, Road Safety Program Development	103,176.19	
Edginton, G	Corporate Application Architect	92,229.30	
Edwards, A	Accredited Repair Inspector	72,148.60	
Edwards, E	Estimator-Rural	66,933.18	
Edwards, J	Clerk 4	56,233.21	
Egan, D	Sr Case Manager	84,692.10	
Eger, R	Estimator-City	70,282.53	
Eisener, D	PIPP Benefits Administrator	56,016.01	
Eisner, R	Sr Case Manager	83,740.87	
Ekdahl, S	Sr Business Analyst	84,608.07	
Ellis, S	Clerk 4	50,371.04	
Emes-Macklin, B	Deputy Registrar	102,828.08	
Empey, G	Service Centre Representative	57,368.17	
Engbrecht, A	Sr Instructional Designer	83,516.87	
Engel, S	Sr IT Administrator	55,313.62	
English, T	Estimator-City	54,223.28	
Enns, L	Medical Assessment Supervisor	83,931.60	
Ernewein, A	Administrator 1	57,465.65	
Esau, G	Driver Examiner	61,585.55	
Estabrooks, J	Customer Care Agent 2	55,481.51	
Estares, J	Sr Business Analyst	86,236.37	
Exconde, K	Customer Care Agent 1	52,786.84	
Fahrenschon, T	Adjuster	58,148.74	

Name	Position Title	Total Compensation	
Falkenberg, P	Special Investigator	64,010.13	
Falkowski, C	Estimator-Rural	57,149.70	
Faria, P	Information Architect	91,516.18	
Fast, C	Underwriter 1	59,558.82	
Fecyk, K	Customer Care Lead	61,663.44	
Feeney, M	Talent Acquisition Consultant	63,403.00	
Fehr, T	Service Centre Representative	55,547.77	
Fender, J	Service Centre Representative	54,348.53	
Feng, Y	Sr IT Support Analyst	73,285.14	
Fernando, S	Analyst	89,108.05	
Ferreira, R	Assistant Manager, Physical Damage Program	93,330.66	
Ferris, E	Identity Verification Administrator	50,343.81	
Feser, J	Driver Examiner	58,174.48	
Figueiredo, C	Business Relationship Manager	103,237.81	
Fiks, M	Manager, Basic Autopac Special Services	52,048.67	**
Fillion, K	Sr Case Manager	84,009.12	
Firman, S	Service Centre Representative	55,416.01	
Fish, D	Broker Services Administrator	69,664.19	
Fisher, D	Analyst	83,717.47	
Fisher, L	Assistant Manager, Customer Service	72,785.23	
Fleming, D	Tow Truck Operator	56,875.37	
Fleury, S	Clerk 3	50,860.72	
Fleury-Charles, F	Adjuster	58,597.29	
Foidart, P	Estimator-City	61,231.51	
Fomgbami, Z	Adjuster	59,888.46	
Fontaine, D	Supervisor, Driver Testing	74,521.69	
Fontaine, S	Driver Training Permit Officer	53,211.87	
Forson, K	Associate Commercial Adjuster	58,290.61	
Fosty, B	Manager, Driver Testing Policy & Evaluation	112,280.55	**
Fosty, P	Driver Training Permit Officer	78,487.96	**
Fotheringham, B	Identity Verification Supervisor	63,520.37	
Foulkes, G	Case Manager 2	72,395.47	
Fraiter, T	Programmer	61,032.96	
Francis, R	Estimator-Rural	60,753.95	
Franklin, M	Strategic Communications Coordinator	67,039.10	
Frazer, D	Manager, Estimating & Salvage Operations	85,153.11	
Frechette, F	Reviewing Officer	64,439.36	
Frederickson, F	SME - Sr Instructional Designer	84,141.84	
Fredette, R	Estimator-City	56,737.36	
Freeman, B	Sr Graphic Designer	66,917.15	
Friesen, K	Sr Business Continuity Coordinator	92,985.88	
Friesen, K	Instructional Designer	62,341.35	
Froelich, S	Analyst	79,576.38	

Name	Position Title	Total Compensation
Froese, G	Manager, Accredited Repair	96,822.96
Frykas, C	Injury Claims Analyst 2	74,419.33
Fujiwara, T	Estimator-City	70,285.79
Fuz, J	Commercial Specialist	85,085.84
Gagne, J	Director, Corporate Services	144,127.27
Gagnon, C	Adjuster	59,183.10
Gagnon, R	Analytics Specialist	68,527.32
Galezowski, L	Supervisor, Driver Testing	78,677.66
Galka, R	Purchasing Agent	64,931.91
Gallant, N	Supervisor, Commercial Claims	54,179.15
Gardner, S	Estimating Supervisor	74,234.34
Garn, P	Manager, KM Governance and Architecture	101,937.05
Garofoli, D	Product Specialist	84,720.23
Garrioch, C	Estimator-City	64,203.58
Garwood, M	Internal Review Officer	84,861.37
Gasmen, K	Associate Driver Examiner	50,842.84
Gaspar, L	Adjuster	55,748.61
Gaucher, M	Manager, Broker Support & Autopac Services	86,482.51
Gaudry, G	Assistant Manager, Financial Reporting	100,321.69
Geiger, C	Service Centre Representative	57,975.55
Gendreau, L	Manager, HR Business Partnerships	98,284.71
General, E	Programmer/Analyst	56,699.26
Gerullis, G	Community Program Coordinator	60,047.24
Giannico, M	Customer Relations Officer	73,758.88
Giasson, C	Yardman	52,719.47
Gibson, T	Business Analyst	72,816.24
Giesbrecht, B	Claims Cost Controller	98,442.21
Giesbrecht, W	Adjuster	63,876.52
Gillies, G	Senior Applications Architect	140,889.95
Gilmore, C	Driver Examiner	59,847.06
Gingras, M	Adjuster	60,601.27
Glenday, C	Assistant Manager, Contact Centre Operations	73,419.22
Glowa, R	Subrogation Specialist 2	73,800.05
Gnoinski, J	Adjuster	58,951.39
Gobeil, L	Customer Care Agent 2	57,304.45
Gobeil, T	Customer Care Agent 1	52,464.49
Goddard, S	Injury Management Coordinator	87,416.26
Goertzen, C	Special Investigator	87,826.76
Goertzen, I	Claims Cost Controller	98,641.31
Gomez Sanchez Baca, J	Premises Assistant	50,691.66
Gomez-Sanchez, K	Case Manager 2	69,653.69
Gompf, V	Subrogation Adjuster	60,481.01
Goodine, K	Special Investigator	82,094.92

Name	Position Title	Total Compensation	
Goos Berard, A	Strategic Communications Coordinator	77,547.54	
Gordon, A	Legal Processor	51,986.04	
Gordon, D	Customer Care Agent 1	52,390.82	
Gowen, T	Commercial Estimating Supervisor	82,285.53	
Grabowski, M	Service Centre Representative	55,736.95	
Graham, C	Case Manager 2	69,332.19	
Grantham, D	Analyst	72,727.42	
Greco, F	Vehicle Standards Officer	72,972.54	
Green, B	Driver Examiner	117,290.44	**
Green, D	Sr Case Manager	82,421.02	
Greig, R	Vehicle Standards Officer	74,959.09	
Grenier, R	Instructional Designer	66,328.94	
Griffith-Parker, B	Sr Graphic Designer	69,027.50	
Groen, L	Sr Instructional Designer	75,780.59	
Grose, T	Driver Examiner	58,220.23	
Gross, W	Case Manager 2	59,121.82	
Grossman, P	Assistant Manager, Special Accounts & Subrogation	99,912.13	
Gudz, T	Systems User Analyst	92,327.02	**
Guerra, A	Solicitor 1	59,447.34	
Guimond, D	President & CEO	353,717.49	
Gunn, C	Assistant Manager, Service Centre	95,640.96	
Gushulak, T	Data Steward	53,285.33	
Hadla, A	Accounting Clerk 2	52,219.89	
Haggarty, K	Associate Underwriter	54,573.68	
Haire, S	Tech Communications Lead	77,590.45	
Haithwaite, R	Executive Director, Injury Claims Management	137,688.51	**
Halabiski, J	IT Analyst	86,582.57	
Halili, R	IRI Calculator	53,724.73	
Hall, L	Driver Fitness Systems User Analyst	64,288.73	
Halliday, B	Underwriter 2	60,376.43	
Halliday, E	SRE Administrator	60,120.78	
Hallock, J	Manager, Purchasing	80,432.10	
Halma, J	Estimating Supervisor	68,357.55	
Hannah, H	Injury Management Coordinator	81,134.42	
Hansell, C	Sr Case Manager	78,059.43	
Hansma, A	Talent Acquisition Consultant	56,983.10	
Harasym, C	Adjuster	59,548.81	
Harkness, K	Director, Organizational Readiness	118,490.09	
Harmacy, S	Shop Relationship Advisor	75,577.88	
Harron, P	Underwriting Supervisor	85,496.03	
Hartry, B	Driver Examiner	51,096.43	
Hartung, S	Adjuster	57,955.25	
Hartwich, S	Medical Fitness Administrator	81,703.63	

Name	Position Title	Total Compensation	
Harvey, M	Underwriting Supervisor	90,337.88	
Harvey-Rundle, J	Fleets Administrator	56,522.21	
Hassa, M	Sr Functional Support Analyst	87,752.80	
Hastings, M	Supervisor, Customer Service Centre	65,508.73	
Hauser, T	Injury Management Coordinator	89,051.25	
Haywood, J	PIPP Benefits Administrator	55,086.94	
Haywood, T	Customer Care Lead	60,037.81	
Heinrichs, C	Supervisor, IT Services	120,459.89	
Heintz, D	Accredited Repair Inspector	83,091.56	
Helgason, N	Sr Adjuster	73,180.51	
Henderson, J	Adjuster	113,950.34	**
Henderson, K	Sr Case Manager	86,044.02	
Hendricks, C	Sr Business Analyst	81,603.69	
Hermary, M	Vehicle Standards Officer	72,972.54	
Hibbert, C	Accounts Receivable Representative	52,114.89	
Higgins, D	Systems User Analyst	64,714.11	
Higgs, D	Assistant Manager, Subrogation & Control	87,504.98	**
Hildawa, R	Project Manager	88,692.22	
Hildebrand, K	Estimating Supervisor	78,176.73	
Hills, T	HR Business Partner	62,804.99	
Hindmarsh, C	Supervisor, Customer Service Centre	67,339.41	
Hirmann, J	Premises Coordinator	70,345.02	
Hirose, G	Customer Care Agent 1	52,727.27	
Hlatkey, R	Adjuster	59,866.84	
Hnatiuk, C	Case Manager 2	64,074.49	
Hoban, J	HR Benefits Administrator	66,501.58	
Hobson, K	Claims Supervisor	84,996.04	
Hobson, K	Adjuster	51,519.10	
Hocken, C	Registrar of Motor Vehicles	168,242.16	
Hoffman, M	Legal Specialist	136,837.65	
Hoggan, B	Salvage Supervisor	95,809.70	**
Hogue, I	Estimating Systems Administrator	78,773.52	
Holdsworth, K	Business Architect	95,442.63	
Holgate, R	Accountant 1	61,077.92	
Holmes, K	Driver Examiner	60,179.39	
Holowachuk, D	Service Centre Representative	54,291.60	
Holowick, D	Sr Payroll Administrator	107,610.03	**
Hook, C	Accountant 1	60,393.45	
Hooper, S	Estimating Supervisor	75,831.19	
Hopkins, D	Manager, Financial Reporting	119,772.99	
Hoppe, D	Estimator-Rural	64,044.23	**
Hora, C	Director, Service Centre Operations	130,245.96	
Horn, L	Case Manager 2	62,250.78	

Name	Position Title	Total Compensation	
Howdle, H	Manager, Health Care Services	79,267.73	**
Howe, D	Sr Adjuster	68,428.23	
Howell, A	Estimator-Rural	64,559.94	
Howlett, J	Premises Coordinator	67,301.88	
Hoy, K	Business Analyst	83,514.53	
Hrabliuk, C	Injury Management Coordinator	90,033.88	
Hristovski, M	Sr Case Manager	59,484.54	
Hruda, M	Commercial Estimator	54,996.67	
Hrustic-Gyselinck, A	Service Centre Representative	55,554.45	
Hryciw, N	Supervisor, Broker Services Audit	55,884.67	
Huber, C	Manager, Physical Damage Research & Training	109,923.20	
Huber, R	Adjuster	59,043.05	
Hudey, J	Supervisor, PIPP Administrative Services	72,731.51	
Hudson, G	Estimator-Rural	55,250.57	
Hudson, J	Commercial Specialist	78,173.52	
Humble, J	Sr Business Analyst	85,815.98	
Humphries, E	Special Investigator	88,141.64	
Hunt, T	Strategic Communications Coordinator	54,012.89	
Huppe, G	Fair Practices & Customer Relations Coordinator	87,295.59	
Hussey, M	Programmer/Analyst	71,777.59	
Hutchinson, V	Case Manager 2	66,664.78	
Hutsal, F	Customer Care Agent 2	55,324.04	
Huzel, J	Business Analyst	78,963.53	
Hykawy, R	Vehicle Standards Officer	72,972.54	
Ingram, J	Emergency Preparedness & Safety Coordinator	71,946.40	
Innes, M	Sr IT Support Analyst	68,356.60	
Insch, K	Assistant Manager, Contact Centre Operations	76,662.81	
Irie, I	Adjuster	57,117.88	
Irving, C	Commercial Registrations Supervisor	64,196.91	
Irwin, C	Service Centre Representative	55,416.01	
Isaak, J	Supervisor, Customer Service Centre	65,155.77	
Isaak, N	Analyst	78,862.72	
Isfjord, S	SME - HRMS Information Specialist	86,053.69	
Isfjord, T	Sr Business Analyst	98,358.06	
Iskierski, J	Adjuster	51,493.26	
Islam, Z	Service Centre Representative	55,448.95	
Ismail, M	Assistant Manager, Financial Operations	103,198.23	
Izzard, R	Accountant 2	83,093.78	
Jagger, H	Sr Case Manager	84,694.10	
Jajam, J	Sr Adjuster	68,125.02	
Jamieson, S	Systems User Analyst	62,674.74	
Jansen, S	Commercial Registrations Representative	56,441.83	
Janssen, K	Adjuster	55,443.57	

Name	Position Title	Total Compensation	
Jantz, F	Driver Examiner	57,107.48	
Jaques, L	Medical Assessment Clerk	50,258.52	
Jassal, G	Auditor 2	77,130.11	
Jay, R	Programmer/Analyst	64,514.91	
Jeanson, R	Commercial Adjuster	68,128.23	
Jeffrey, K	Assistant Manager, Claims Services	95,527.91	
Jenkyns, M	Adjuster	60,625.22	
Jensen, M	Estimator-Rural	65,202.03	
Jia, H	Sr IT Analyst	81,987.52	
Johns, R	Systems User Analyst	67,317.91	
Johnson, D	Staff Development Consultant	83,211.06	
Johnson, D	IT Support Analyst	60,452.05	
Johnson, J	Adjuster	59,751.52	
Johnson, K	Sr Systems User Analyst	71,676.48	
Johnson, K	Commercial Estimator	69,815.62	
Johnson, K	Estimator-City	55,159.65	
Johnson, L	Special Investigator	77,381.81	
Johnston, G	Director, Business Transformation Office	168,215.70	
Johnston, L	Chief Actuary	197,864.46	
Jolicoeur, N	Customer Care Agent 2	51,880.53	
Jonasson, K	Associate Underwriter	50,064.09	
Jonasson, L	PIPP Benefits Administrator	53,214.50	
Jones, D	Special Investigator	69,716.26	
Jones, G	Adjuster	59,646.10	
Jones, L	Special Activities Services Officer	64,737.39	
Jones, M	Underwriter 2	58,921.11	
Jovanovic, M	Manager, Budgeting	134,661.98	**
Jubinville, D	Sr IT Administrator - Operations	68,206.53	
Juhnke, M	Case Manager 2	72,764.63	
Jurkowski, L	Manager, Estimatics	95,294.55	
Jurkowski, R	Driver Improvement Supervisor	73,771.09	
Kacher, M	Director, DVA Administration	140,802.39	
Kalomiris, H	Analyst	82,752.44	
Kalushka, K	Tech Communications Officer 1	60,227.09	
Kamenkovich, M	Enterprise Data Warehouse Specialist	69,727.78	
Kantimer, C	Instructional Designer	61,202.06	
Karpenko, S	Assistant Manager, Special Investigation Unit	81,235.55	**
Kaspersion, D	Accountant 2	78,388.26	
Kaspick, J	Shop Relationship Advisor	86,309.79	
Katz Robert, S	Manager, Internal Communications	82,294.93	
Kauk, S	Adjuster	56,975.18	
Kaushal, M	Respectful Workplace Advisor	89,607.36	
Kaushal, R	Driver Examiner	57,795.20	

Name	Position Title	Total Compensation	
Kazubek, S	Customer Account Representative	57,442.23	
Keating, D	Adjuster	60,989.67	
Kee, A	Adjuster	57,598.21	
Kehler, R	Supervisor, Rural Service Centre	89,922.37	
Keith, M	Supervisor, PIPP Administrative Services	64,272.51	
Keith, W	Vice President, Business Development & Communications and CAO	222,945.56	
Keller, D	Estimator-City	69,063.59	
Kemash, A	Identity Verification Supervisor	62,579.42	
Kernaghan, B	Business Analyst	56,271.57	
Keszi, M	Multimedia App Developer	64,196.91	
Ketola, D	Estimator-Rural	70,846.84	
Khan, D	Business Analyst	68,054.17	
Khan, S	Analyst	77,383.40	
Kindrat, D	Adjuster	60,311.24	
King, K	Case Manager 1	53,423.30	
Kintop, K	Business Analyst	78,971.52	
Kirkwood, M	Adjuster	59,443.81	
Kjartanson, M	Systems User Analyst	64,439.69	
Klassen, B	Driver Examiner	52,640.42	
Klassen, C	Analyst	79,049.53	
Klassen, K	Team Leader, Broker Services Administration	78,368.76	
Klingbell, S	Sr Analyst	99,412.62	
Klohn, K	Contact Centre Operations Resource Coordinator	63,560.35	
Kluner, R	Administrative Officer 2	68,596.28	
Kneeshaw, B	Supervisor, Customer Service Centre	68,381.02	
Knight, K	Adjuster	52,511.18	
Kobylinski, M	Assistant Manager, Licencing Services	109,125.28	**
Kocis, M	Estimator-City	67,757.65	
Koehl, H	Sr Analyst	75,927.21	**
Kokan, D	Analyst	60,624.96	
Kolly, L	Manager, Enterprise Project Management Office	130,580.55	
Komadowski, S	Executive Assistant	75,715.20	
Kominowski, P	Adjuster	61,533.33	
Koots, K	Project Manager	139,664.01	**
Kopec, C	Supervisor, Customer Service Centre	62,737.04	
Kopeechuk, L	Supervisor, Customer Service Centre	50,416.77	
Koroscil, D	Manager, Quality Assurance	115,125.63	
Koroscil, M	Technical Communications Editor	53,946.93	
Korozsi, B	Estimating Supervisor	79,460.12	
Korsunsky, A	Solicitor 1	93,213.58	
Koscielny, K	Sr Underwriter	76,600.10	
Kowalchuk, M	Sr Case Manager	84,313.64	

Name	Position Title	Total Compensation	
Kowbel, D	Director, External Communications & Community Relations	170,534.06	
Krahn, M	Sr Injury Claims Adjuster	74,329.13	
Kramble, D	Clerk 2 - Receiver	50,399.86	
Kramer, L	Estimator-City	68,138.37	
Kramer, O	Special Advisor	64,209.27	
Krasnowski, G	Sr Analyst	100,374.31	
Kravetsky, M	Business Analyst	72,346.79	
Krawchuk, M	IT CMDB Specialist	78,898.40	
Kroeker, C	Sr Adjuster	50,266.61	
Kroll, D	Tow Truck Operator	51,303.70	
Krueger, K	Director, Internal Audit & Enterprise Risk Management	128,655.80	
Krueger, K	Adjuster	58,482.23	
Krupinski, J	Manager, Budgeting	131,685.34	
Ksiazek, K	Supervisor, PIPP Administrative Services	68,505.74	
Kuby, Q	Adjuster	53,131.93	
Kuegle, A	Customer Care Agent 2	50,036.80	
Kumka, J	Occupational Therapist	85,211.93	
Kumka, T	Solicitor 2	121,410.70	
Kushnir, A	Analyst	66,869.09	
Kusiak, J	Tech Communications Officer 1	58,343.28	
Kusie, T	Customer Care Agent 2	56,906.68	
Kuypers, A	Estimator-City	56,114.91	
Kwiatkowski, B	Corporate Application Architect	92,547.55	
Kyliuk, T	Analyst	80,924.26	
Lacey, R	Programmer	52,814.29	
Lachance, K	Subrogation Specialist 2	74,388.18	
Lacroix, P	Privacy & Information Officer	89,041.64	
Laferriere, M	Sr Analyst	104,260.08	
Lafortune, C	Supervisor, Customer Service Centre	68,255.93	
LaFreniere, R	Adjuster	62,526.86	
Lagace, C	Supervisor, Claims Processing	73,163.46	
Laidlaw, D	Project Manager	101,388.64	**
Lamb, D	Driver Licensing Liaison Officer	65,540.11	
Lambert, J	Assistant Manager, Claims Services	72,580.84	**
Lambrecht, K	Analyst	75,509.89	
Lamont, B	Facilities Service Technician	80,790.38	
Lang, L	Claims Supervisor	73,745.14	
Lansard, S	Supervisor, Rural Service Centre	90,085.07	
Lapina, J	Injury Claims Analyst 1	63,167.29	
Lapointe, G	Injury Management Coordinator	98,259.53	**
Lapointe, J	IT Analyst	82,167.80	
Lapratte, P	Estimator-Rural	68,961.99	
Larsen, M	Identity Case Administrator	55,660.41	

Name	Position Title	Total Compensation	
Larson, C	Supervisor, Mail and Warehouse	69,372.94	
Lasuik, B	Assistant Manager, Claims Services	80,928.89	
Lau, R	Information Systems Auditor	90,600.43	
Lawless, S	Associate Business Analyst	52,697.35	
Lawrence, M	Business Analyst	78,767.12	
Lawrence, M	Sr IT Support Analyst	73,043.25	
Lawrence, S	Administrative Officer 2	72,303.24	
Laxdal, G	Business Analyst	78,874.61	
Lazarko, L	Director, Information Technology	161,047.12	
Lea, M	Supervisor, IT Services	110,035.02	
Leach, K	Collection Supervisor	79,013.34	
Lebedeff, T	Parts Program Administrator	52,663.00	
Leclerc, P	Customer Care Agent 1	51,272.81	
Lee, R	Business Analyst	80,102.63	
Lee, S	Disaster Recovery Coordinator	77,646.77	
Lee-Ward, B	Sr IT Analyst	72,751.24	
Leganchuk, D	Service Centre Representative	55,554.67	
Lehmann, K	Supervisor, Rural Service Centre	95,015.19	
Lehmann, S	Sr Information Security Risk Analyst	96,854.56	
Leiman, C	Associate Case Manager	52,388.63	
Leitold, K	Special Investigator	87,902.89	
Lemoine, C	Sr Graphic Designer	65,595.39	
Lepki, G	Estimating Supervisor	78,173.52	
Leppky, S	Acting Vice President, Human Resources & CHRO	200,097.29	**
Lernowicz, K	Customer Care Agent 2	52,698.47	
LeSage, J	Adjuster	63,802.85	
Leslie, S	Estimator-City	55,159.65	
Letkemann, J	SME - Adjuster	59,848.81	
Levy, S	Accountant 1	53,230.01	
Lewis, C	Sr IT Administrator - Operations	67,717.70	
Lewis, J	Special Investigator	88,556.15	
Lewis, R	Customer Account Representative	56,016.01	
Leys, E	Commercial Estimator	70,391.54	
Leys, T	Estimator-Rural	68,763.58	
Ligsa, J	PIPP Benefits Administrator	63,760.92	
Lima de Moura, R	HRMS Administrator	53,038.96	
Lindenberg, L	Sr Analyst	86,899.22	
Lindo, G	Buyer	56,025.71	
Link, C	Manager, Rehabilitation Management	106,914.00	
Lischynski, A	Tech Communications Officer 1	50,056.44	
Litke, D	Assistant Manager, Accounting Services	79,993.14	
Litwin, S	Claims Audit Administrator	51,733.09	
Liu, L	Business Analyst	55,679.31	

Name	Position Title	Total Compensation
Lobban, E	Sr Case Manager	76,585.42
Locke, C	Sr Adjuster	69,995.99
Locke, J	Adjuster	58,638.14
Loeb, C	Customer Care Agent 2	55,766.59
Loechner, M	Assistant Manager, Customer Service	95,340.96
Loeppky, G	Injury Management Coordinator	92,695.39
Loewen, D	Research & Training Technician - Mechanical	83,321.15
Lokke, A	Business Analyst	79,578.76
Long, R	Adjuster	62,370.64
Lopushniuk, S	Accounting Clerk 2	56,577.76
Loree-Dueck, K	Programmer	61,715.52
Lorteau, G	Driver Examiner	60,110.78
Loster, J	Sr IT Analyst	88,710.96
Love, D	Supervisor, Driver Testing	73,272.54
Lovering, A	Medical Fitness Administrator	81,687.13
Lucko, T	Manager, SRE Fleet Safety	95,664.85
Lucyk, T	Driver Examiner	60,624.79
Ludba, D	Sr Information Security Risk Analyst	108,857.62
Luky, C	Supervisor, Claims Audit	68,125.02
Lumbres, M	Functional Support Analyst	65,063.45
Lundy, R	Estimator-City	69,854.30
Lupky, S	Manager, Specialized Risk Claims	126,489.28
Lyburn, L	Commercial Specialist	78,636.83
Lyle, K	Claims Supervisor	84,043.12
Lyons, J	Sr Communications Specialist	88,790.30
Lysy, C	Analyst	84,119.65
Lysyk, N	Collection Officer	54,571.26
Lytwyn, C	Advertising Specialist	62,460.79
MacBeth, R	Analyst	80,734.46
MacCutcheon, S	Internal Review Officer	84,521.87
MacDonald, K	Vehicle Standards Officer	71,566.83
MacDonald, T	Commercial Adjuster	68,927.74
Macdonald, V	Assistant Manager, Medical Compliance & Assessments	96,676.75
MacFadyen, R	Business Analyst	66,423.70
MacFarlane, E	Sr Underwriter	70,989.97
Machado, N	Business Analyst	71,613.96
MacKay, A	Analyst	80,553.55
MacKeen, M	Fair Practices Analyst	79,450.69
Mackeen, T	IT Support Analyst	61,683.51
MacKenzie, A	Clerk 4	55,936.50
Macsymach, B	Service Centre Representative	55,416.01
Madden, K	Sr Payroll Administrator	63,386.35
Madhosingh, T	Business Analyst	78,975.92

Name	Position Title	Total Compensation	
Madrigga, J	Project Coordinator	79,598.76	
Maeren, D	Driver Records Coordinator	84,475.87	
Maes, D	Estimator-City	68,372.02	
Maharajh, M	Business Analyst	78,323.52	
Mai Moussa, C	Associate Commercial Adjuster	55,064.58	
Major, R	SME - Analyst	50,233.10	
Maly, P	Service Centre Representative	52,503.15	
Mangubat, R	Sr IT Support Analyst	61,726.85	
Mankewich, A	Commercial Estimator	66,545.23	
Manmohan, S	IRI Analyst	78,673.87	
Mann, C	Purchasing Agent	60,263.81	
Mann, S	Business Analyst	78,673.52	
Manthei, H	Medical Fitness Administrator	81,702.73	
Manzano, B	Contact Centre Supervisor	68,880.02	
Marchant, J	Facilities/Premises Administrator	83,013.70	
Marcheschuk, H	Driver Examiner	55,298.78	
Marczak, R	Customer Care Agent 2	59,807.17	
Marlatt, V	Adjuster	63,166.79	
Marsch, T	Service Centre Representative	56,477.70	
Marshall, J	Paralegal	55,979.12	
Martens, L	Adjuster	59,516.72	
Martin, C	Vice President, Customer Service and COO	351,705.74	**
Martin, S	Manager, Special Investigation Unit	75,710.32	**
Martineau, B	Sr Case Manager	82,616.87	
Martinez, J	Estimator-City	68,037.90	
Martynuk, J	Manager, IT Support & Operations	101,626.86	
Mary, D	Subrogation Adjuster	57,132.32	
Maryalaya Nelson, J	Business Architect	94,741.50	
Maslanka, M	Solicitor 2	124,314.30	
Masnyk, C	Subrogation Adjuster	60,192.53	
Mason, K	Customer Care Agent 2	56,551.36	
Mason, M	Clerk Typist 2	50,631.36	
Mather, J	Dealer Inspector	63,896.91	
Matkowski, R	Adjuster/Driver Examiner	71,835.02	
Matlashewski, L	Sr Compensation & Benefits Analyst	89,779.31	
Matson, G	Manager, Driver Fitness	110,104.81	
Matthes, B	Driver Examiner	61,107.03	
Matthes, B	Driver Examiner	59,715.14	
Mazzei, C	Policy Research Analyst	84,450.88	
McBride, C	Service Centre Representative	55,722.81	
McCaffrey, D	Data Architect	89,603.61	
McComb, L	Sr Subrogation Specialist	79,542.31	
McCulloch, I	Clerk 2 - Receiver	51,401.49	

Name	Position Title	Total Compensation	
McCullough, A	Fleet Safety & Loss Prevention Specialist	67,375.72	
McDivitt, M	Supervisor, Customer Accounts Receivable	65,221.25	
McDonald, C	Corporate Information Security Officer	167,824.08	
McDonald, D	Identity Verification Clerk	51,131.60	
McDonald, J	Estimator-Rural	73,408.48	
McDonald, W	Sr MultiMedia Application Developer	68,942.22	
McEachern, I	Customer Care Agent 1	52,496.39	
McEvoy, C	Service Centre Representative	54,680.11	
McFadyen, K	Manager, Quality Control & Metrics	96,936.18	
McGill, C	Sr Case Manager	77,124.84	
McGinnis, S	Audit Clerk	52,704.75	
McGrath, C	Sr Security Advisor	89,462.44	
McIntyre, H	Sr Analyst	91,906.74	
McKay, G	Analyst - Rate Groups	56,255.17	
McKay, J	Adjuster	58,165.22	
McKee, J	Business Analyst	83,717.53	
McKinnon, S	Executive Assistant	78,980.03	
McLaughlin, C	Injury Claims Adjuster	66,979.03	
McLean, P	IT Support Analyst	52,964.45	
McLennan, K	Manager, Financial Operations	122,363.51	
McLeod, T	Reinspection Estimator	83,973.63	**
McMullin, L	Customer Care Lead	57,310.78	
McNabb, D	Adjuster	58,868.32	
McNarry, N	Underwriter 1	54,621.46	
McRae, J	Sr IRI Calculator	62,162.48	
Meakin, K	Adjuster	63,765.02	
Meakin, L	Vehicle Standards Officer	72,159.17	
Meakin, S	Commercial Adjuster	80,691.06	**
Meier, C	Estimator-City	60,157.22	
Melizza, F	Sr Collection Officer	60,189.28	
Melnick, C	Accountant 1	63,423.95	
Melnyk, C	Sr Business Analyst	83,539.98	
Melnyk, R	Sr Business Analyst	84,331.69	
Melo, L	Assistant Manager, Rehabilitation Management	96,347.96	
Memryk, K	Service Centre Representative	52,186.12	
Mestdagh, L	Manager, Special Investigation Unit	109,972.37	
Meyer, A	SME - Technical Communicatons Lead	79,796.60	
Meyer, D	Driver Licensing Liaison Officer	83,689.39	**
Michie, S	Business Analyst	77,568.05	
Middlestead, W	Supervisor, Application Services	109,665.39	
Middleton, M	Service Centre Representative	53,984.36	
Mignon, C	Wellness Program Coordinator	77,581.10	
Miles, A	Solicitor	73,553.33	

Name	Position Title	Total Compensation	
Milette, C	Case Manager 2	72,430.81	
Miller, B	Associate Adjuster	53,754.06	
Miller, J	Manager, Service Centre	112,174.50	
Miller, T	Contact Centre Supervisor	59,654.41	
Millman, T	Commercial Registrations Representative	56,511.77	
Milroy, M	Supervisor, Legal Services	58,964.37	
Minenna, M	Manager, Driver Education & Training	102,613.08	
Mitchell, B	Sr Functional Support Analyst	84,340.87	
Mitra, S	Director, Physical Damage	144,625.02	
Mofe-Damijo, K	Associate Case Manager	50,806.31	
Mohr, A	Manager, Accounting Services	120,390.17	
Mohr, T	Sr Analyst	99,709.13	
Moins, M	Accredited Repair Inspector	82,095.03	
Molinski, D	Shop Relationship Advisor	87,508.94	
Molinski, T	Estimator-City	77,178.00	
Monchamp, M	Commercial Registrations Representative	55,798.26	
Monikandan, C	Analyst	88,517.33	
Moniuk, S	Sr Legal Processor	66,399.10	
Monteith, L	SME - Organizational Change Management Consultant	59,377.89	
Montroy, L	Manager, Service Centre	104,529.97	
Moore, D	Internal Review Officer	111,380.46	**
Moore, R	Sr Injury Claims Adjuster	131,926.44	**
Moorehead, D	Out of Province Claims Supervisor	79,096.79	
Morcos, G	Accountant 2	66,766.52	
Morgan, K	Adjuster	59,300.93	
Morgan, M	Project Manager	93,089.06	
Morin, L	Legal Processor	64,517.48	
Morley, D	Estimator-City	65,656.93	
Moroz, B	Supervisor, Driver Testing	73,338.14	
Morris, R	Estimator-Rural	69,715.46	
Morrish, A	Clerk 3 Receiver	55,037.73	
Morrison, T	Vehicle Standards Supervisor	78,415.36	
Morton, S	Adjuster	59,553.42	
Mosiuk, B	Business Analyst	78,773.52	
Moski, J	Sr Case Manager	84,281.87	
Mowat, B	Sr Analyst	91,031.37	**
Mucska, A	Case Manager 2	68,836.09	
Mulcahy, S	Accountant 1	64,196.91	
Mulholland, J	Contact Centre Supervisor	62,498.97	
Munyoro, V	Business Analyst	51,189.85	
Murray, G	Special Investigator	93,720.39	**
Murray, P	Workplace Safety Advisor	82,878.63	
Murray, R	Adjuster	56,731.55	

Name	Position Title	Total Compensation	
Murray, S	Service Centre Representative	53,266.00	
Mutcheson, M	Adjuster/Driver Examiner	60,488.18	
Mutter, J	Accountant 2	78,525.39	
Mwanza, O	Manager, Customer Research	109,699.82	
Myshkowsky, S	Executive Assistant	75,430.44	
Napier, B	Special Investigator	83,493.96	
Natt, G	Business Analyst	68,012.32	
Nault, L	Supervisor, Customer Service Centre	96,883.60	**
Navid, H	Service Centre Representative	53,928.44	
Naworynski, J	HRMS Information Analyst	51,775.42	
Neal, J	Customer Care Agent 1	52,449.09	
Neiser, S	Sr Case Manager	83,990.87	
Neufeld, C	Estimator-City	68,179.02	
Neufeld, J	Adjuster	59,892.21	
Neufeld, J	Adjuster	55,566.09	
Neufeld, K	Estimator-Rural	71,660.55	
Neufeld, P	Sr Systems User Analyst	71,020.09	
Neufeld, R	Commercial Estimator	70,667.51	
Newton, K	Injury Management Coordinator	89,898.36	
Newton, T	Assistant Manager, SRE	94,046.90	
Nickel, D	Sr Business Analyst	82,684.92	
Nietrzeba, A	Estimator-City	54,970.17	
Nimchan, N	Estimator-City	63,782.94	
Nixon, B	Disability Management Specialist	102,441.91	
Niziol, L	Service Centre Representative	58,529.73	
Nkingi, J	Accountant 1	60,936.92	
Norris, C	Customer Account Representative	56,355.54	
North, S	Clerk 2 - Receiver	50,513.44	
Novak, D	Sr Case Manager	85,643.37	
Nuevo, M	Analyst	68,962.59	
Oberholtzer, J	Claims Supervisor	78,136.64	
Odlum, J	Estimator-Rural	72,116.61	
Oertel, E	Facilities Service Technician	76,642.50	
Okun, J	Accredited Repair Inspector	81,782.90	
Olijnek, J	Sr Graphic Designer	68,725.02	
Oliver, S	Claims Audit Administrator	52,033.09	
Olsen, C	KM Service Delivery Manager	96,544.27	
Olson, A	Adjuster	58,688.52	
Olson, D	Service Centre Representative	55,581.20	
Onofreychuk, L	Sr Business Analyst	84,781.22	
Opinga, R	Estimator-City	66,178.09	
Oravec, D	Product Specialist	92,176.60	
Ordonez, M	Clerical Supervisor	55,393.77	

Name	Position Title	Total Compensation	
Orlukiewicz, P	Sr IT Administrator	57,078.73	
Osborne, B	Claims Controller - Injury	97,933.55	
Overwater, D	Director, Insurance & Underwriting	169,863.50	
Owen, R	Injury Management Coordinator	90,366.08	
Ozouf, R	Sr IT Support Analyst	77,894.83	
Pacheco Valente, L	Service Centre Representative	52,813.14	
Palatino, R	Assistant Manager, Internal Audit	86,508.18	
Pankratz Wieler, S	Sr Business Analyst	73,632.08	
Pantel, S	Adjuster/Driver Examiner	66,186.47	
Pardoski, A	Commercial Registrations Representative	55,679.47	
Paredes, C	Adjuster	54,501.23	
Parent, S	Associate Driver Examiner	51,599.09	
Pariyasamy, K	Manager, Application Services	117,934.85	
Park, J	Associate Business Analyst	52,124.98	
Park, P	Programmer/Analyst	62,258.93	
Parker, B	Customer Service Representative	51,623.56	
Partaker, T	Programmer/Analyst	60,948.48	
Pathak, S	Sr Business Analyst	84,596.53	
Patton, J	Business Analyst	70,684.94	
Patton, S	Sr Business Analyst	84,640.87	
Paul, B	Case Manager 2	68,511.20	
Paul, C	Organizational Change Management Consultant	74,842.37	
Paul, G	Claims System Analyst	60,181.01	
Pauls, T	Systems User Analyst	64,628.83	
Paulus, J	Adjuster	77,028.21	**
Pavluk, T	Adjuster	59,438.81	
Pearce, T	Sr Data Steward	51,247.62	
Pedrosa, J	Case Manager 2	71,515.81	
Pelissier, B	PIPP Benefits Administrator	56,177.23	
Pellatt, K	HR Business Partner	81,595.32	
Pellegrino, D	Adjuster	60,759.57	
Pemkowski, D	Fair Practices & Customer Relations Coordinator	134,904.72	**
Pendley, H	Estimator-City	64,792.99	
Peniuk, K	Commercial Specialist	74,913.51	
Penner, H	Vehicle Control Supervisor	77,221.02	
Penner, K	Adjuster	53,292.55	
Perchuk, T	Sr Test Administrator	61,060.80	
Perehinec, B	Adjuster	58,354.78	
Pereira, D	Sr Case Manager	83,893.46	
Perez, G	Community Relations Specialist	67,548.33	
Perreault, S	Service Centre Representative	56,314.35	
Perron, M	Broker Services Administrator	69,182.42	
Peterson, B	Manager, Administrative Services	89,999.90	

Name	Position Title	Total Compensation	
Peterson, D	Sr Case Manager	89,782.11	
Peterson, R	Customer Account Representative	56,653.77	
Petersson Martin, K	Solicitor	70,038.55	
Philippot, C	Facilities Service Technician	83,544.26	
Phoa, T	Manager, Pricing	89,975.36	
Phung, J	Business Analyst	65,769.61	
Picard, M	Sr Analyst	99,256.30	
Picard, P	Estimator-City	79,176.27	
Picard, V	Century Warehouse Supervisor	64,161.49	
Piec, D	Sr Adjuster	66,827.55	
Piec, M	KM Portfolio Manager	88,333.39	
Piirik, S	Tech Communications Officer 1	54,843.82	
Pilawski, C	Facilities/Premises Administrator	80,283.17	
Pineda, G	Accountant 1	51,782.52	
Pisipati, R	Associate Business Analyst	54,940.06	
Pitt, A	Estimatics Coordinator	81,535.81	
Pitzel, S	Legal Specialist	126,768.01	
Place, D	Systems User Analyst	64,695.31	
Plante, J	Customer Care Lead	60,314.11	
Platt, C	Contact Centre Supervisor	62,258.97	
Plenert, H	Estimator-City	68,688.95	
Pogorzelec, E	Sr Project Manager 2	116,800.06	
Poitras, K	Driver Examiner	61,590.26	
Pokorny, K	Adjuster	54,154.86	
Pollock, D	Sr Analyst	82,212.78	
Poloway, C	Adjuster	72,936.56	**
Popiel, S	Customer Care Agent 2	56,300.09	
Porco, K	Manager, Bodily Injury Centre	151,930.82	**
Prasek, W	IT Managed Services Controller	97,625.16	
Prendergast, C	Contact Centre Supervisor	86,172.25	**
Preteau, R	Estimator-Rural	68,520.50	
Price, R	Manager, Service Centre	112,926.61	
Prince, E	Estimate Reviewer	50,994.15	
Prozyk, C	Assistant Manager, Financial Operations	82,407.12	
Prud'homme, M	Estimator-City	57,250.88	
Prysizney, G	Sr Graphic Designer	50,384.91	**
Puchailo, D	Vehicle Standards Officer	77,924.03	
Pudlo, K	Injury Management Coordinator	90,305.88	
Pukin, W	Customer Care Agent 1	53,211.49	
Pura, S	Contact Centre Supervisor	69,486.19	
Pursaga, J	Sr Program Delivery Coordinator	78,773.52	
Pye, T	Estimator-Rural	76,750.88	
Quan, T	Customer Care Lead	60,976.04	

Name	Position Title	Total Compensation	
Quenelle, R	Fleet Safety & Loss Prevention Specialist	70,966.70	
Quirante, J	Programmer/Analyst	62,449.25	
Rabichuk, C	Special Investigator	65,818.86	
Radi, J	Buisness Analyst	65,285.10	
Radtke, D	Manager, Application Services	125,964.96	**
Ragasa, C	Accountant 1	61,329.11	
Rahman, N	Associate Adjuster	51,670.09	
Rahman, R	Adjuster	58,231.23	
Raimo, G	Systems User Analyst	63,277.69	
Rajotte, M	Accounting Clerk 2	53,669.45	
Rak, A	IT Support Analyst	56,463.53	
Rak, T	Business Analyst	78,173.52	
Ramani Gopal, A	Analyst	74,163.79	
Ramberran, R	Estimator-City	69,236.66	
Ramchandar, S	Business Relationship Manager	96,240.90	
Ramirez, A	Manager, Vendor Management	102,502.84	
Randell, R	Programmer/Analyst	67,953.10	
Randhawa, T	Business Analyst	69,556.19	
Rebizant, D	Administrative Assistant	59,377.26	
Redfern, D	Payroll Administrator	59,645.85	
Redmond, S	Supervisor, Rural Service Centre	88,325.62	
Reesor, E	Customer Care Lead	60,634.33	
Reeves, B	SME - CCRS Project	104,932.31	
Reichert, H	Vice President, Finance and CFO	163,136.56	**
Reid, L	Sr Analyst	109,533.10	
Reilly, C	Corporate Application Architect	98,070.76	
Reis, D	Sr Case Manager	88,488.26	
Rekrut, J	Business Relationship Manager	102,013.08	
Remillard, C	Adjuster	58,099.57	
Remillard, J	Corporate Business Architect	175,368.82	
Rempel, E	Estimator-Rural	73,592.78	
Rempel, S	Operations Supervisor, Special Accounts & Subrogation	60,162.91	
Renaud, J	Collection Officer	54,419.82	
Revet, G	Underwriter 1	59,963.81	
Reyes, A	IRI Calculator	51,106.50	
Reynante, J	IT Analyst	86,624.62	
Reznik, L	Adjuster/Driver Examiner	67,358.84	
Rhodes, T	Sr Business Analyst	84,192.91	
Richard, J	Contact Centre Supervisor	61,388.30	
Richard, W	Service Centre Representative	55,562.11	
Riddell, J	Analyst	88,666.27	
Riddell, M	Business Analyst	66,481.68	
Riel, J	Senior Value Management Specialist	120,518.27	

Name	Position Title	Total Compensation	
Rieu, D	Sr Systems User Analyst	74,248.80	
Riffel, T	Supervisor, PIPP Administrative Services	65,280.59	
Riggs, R	Adjuster	60,855.48	
Rindall, C	Adjuster/Driver Examiner	59,899.25	
Ring, M	Assistant Manager, Service Centre	94,345.40	
Ripak, D	Analyst	81,349.44	
Riva, M	Facilities Design Administrator	74,709.66	
Robert, R	Ignition Interlock Program Administrator	56,217.61	
Robertson, A	Solicitor 2	113,337.66	
Robertson, D	Customer Account Representative	56,016.01	
Robertson, R	Project Coordinator	91,520.60	
Robidoux, B	Service Centre Representative	56,030.89	
Robins, C	Accredited Repair Inspector	77,652.48	
Robins, D	Vehicle Standards Officer	73,435.22	
Robinson, D	Solicitor 2	125,865.22	
Robinson, P	Risk Management Specialist	98,906.53	
Robson, K	Estimator-Rural	56,593.75	
Rochon, A	Claims Supervisor	82,987.97	
Rodewald, L	Business Analyst	67,659.51	
Rodrigo, C	IT Security Administrator	52,177.08	
Rody, V	HR Business Partner	66,808.13	
Rogers, A	Manager, Service Centre	79,298.45	
Rondeau, N	Paralegal	56,016.01	
Rosario, M	Injury Claims Analyst 2	75,691.52	
Rosche, R	IT Analyst	85,241.08	
Roschuk, K	Accounts Receivable Representative	66,575.22	**
Ross, K	Analyst	89,003.00	
Rowbotham, P	Special Activities Clerk	54,700.31	
Roy, C	Adjuster	50,703.02	
Roziere, G	Service Centre Representative	55,470.91	
Ruffeski, D	Manager, Business Services	95,940.96	
Rusak, D	Sr Case Manager	81,950.58	
Russo, M	Accountant 2	80,869.73	
Rutter, C	Business Analyst	76,403.37	
Rydz, K	Strategic Communications Coordinator	66,559.35	
Ryman, T	Business Analyst	65,889.48	
Ryz, C	Injury Management Coordinator	90,890.08	
Rzepka, O	Adjuster	62,804.29	
Saffie, D	Accredited Repair Inspector	82,093.86	
Safiniuk, B	Information Systems Auditor	90,985.43	
Sahar, N	SME - PDR Program	236,719.85	**
Saini, P	SME - Analyst	84,212.75	
Saluk, G	Supervisor, Application Services	105,198.06	

Name	Position Title	Total Compensation	
Sam, S	Organizational Change Management Consultant	85,579.00	
Samatte, W	Driver Ed Liaison Officer	59,779.33	
Sanan, S	Vehicle Standards Officer	72,972.54	
Sarginson, P	Sr Legislation Analyst	84,601.87	
Sass, J	Director, Service Centre Operations	129,913.92	
Savard, G	Sr Case Manager	84,340.87	
Savoie, A	Adjuster	59,881.98	
Sawatzky, L	Research & Training Technician - Mechanical	81,547.06	
Sawatzky, N	Business Analyst	78,421.13	
Sawatzky, P	Specialist, Strategic Research	118,340.06	
Scaletta, D	Director, Legal Services	147,273.05	
Scalizzi, C	Adjuster	56,443.23	
Scanlon, M	PIPP Benefits Administrator	51,446.79	
Scarff, N	Claims Supervisor	76,382.89	
Scarfone, S	Solicitor 2	126,165.22	
Scham, A	Clerk 2	52,293.18	
Schaubroeck, M	Manager, External Communications	56,121.82	**
Schesnuk, D	Sr IT Support Analyst	71,604.48	
Schlag, J	Adjuster	63,917.35	
Schmidt, D	SME - Instructional Designer	80,717.58	
Schmuland, D	Customer Care Agent 2	55,357.16	
Schneiderat, T	Sr Case Manager	85,185.37	
Schroeder, T	Commercial Adjuster	62,987.27	
Schultz, A	Claims Audit Administrator	50,356.08	
Schwab, D	Sr Business Analyst	83,740.87	
Scott, J	Supervisor, Commercial Claims	76,942.16	
Seddon, K	Injury Management Coordinator	89,890.88	
Seddon, T	Sr Case Manager	81,478.57	
Selch, J	Research & Training Technician Lead - Mechanical	89,808.47	
Selch, J	Claims Audit Administrator	55,622.33	
Sellar, E	Customer Relations Officer	64,949.09	
Senden, N	Systems User Analyst	64,248.07	
Senkowsky, M	Manager, Compulsory Insurance	102,363.08	
Sentner, C	Supervisor, Web & Multimedia	81,947.51	
Senyk, D	Sr Collection Officer	59,037.43	
Serbyniuk, M	Estimator-City	68,796.94	
Serceau, M	Estimator-Rural	69,257.36	
Serceau, R	Estimator-City	68,135.35	
Serino, S	Service Centre Representative	55,759.93	
Sesay, A	Accountant 1	64,714.11	
Sharaburak, G	Commercial Registrations Representative	56,452.83	
Sharma, A	Customer Care Agent 1	52,740.85	
Shemeliuk, T	Adjuster/Driver Examiner	68,435.48	

Name	Position Title	Total Compensation	
Shemeluk, G	Shop Relationship Advisor	81,048.97	
Sheppard, J	Sr Systems User Analyst	113,579.23	**
Shibata, S	Adjuster	60,932.29	
Shimoda-Loechner, L	Sr IRI Calculator	59,181.74	
Shokpeka, E	Assistant Manager, Customer Service	52,731.27	**
Shostak, M	Instructional Designer	71,939.20	
Shukin, K	Underwriter 2	56,488.51	
Shum-McDonald, E	Business Analyst	74,048.00	
Shyiak, J	Organizational Development Consultant	87,060.56	
Siepman, K	Research & Traninig Technician - Autobody	85,029.83	
Sierhuis, T	Assistant Manager, Accounting Services	79,771.99	
Sigurdson, D	Sr Case Manager	82,199.60	
Sim, S	Tow Truck Operator	54,150.83	
Simard, T	Injury Claims Adjuster	73,052.54	
Simmons, A	Sr Case Manager	83,740.87	
Simoes, G	Organizational Change Management Consultant	53,385.50	
Skelton, C	Sr Case Manager	83,746.62	
Skiba, K	IT Analyst	84,827.10	
Skibo, W	Commercial Specialist	78,509.72	
Skinner, S	Customer Service Representative	50,172.63	
Skitcko, L	Sr Case Manager	77,960.43	
Sklar, A	Driver Education Course Coordinator	53,335.34	
Skrupski, D	Broker Services Administrator	63,455.25	
Sladek, J	Estimating Supervisor	75,309.06	
Slimmon, J	Supervisor, Customer Service Centre	53,202.46	
Sloggett, P	Medical Fitness Administrator	83,645.54	
Smale, P	Organizational Development Administrator	50,710.21	
Smart, S	Research & Training Technician - Mechanical	79,954.00	
Smiley, B	Media Relations Coordinator	112,327.91	
Smit, R	Sr Underwriter	84,275.49	
Smith, B	Supervisor, Commercial Claims	90,114.08	
Smith, C	Claims Supervisor	88,400.04	
Smith, D	Estimator-City	60,244.00	
Smith, R	Supervisor, Customer Service Centre	72,705.44	
Smoley, D	Case Manager 2	59,149.26	
Snider, D	Adjuster	74,119.05	
Soares, A	Claims Supervisor	77,678.81	
Soucy, M	Claims Supervisor	85,930.63	
Sousa, L	Driver Examiner	57,436.30	
Spence, C	Premises Assistant	56,233.21	
Spencer, I	Special Investigator	86,805.06	
Sprenger, W	Sr Investment Forecasting Specialist	105,157.17	
Sproule, R	Estimatics Coordinator	82,913.88	

Name	Position Title	Total Compensation	
St. Germain, P	Data Architect	93,722.98	
St. Godard, C	Injury Management Coordinator	116,185.89	**
St. Godard, D	Commercial Specialist	71,163.32	
St. Vincent, K	Case Manager 2	70,284.18	
Stacey, K	Associate Adjuster	58,814.47	
Stade, S	Sr Case Manager	85,807.20	
Stakhura, C	Adjuster	51,762.41	
Stallard, T	Estimator-Rural	56,597.46	**
Stanke, B	Analyst - Rate Groups	55,875.65	
Starrett, M	Clerk 2	56,139.63	**
Steeds, K	Internal Review Officer	84,727.48	
Stefaniuk, C	Service Centre Representative	52,336.42	
Steffens, M	Clerical Supervisor	61,707.49	
Stelma, K	Service Centre Representative	88,707.19	**
Ste-Marie, G	Yardman	52,763.04	
Sterzer, C	Estimatics Coordinator	73,776.25	
Stock, N	Case Manager 1	58,093.42	
Stoneham, C	Supervisor, Customer Service Centre	69,187.38	
Stonyk, R	Legal Specialist	84,637.76	
Stow, L	Adjuster	63,771.95	
Stoyka, E	Business Analyst	71,320.92	
Strand, C	Clerk 3 Receiver	65,535.86	
Strecker, M	Service Centre Representative	54,524.37	
Streib, C	Driver Examiner	61,653.31	
Striefler, D	Lead IT Security Administrator	111,632.10	**
Stuart, C	Medical Fitness Administrator	83,039.67	
Stuart, D	Estimator-City	71,165.04	
Stubbe, K	Driver Fitness Systems User Analyst	58,101.32	
Su, Y	Sr Actuarial Analyst	95,418.08	
Subramaniam, T	IT Managed Services Analyst	76,432.90	
Sullivan, N	Service Centre Representative	56,081.19	
Surgeoner, S	Purchasing Agent	64,831.71	
Surla, J	Customer Care Lead	59,327.20	
Swayze, C	Service Centre Representative	53,572.10	
Sy, J	Customer Service Representative	55,789.39	
Sych, J	Security Operations Coordinator	64,703.57	
Sykes, L	Associate Adjuster/Driver Examiner 2	70,314.41	
Sykes, R	Estimator-City	68,318.05	
Sylvestre, P	Service Centre Representative	58,042.79	
Symons, K	Customer Account Representative	55,584.55	
Sysa, M	Systems User Analyst	64,196.91	
Tachan, L	Communications Officer 2	54,288.35	
Tackaberry, W	Claims Controller - Injury	96,932.52	

Name	Position Title	Total Compensation	
Tackie Anderson, N	Business Architect	92,795.98	
Tagliaferri, M	Estimator-City	68,125.02	
Tan, K	Corporate Application Architect	82,123.18	
Tanchak, P	SME - Sr Analyst	117,950.90	
Tapia, R	Driver Examiner	62,433.44	
Tapia, R	Analyst - Rate Groups	53,781.60	
Tarrosa, A	Adjuster	53,047.44	
Tavares, A	Contact Centre Supervisor	67,448.21	
Taylor, B	Assistant Manager, Claims Services	95,525.96	
Taylor, B	Injury Management Coordinator	91,021.95	
Taylor, C	Director, Corporate Services	105,735.19	
Taylor, C	Estimator-City	67,243.51	
Taylor, J	Broker Services Administrator	68,261.52	
Taylor, M	Injury Management Coordinator	111,150.44	**
Taylor, M	SME - Sr Adjuster	68,205.02	
Taylor, M	Commercial Registrations Representative	56,081.89	
Taylor, S	Manager, Driver Testing Policy & Evaluation	86,894.52	
Tazin, C	Adjuster	60,753.32	
Telfer, D	Business Analyst	74,847.47	
Thai, N	Customer Care Agent 2	53,784.40	
Theriault, P	Service Centre Representative	55,470.31	
Thiessen, A	Service Centre Representative	55,199.65	
Thiessen, B	Adjuster	59,677.46	
Thomassen, R	Internal Review Officer	84,525.87	
Thompson, J	Adjuster	59,878.00	
Thompson, P	Supervisor, Rural Service Centre	89,890.88	
Thompson, R	Vehicle Standards Officer	67,279.65	
Thompson, T	Commercial Specialist	67,932.74	
Thomson, A	Adjuster/Driver Examiner	61,275.73	
Thomson, J	Director, Corporate Business Planning	96,245.73	**
Thorsteinson, D	Director, Knowledge Management Services	111,097.43	
Thorsteinson, S	Adjuster	64,477.56	
Thou, B	Adjuster	50,439.06	
Thurston, J	Injury Claims Adjuster	73,164.24	
Tibbs, L	Adjuster	62,567.67	
Tiltman, R	Adjuster	60,355.76	
Timcoe, W	Sr IT Support Analyst	70,986.33	
Tkachuk, S	Acting Vice President, Human Resources & CHRO	170,979.49	
Tkachyk, D	Clerk 2	59,110.50	**
To, C	IRI Supervisor	85,597.73	
Todd, A	Customer Care Lead	56,293.13	
Toews, M	IT Security Administrator	50,243.77	
Toker, R	Estimatics Administrator	55,613.65	

Name	Position Title	Total Compensation	
Toms, A	Estimator-Rural	68,683.55	
Toor, E	Customer Account Representative	58,052.42	
Topolnitska, O	Service Centre Representative	55,416.01	
Toporoski, C	Driver Examiner	52,490.00	
Torgerson, J	Analyst	51,369.40	
Tranmer, L	Systems User Analyst	62,091.61	
Travica, D	Sr Case Manager	70,457.11	
Trefiak, J	Clerical Supervisor	61,984.94	
Treichel, A	Talent Acquisition Specialist	84,696.92	
Tremblay, C	Associate Adjuster	52,860.55	
Tremblay, D	Identity Case Administrator	54,431.24	
Triggs, M	General Counsel & Corporate Secretary	196,850.63	
Tripp, S	Service Centre Representative	54,972.19	
Trivett, D	Sr Underwriter	72,540.19	**
Trudeau, J	Injury Management Coordinator	90,905.88	
Trudeau, M	Estimator-Rural	66,144.53	
Trudeau, M	Service Centre Representative	54,821.54	
Trudel, P	Senior Application Services Technical Advisor	104,421.32	
Truong, M	Adjuster	51,600.71	
Trupp, N	Contact Centre Quality Analyst	59,944.73	
Tubman, T	Contact Centre Quality Analyst	60,259.01	
Tucovic, A	Programmer	54,120.56	
Turcan, L	Adjuster	59,512.92	
Turnley, C	Facilities/Premises Administrator	81,349.22	
Tweed, T	Training & Development Support Clerk	56,159.59	**
Ulicki, K	Corporate Training Facilitator	72,824.99	**
Valliani, R	Sr Information Security Risk Analyst	53,651.35	
Van Kleek, N	Identity Verification Clerk	61,648.40	**
Van Landeghem, D	Injury Management Coordinator	78,153.97	
Van Oeveren, S	Quality Control Coordinator	87,714.17	
Van Ryckeghem, D	Claims Supervisor	87,183.52	
van Wissen, L	Customer Care Agent 1	51,631.55	
VandeMosselaer, D	Manager, Identity Verification and Data Integrity	84,565.44	
Vandermeulen, K	Corporate Directives Coordinator	54,514.77	
Vandurme, B	Business Analyst	78,943.88	
Varey, A	Estimator-Rural	68,887.67	
Vaughan, D	Estimator-City	71,162.99	
Veitch, T	Adjuster	62,781.44	
Velasco, A	Programmer/Analyst	60,900.22	
Veldkamp, S	Supervisor, Driver Fitness Administration	60,108.61	
Venton, B	Business Analyst	78,775.52	
Verghetti, A	Lead IT Security Administrator	60,787.02	
Verghetti, T	Sr Subrogation Specialist	78,116.34	

Name	Position Title	Total Compensation	
Vermette, C	Adjuster	63,713.18	
Vermette, D	Sr IT Support Analyst	81,652.82	
Vermette, R	Sr IT Analyst	96,394.19	
Vermette, R	Systems User Analyst	64,414.11	
Vernon, T	Analyst	290,986.46	**
Viallet, D	Adjuster	59,443.81	
Vickery, C	PIPP Benefits Administrator	50,208.78	
Vieira, P	Manager, External Communication & Advertising	91,879.15	
Vince, K	Community Relations Specialist	64,162.75	
Vital, A	Sr Business Analyst	81,846.10	
Vnuk, J	Service Centre Representative	55,633.21	
Vokey, H	Premises Coordinator	69,552.65	
Vokey, V	Driver Fitness Clerk	60,358.62	**
Von Dohren, R	Business Analyst	79,513.68	
Vreyborg, H	Fleet Safety & Loss Prevention Specialist	64,635.13	
Waddington, R	IT Remedy Administration & Reporting	78,681.20	
Wagner, B	Accredited Repair Inspector	95,353.16	
Wahl, M	IT Managed Services Analyst	67,971.19	
Wai, E	Analyst	77,449.85	
Walder, E	Sr IT Administrator - Operations	70,914.89	
Waldner, E	Sr IT Analyst	102,660.01	
Wall, J	Adjuster	60,850.44	
Wallis, K	Medical Fitness Administrator	83,293.87	
Walterson, S	Driver Examiner	52,919.27	
Wang, F	Analyst	82,576.92	
Wang, J	Business Analyst	71,070.58	
Wang, X	Claims Cost Controller	91,398.07	
Wannamaker, M	Underwriting Supervisor	76,127.72	
Warkentin, L	Service Centre Representative	54,226.98	
Warren, D	Associate Driver Examiner	59,516.51	
Warren, L	Executive Assistant To The President	86,315.88	
Watson, D	Advertising Services Lead	65,573.70	
Watson, D	Tech Communications Officer 1	57,002.33	
Way, C	Manager, PIPP Support Services	92,732.03	
Webb, C	Manager, Compensation & Benefits	103,451.25	
Webb, H	Identity Verification Administrator	56,095.21	
Webb, M	Programmer/Analyst	58,484.11	
Weger, J	Estimator-Rural	69,515.09	
Weighell, C	Injury Claims Adjuster	67,083.92	
Wells, H	Case Manager 2	66,733.92	
Welsh, O	Adjuster	60,188.59	
Wennberg, C	Vice President, Customer Service and COO	248,201.23	
Weselake, S	Manager, Community & Customer Relations	101,099.10	

Name	Position Title	Total Compensation
Weselowski, N	Business Analyst	72,905.95
Whalen, G	Manager, Injury Claims Management	108,656.28
Wheeler, I	Tech Communications Officer 1	60,023.81
Wheeler, J	Customer Account Supervisor	64,154.31
Whettell, C	Customer Care Agent 2	58,025.36
White, C	Injury Claims Adjuster	73,457.54
White, S	Assistant Manager, Customer Service	81,945.41
White, T	Estimator-Rural	70,166.66
Wiebe, B	Manager, Service Centre	111,901.94
Wiebe, N	Subrogation Adjuster	60,058.18
Wiebe, R	Sr Injury Claims Adjuster	79,736.11
Wiedmer, R	Supervisor, Customer Service Centre	67,888.38
Wieler, D	Sr IT Analyst	74,602.72
Wieler, T	Customer Care Agent 1	52,279.42
Williams, A	Manager, Business Analytics	97,639.34
Williamson, L	Sr Graphic Designer	50,711.31
Winter, J	Driver Ed Curr Dev and Trng Support Spec	72,426.12
Wityshyn, W	Analyst	80,183.56
Wlasiuk, D	Premises Coordinator	70,620.02
Wojtowicz, E	IT Change Management Specialist	81,022.69
Wojtowicz, G	Adjuster	56,433.00
Wolch, M	Supervisor, IT Services	97,093.86
Wolfe, M	Organizational Change Management Consultant	71,829.21
Woloshyn, C	Service Centre Representative	54,974.11
Wong, P	Sr Business Analyst	83,246.35
Wood, B	Estimator-Rural	56,899.33
Woodhurst, D	Driver Ed Liaison Officer	62,223.36
Worboys, C	Analyst	87,270.13
Wu, R	Accredited Repair Inspector	76,565.01
Wyche, C	Organizational Development Consultant	71,676.70
Wycislak, F	Injury Management Coordinator	88,191.76
Wylde, J	Service Centre Representative	55,416.01
Wyrzykowski, C	Analyst	76,706.73
Yakel, J	Director, Enterprise System Support	126,786.29
Yarish, Y	Service Centre Representative	58,827.94
Yewdall, H	Manager, Bodily Injury Centre	98,968.22
Youell, D	Sr Business Analyst	76,746.36
Young, S	Sr Business Analyst - Workforce Management Coordinator	82,798.82
Yu, E	Manager, Autopac Extension & Special Programs	102,675.98
Zacharias, S	Sr IT Administrator	51,338.02
Zadnepreannii, L	IT Analyst	95,202.83
Zajac, B	Adjuster	57,770.22
Zalitach, W	Clerk Typist 3	54,646.85

Name	Position Title	Total Compensation
Zarrillo, D	Business Relationship Manager	96,051.47
Zeaton, G	SME - Service Centre	108,986.16
Zhao, L	Business Analyst	72,583.27
	Aggregate Total Board of Directors	85,422.70

** Denotes inclusion of severance pay/retiring allowance

NOTE TO SCHEDULE

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, 2017. 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, 2017

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) 1-33

Part and Chapter:	Part VIII, Annual Reports, Universal Compulsory Automobile Insurance, Note 15	Page No.:	30
PUB Approved Issue No:	9. Cost of operations		
Topic:	Employee future benefits		
Sub Topic:			

Preamble to IR (If Any):

"The Corporation uses an actuarial valuation, on an annual basis, to measure the accrued provision for its benefit plans. The most recent actuarial valuation was conducted by an external actuary as at December 31, 2017, with the next scheduled valuation being December 31, 2018."

Question:

Please file a copy of the actuarial pension and other benefit plans valuation reports prepared as at December 31, 2017.

Rationale for Question:

To review the pension and other benefits plans actuarial valuation reports and the financial impact on basic insurance operations.

RESPONSE:

Please see the reports provided as *Attachments A*, *B*, and *C*.

Actuarial Valuation Report as at December 31, 2017

Pension Liabilities of Manitoba Public Insurance (As a result of participation of its employees in the Civil Service Superannuation Act)

Submitted: March, 2018

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APPENDICES

I Summary of Data

II Summary of Actuarial Assumptions

III Projection of M.P.I. Pension Liabilities for 2017

1. PURPOSE

The purpose of this Actuarial Valuation Report (Report) is to:

- indicate the liabilities which the Manitoba Public Insurance (M.P.I.) has as at December 31, 2017 (Valuation Date), as a result of the participation of its employees in the Civil Service Superannuation Act (CSSA), and
- provide a formula which can be used by the management of M.P.I. to estimate the increase in these liabilities in the following 12 to 18 months after December 31, 2017.

These liabilities are an estimate of the present value of the future payments which M.P.I. is expected to make to the Civil Service Superannuation Fund (CSSF).

The liabilities have been computed on a going concern basis. This basis contemplates the continued existence of the pension plan and the funding arrangements for the benefits under the pension plan.

The guidance for the calculation of the liabilities and the preparation of this Report are the Practice-Specific Standards for Pension Plans of the Canadian Institute of Actuaries and IAS 19, Employee Benefits issued by the International Accounting Standards Committee.

2. DATA

It is anticipated no amendments will be made to the CSSA.

The data used in the calculations includes the portion of each pension, currently in payment or which is expected to be in payment, that M.P.I. is responsible for.

The data for all the pensions in payment and the accrued pensionable service of all employees participating in the CSSA was provided by the Civil Service Superannuation Board (Superannuation Board).

Information on the pensions and benefits paid by M.P.I. and the employee contributions for 2017 were obtained from M.P.I., as reported by the Superannuation Board.

Due to time constraints, the data provided by the Superannuation Board was sent without performing their normal annual edit checks. However, the data was checked for missing information, illogical information and reconciled with the prior valuation data. A few minor changes to the data resulted from the checks made.

3. MEMBERSHIP

The data provided indicated that M.P.I. was the employer of record for the following participants:

	31-Dec-2017			31-Dec-2016		
	Males	Females	Total	Males	Females	Total
Contributors	823	1,135	1,958	846	1,187	2,033
Deferred Pensioners	81	115	196	80	117	197
Reciprocal Transfers	1	-	1	1	-	1
Pensioners & Survivors	464	468	932	440	434	874
Total	1,369	1,718	3,087	1,367	1,738	3,105

A reconciliation of the number of member records used in the calculations is shown in Appendix I.

The numbers shown for pensioners includes 70 beneficiary records as at December 31, 2017 and 66 as at December 31, 2016.

4. ASSUMPTIONS

The assumptions used in this Report and assumptions used in the last actuarial valuation report of the M.P.I. pension liabilities are shown in Appendix II.

The demographic assumptions have been developed from the accumulated experience of the CSSF. This experience is reflected in the demographic assumptions adopted for the actuarial valuations of the CSSF. Changes to these assumptions were made for the actuarial valuation of the CSSF as at December 31, 2016 (CSSF AVR 2016).

The economic assumptions have been chosen by management. The specific choices are made after a review with internal staff and the actuary. The existing economic assumptions were confirmed to us on March 5, 2018 by management after management's review of the assumptions.

The demographic assumptions overall represent a reasonable best estimate basis for these assumptions. The economic assumptions, overall, represent M.P.I.'s best estimate basis for those assumptions.

5. M.P.I. SHARE OF BENEFIT PAYMENTS

The benefits expected to be paid are based on the provisions of the CSSA.

M.P.I. is expected to make payments due to:

- pensions in payment as at December 31, 2017 where M.P.I. is the last employer of record,
- pensions expected to become payable to former employees who retained the right to a deferred paid-up pension, and
- pensions and other benefits expected to become payable to existing employees as a result of service completed up to the Valuation Date.

At present, M.P.I. is contributing to the CSSF based on the pay-as-you-go method of funding. Under this method, no advance funding payments for the employer share of the cost of pensions are made to the CSSF. M.P.I. has, however, established a reserve against general assets which is being increased to match the increase in its pension liabilities.

Each month, M.P.I. makes payments to the CSSF to reimburse it for:

- a portion (currently about 44%) of each pension payment to retired employees,
- a portion (currently about 44%) of each pension payment to a beneficiary of a deceased pensioner or the survivor of an employee who dies in service,
- a portion of any amounts transferred to other pension plans under reciprocal agreements,
- a portion of any commuted values paid out as a result of employees terminating service or as a result of marriage breakdowns, and
- a portion of the administrative costs of operating the CSSF in respect of M.P.I. records.

Pensions in payment are indexed to 2/3 of the increases in the cost of living, provided sufficient funds exist to finance such increases. Former employees who retain a right to a deferred paid-up pension have their pensions indexed during both the deferral period and the payout period.

The employer share of each pension is based on when the pension starts. For pensions which commenced:

(a) prior to March 31, 1961, the employer is responsible for a portion of each increase in that pension and

(b) after March 31, 1961, the employer is responsible for a portion (currently about 44%) of the pension paid.

Pursuant to CSSA subsection 22(11), employer funding for employees who have service with more than one non-matching Agency shall be on a pro rata basis. This proration of the benefits assigned to an employer is based on the proration of service allocated to the employer. This proration assignment was made effective for events on or after January 1, 1998. This may decrease or increase the pension obligations in the absence of CSSA subsection 22(11). However, for enhanced benefits, it is the administrative practice to bill all of the enhanced benefits to the current employer.

6. VALUATION PROCEDURE

The projected unit credit actuarial cost method has been used to determine the accrued liabilities and the current service cost applicable to each year after the Valuation Date.

The liabilities are computed separately for each employee and each potential benefit in the future for that employee. For each benefit, we determine:

- the probability of that benefit becoming payable each year in the future based on the assumptions outlined in Appendix II,
- a discount factor which makes allowance for the interest expected to be earned between the valuation date and the date of payment to finance a portion of the future payment, and
- the amount of the future benefit. Pensions are based on service completed prior to the valuation date and projected salaries immediately prior to the event causing the pension to be paid.

The liability for each benefit for an employee is the sum of the product of these three factors for each year in the future. The sum of these liabilities obtained for all employees is the liability for that benefit in respect of employees.

The liabilities for pensioners and deferred pensioners is determined by a similar process except that the amount of payment is based on the pension in payment or the pension of record in the case of deferred pensioners.

For accounting purposes, the service-to-date pension obligations have been shown.

7. VALUATION RESULTS

The following table shows the liabilities which M.P.I. has as at December 31, 2017 and December 31, 2016 as a result of the participation of its employees and former employees in the CSSA:

Pension Liabilities with Allowance Made for Indexing of Pensions

	After Change in assumptions 31-Dec-2017	Before change in assumptions 31-Dec-2017	31-Dec-2016
Contributors	$ 187,915,900	$ 170,763,600	$ 174,397,300
Deferred Pensioners	7,423,300	6,523,200	9,503,900
Pensioners & Survivors	195,974,300	185,453,000	168,240,100
Total	$ 391,313,500	$ 362,739,800	$ 352,141,300

For this valuation, the liabilities were $969,800 less than projected prior to reflecting changes in actuarial assumptions. The detailed breakdown of all experience is shown in Appendix III.

The liabilities were also affected by the change made to anticipated future experience. The decrease in the discount rate from 3.89% to 3.43% increased the liabilities by $31.3 million.

The expected average remaining service life (EARSL) of employees is 15.0 years.

8. PROJECTION FORMULA FOR LIABILITIES

The application of the projection formula is shown in Appendix III.

The following formula can be used to project the estimated increase in liabilities in the 12 to 18 months after the Valuation Date:

- Add interest at the rate of 3.43% per year to the liabilities at the beginning of the period, the contributions for the period, and the benefit payments for the period. The interest addition for the contributions and the benefit payments should be prorated to recognize investment for half the period on average.

- Add employer contributions at the rate of 144.8% of the employee contributions required to be made for the period.

- Deduct the actual employer pension and benefit payments made to the CSSF for the period.

9. MATURITY ANALYSIS

The following table shows the estimated future pensions as at December 31, 2017 and December 31, 2016:

	Less than 1 year	Between 1 - 2 years	Between 2 - 5 years	Over 5 years	Total
31-Dec-2017	$ 11,119,600	$ 12,407,100	$ 44,945,600	$ 635,237,300	$ 703,709,600
31-Dec-2016	10,173,000	11,436,400	41,889,400	622,866,000	686,364,800

10. ACCOUNTING FOR PENSION OBLIGATIONS

A reserve against general assets has been established and is being increased to match the accrued pension liability. This reserve should eventually reflect the existence of assets in the Employer Trust Account held in the CSSF.

The pension expense for a period is equal to:

(a) the change in the reserve, plus

(b) the actual benefit payments, plus

(c) the amounts for the amortization of previous gains and losses.

The above formula takes no credit for interest that may have been earned on assets supporting the liabilities.

11. ACTUARIAL OPINION

In our opinion, for the purposes of this Report:

- The membership data is sufficient and reliable.
- The assumptions, in aggregate which have been used, are appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- The method which has been used is appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- There is a risk that the liabilities may be exposed to adverse demographic experience in the future (e.g. retirement, mortality, etc.).
- We are not aware of any other matters or events occurring since the completion of this Report, which will materially affect the financial position of the liabilities as at December 31, 2017.

This Report has been prepared and this opinion has been given in accordance with accepted actuarial practice.

Dated at Winnipeg, this 16th day of March, 2018.

ELLEMENT CONSULTING GROUP

Dennis Ellement, FSA, FCIA
Brandon Ellement, FSA, FCIA

APPENDIX I

Summary of Data

- Reconciliation of Membership

TOTAL	ACTIVES	DEFERREDS	RECIPROCAL	PENSIONERS	SURVIVORS
Opening 31-Dec-2016	2,033	197	1	808	66
New Entrants	109	-	-	-	-
Retirements	(69)	(5)	-	74	-
Terminations - Deferred	(21)	21	-	-	-
Terminations - Refunds	(94)	(17)	-	(14)	(2)
Terminations - Deaths	-	-	-	-	-
Death - Survivors	-	-	-	(6)	6
Closing 31-Dec-2017	1,958	196	1	862	70

MALES	ACTIVES	DEFERREDS	RECIPROCAL	PENSIONERS	SURVIVORS
Opening 31-Dec-2016	846	80	1	432	8
New Entrants	60	-	-	-	-
Retirements	(29)	(3)	-	32	-
Terminations - Deferred	(10)	10	-	-	-
Terminations - Refunds	(44)	(6)	-	(10)	-
Terminations - Deaths	-	-	-	-	-
Death - Survivors	-	-	-	(2)	4
Closing 31-Dec-2017	823	81	1	452	12

FEMALES	ACTIVES	DEFERREDS	RECIPROCAL	PENSIONERS	SURVIVORS
Opening 31-Dec-2016	1,187	117	-	376	58
New Entrants	49	-	-	-	-
Retirements	(40)	(2)	-	42	-
Terminations - Deferred	(11)	11	-	-	-
Terminations - Refunds	(50)	(11)	-	(4)	(2)
Terminations - Deaths	-	-	-	-	-
Death - Survivors	-	-	-	(4)	2
Closing 31-Dec-2017	1,135	115	-	410	58

- ## Contributors

CONTRIBUTORS - MALES 31-Dec-2017

MALES		Average			Number of Members in Each Years of Service Cell								
Age	Count	Age	Service	Salary	00 - 04	05 - 09	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44
15 - 19	-	-	-	$ -	-	-	-	-	-	-	-	-	-
20 - 24	9	23.22	1.61	48,313.44	9	-	-	-	-	-	-	-	-
25 - 29	58	27.41	2.88	54,979.03	45	13	-	-	-	-	-	-	-
30 - 34	109	32.17	5.28	59,651.38	53	47	9	-	-	-	-	-	-
35 - 39	136	37.05	6.96	73,492.11	54	50	22	10	-	-	-	-	-
40 - 44	130	41.83	9.58	72,429.41	30	43	24	32	1	-	-	-	-
45 - 49	104	46.87	11.86	78,041.60	22	23	20	26	11	2	-	-	-
50 - 54	125	52.23	18.24	81,293.71	21	13	13	20	13	21	23	1	-
55 - 59	95	56.75	20.35	82,721.02	8	13	12	14	11	8	22	6	1
60 - 64	46	61.80	23.14	77,322.26	1	8	3	8	4	5	10	6	1
65 - 69	11	66.36	20.57	68,283.73	-	2	1	3	1	3	-	-	1
70 - 74	-	-	-	-	-	-	-	-	-	-	-	-	-
2017 Total/Avg	823	43.92	11.77	$ 72,880.73	243	212	104	113	41	39	55	13	3
2016 Total/Avg	846	44.36	12.06	$ 73,552.62	263	200	117	101	36	54	51	20	4

CONTRIBUTORS - FEMALES 31-Dec-2017

MALES		Average			Number of Members in Each Years of Service Cell								
Age	Count	Age	Service	Salary	00 - 04	05 - 09	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44
15 - 19	-	-	-	$ -	-	-	-	-	-	-	-	-	-
20 - 24	31	22.65	1.10	43,709.13	31	-	-	-	-	-	-	-	-
25 - 29	96	27.38	3.36	50,445.98	76	20	-	-	-	-	-	-	-
30 - 34	189	32.07	5.61	56,420.29	80	96	13	-	-	-	-	-	-
35 - 39	166	36.98	7.28	61,704.49	53	68	38	7	-	-	-	-	-
40 - 44	142	41.98	9.82	66,099.40	30	47	36	28	1	-	-	-	-
45 - 49	140	47.24	12.62	66,489.90	21	39	29	25	17	8	1	-	-
50 - 54	172	52.23	19.51	67,847.73	13	21	30	21	20	42	24	1	-
55 - 59	141	56.43	20.63	60,402.90	11	19	19	20	17	17	20	18	-
60 - 64	47	61.49	18.08	59,442.66	2	11	8	12	3	2	4	3	2
65 - 69	11	66.09	18.34	57,262.36	-	4	-	4	1	1	-	-	1
70 - 74	-	-	-	-	-	-	-	-	-	-	-	-	-
2017 Total/Avg	1,135	42.87	11.54	$ 61,153.47	317	325	173	117	59	70	49	22	3
2016 Total/Avg	1,187	43.11	11.54	$ 61,507.40	381	297	170	109	65	90	46	25	4

- ## Deferred Pensioners

DEFERREDS - MALES 31-Dec-2017

MALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
15 - 19	-	$ -	-	$ -
20 - 24	-	-	-	-
25 - 29	-	-	-	-
30 - 34	6	303.43	-	-
35 - 39	11	960.82	-	-
40 - 44	14	1,099.82	-	-
45 - 49	16	788.44	-	-
50 - 54	17	1,171.36	-	-
55 - 59	13	642.14	-	-
60 - 64	3	852.11	-	-
65 - 69	1	372.27	-	-
70 - 74	-	-	-	-
2017 Total/Avg	81	$ 883.85	-	$ -
2016 Total/Avg	80	$ 716.34	-	$ -

DEFERREDS - MALES 31-Dec-2016

MALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
15 - 19	-	$ -	-	$ -
20 - 24	-	-	-	-
25 - 29	-	-	-	-
30 - 34	6	342.85	-	-
35 - 39	11	793.57	-	-
40 - 44	12	678.13	-	-
45 - 49	18	617.35	-	-
50 - 54	16	988.78	-	-
55 - 59	11	683.90	-	-
60 - 64	4	712.67	-	-
65 - 69	2	538.39	-	-
70 - 74	-	-	-	-
2016 Total/Avg	80	$ 716.34	-	$ -
2015 Total/Avg	75	$ 673.66	-	$ -

DEFERREDS - FEMALES 31-Dec-2017

FEMALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
15 - 19	-	$ -	-	$ -
20 - 24	-	-	-	-
25 - 29	-	-	-	-
30 - 34	7	326.94	-	-
35 - 39	17	510.20	-	-
40 - 44	24	630.52	-	-
45 - 49	11	834.98	-	-
50 - 54	25	1,426.47	-	-
55 - 59	12	1,577.50	-	-
60 - 64	17	377.99	-	-
65 - 69	2	407.90	-	-
70 - 74	-	-	-	-
2017 Total/Avg	115	$ 844.46	-	$ -
2016 Total/Avg	117	$ 680.63	-	$ -

DEFERREDS - FEMALES 31-Dec-2016

FEMALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
15 - 19	-	$ -	-	$ -
20 - 24	-	-	-	-
25 - 29	-	-	-	-
30 - 34	8	350.90	-	-
35 - 39	21	396.13	-	-
40 - 44	18	589.57	-	-
45 - 49	12	682.11	-	-
50 - 54	28	1,313.46	-	-
55 - 59	15	515.88	-	-
60 - 64	15	346.34	-	-
65 - 69	-	-	-	-
70 - 74	-	-	-	-
2016 Total/Avg	117	$ 680.63	-	$ -
2015 Total/Avg	117	$ 685.17	-	$ -

- Pensions in Payment

PENSIONERS & SURVIVORS - MALES 31-Dec-2017

MALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
40 - 44	-	$ -	-	$ -
45 - 49	-	-	-	-
50 - 54	1	925.72	1	96.55
55 - 59	51	2,773.69	36	44.07
60 - 64	125	2,275.34	116	101.02
65 - 69	129	2,326.51	123	208.19
70 - 74	83	1,904.69	83	281.56
75 - 79	38	1,574.60	38	373.89
80 - 84	21	1,646.05	21	471.85
85 - 89	14	808.13	14	365.36
90 - 94	1	408.18	1	438.88
95 - 99	1	804.03	1	318.51
100 -105	-	-	-	-
2017 Total/Avg	464	$ 2,137.80	434	$ 212.83
2016 Total/Avg	440	$ 2,119.18	410	$ 205.42

PENSIONERS & SURVIVORS - MALES 31-Dec-2016

MALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
40 - 44	-	$ -	-	$ -
45 - 49	-	-	-	-
50 - 54	1	925.72	1	86.35
55 - 59	52	2,804.04	33	46.60
60 - 64	124	2,150.62	117	87.96
65 - 69	118	2,338.69	114	206.63
70 - 74	80	1,988.57	80	294.21
75 - 79	27	1,770.44	27	420.96
80 - 84	20	1,098.46	20	381.41
85 - 89	15	822.33	15	348.14
90 - 94	1	804.03	1	305.43
95 - 99	2	531.88	2	345.83
100 -105	-	-	-	-
2016 Total/Avg	440	$ 2,119.18	410	$ 205.42
2015 Total/Avg	422	$ 2,096.93	388	$ 198.01

PENSIONERS & SURVIVORS - FEMALES 31-Dec-2017

FEMALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
40 - 44	-	$ -	-	$ -
45 - 49	1	162.60	1	12.24
50 - 54	1	760.96	1	137.55
55 - 59	73	2,487.30	45	44.38
60 - 64	129	1,819.91	118	80.70
65 - 69	116	1,235.79	114	110.94
70 - 74	68	875.17	68	123.51
75 - 79	33	859.51	33	204.97
80 - 84	21	650.86	21	233.27
85 - 89	16	614.29	16	294.32
90 - 94	6	602.01	6	251.09
95 - 99	3	678.07	3	498.05
100 -105	1	76.13	1	95.91
2017 Total/Avg	468	$ 1,448.10	427	$ 122.21
2016 Total/Avg	434	$ 1,365.96	405	$ 113.48

PENSIONERS & SURVIVORS - FEMALES 31-Dec-2016

FEMALES Age	Count	Average Monthly Basic Pension	Count	Average Monthly Cola Pension
40 - 44	-	$ -	-	$ -
45 - 49	1	162.60	1	10.44
50 - 54	1	760.96	1	128.41
55 - 59	62	2,164.44	43	41.13
60 - 64	135	1,782.05	128	72.26
65 - 69	104	1,118.42	101	106.28
70 - 74	60	865.34	60	121.08
75 - 79	29	817.24	29	198.64
80 - 84	20	676.48	20	267.88
85 - 89	13	536.57	13	228.14
90 - 94	5	515.54	5	233.83
95 - 99	4	527.59	4	387.38
100 -105	-	-	-	-
2016 Total/Avg	434	$ 1,365.96	405	$ 113.48
2015 Total/Avg	413	$ 1,319.27	386	$ 107.88

Notes:

1. Both the pension amounts and cost-of-living (cola) amounts shown in the above table are the total amounts paid.
2. Counts are based on the primary pensioner sex.
3. The counts shown reflect employees who are with another employer but have service that is the responsibility of M.P.I.

APPENDIX II

Summary of Actuarial Assumptions

		31-Dec-2017	31-Dec-2016
1.	Annual Discount Rate	3.43%	3.89%
	Annual Rate of Inflation Included in Rate of Return	2.00% for 1.00 year, 2.10% for 1.00 year, 2.00% thereafter	2.20% for 1.00 year, 2.10% for 1.00 year, 2.00% thereafter
2.	General Salary Increases (service and merit is separate and age specific)	1.50% for 0.75 years, 2.00% for 2.00 year, 0.00% for 2.00 year, 0.75% for 1.00 year, 1.00% for 1.00 year, 2.00% thereafter	2.00% for 0.75 years, 1.50% for 1.00 year, 2.00% thereafter
3.	Annual Salary Merit Increases	increased 0.50% (2009) see TABLE	same
4.	Indexing of Pensions (2/3 of the assumed rate of inflation)	1.33% for 1.00 year, 1.40% for 1.00 year, 1.33% thereafter	1.47% for 1.00 year, 1.40% for 1.00 year, 1.33% thereafter
5.	Annual Increase in Earnings under Canada Pension Plan	same as general salary increases	same
6.	Annual Increase in Maximum Pension under Income Tax Act	2018: $2,944 Indexed ≥ 2019: same as 5. above	2017: $2,914 Indexed ≥ 2018: same as 5. above
7.	Annual Rate of Interest Credited to Employee Contributions	1.43% for 1.00 year, 1.33% for 1.00 year, 1.43% thereafter	1.69% for 1.00 year, 1.79% for 1.00 year, 1.89% thereafter
8.	Employer's Portion of Administrative Costs - % of Employee Contributions	0.00%	same
9.	Annual Rates of Death	CPM 2014 Public Mortality Projected using Scale B (see TABLE)	same
10.	Proportion of Employees with a Spouse	see TABLE	same
11.	Annual Rates of Termination of Service	see TABLE	same
12.	Annual Rates of Disability	see TABLE	same
13.	Annual Rates of Retirement	see TABLE	same

	Mortality*		Termination		Disability		Retirement	
Age	Males	Females	Males	Females	Males	Females	Males	Females
20	0.08%	0.02%	10.15%	12.60%	-	-	-	-
25	0.10	0.02	6.60	9.20	-	-	-	-
30	0.11	0.03	4.63	6.88	-	-	-	-
35	0.11	0.04	3.39	5.31	0.01%	0.01%	-	-
40	0.13	0.06	2.58	4.26	0.04	0.06	-	-
45	0.18	0.09	2.06	3.64	0.09	0.13	-	-
50	0.25	0.13	1.71	3.22	0.23	0.30	-	-
55	0.36	0.21	-	-	0.66	0.76	24.86%	24.49%
60	0.53	0.35	-	-	-	-	27.10	21.45
65	0.76	0.56	-	-	-	-	100.00	100.00
70	1.17	0.88	-	-	-	-	-	-
75	2.00	1.46	-	-	-	-	-	-
80	3.74	2.71	-	-	-	-	-	-
85	7.22	5.32	-	-	-	-	-	-
90	13.54	10.23	-	-	-	-	-	-
95	24.27	18.86	-	-	-	-	-	-
100	36.64	31.78	-	-	-	-	-	-

* CPM 2014 Public Mortality Projected using Scale B

	Service and Merit		Married Proportions	
Age	Males	Females	Males	Females
20	3.41%	3.41%	33.00%	35.00%
25	2.90	2.90	69.00	55.00
30	2.40	2.40	90.00	68.40
35	1.89	1.89	92.70	70.50
40	1.37	1.37	93.30	70.00
45	0.94	0.94	93.50	67.80
50	0.70	0.70	90.00	71.00
55	-	-	90.00	71.00
60	-	-	90.00	71.00
65	-	-	90.00	71.00

Plus allowance for use of accrued vacation in calculation of average annual salary at date of retirement: 3.45%.

APPENDIX III

Projection of M.P.I. Pension Liabilities for 2017

1.	**Actuarial Liabilities as at 31-Dec-2016**	$ 352,141,300
2.	Interest on liabilities and cash flow (3.89%)	13,657,700
3.	Current Service Cost for Active Members	14,094,600
4.	Employer Benefit Payments	(16,184,000)
5.	**Projected Liabilities as at 31-Dec-2017**	$ 363,709,600
6.	ACTUAL LIABILITIES as at 31-Dec-2017 before change in economic assumptions	$ 362,739,800
7.	ACTUAL LIABILITIES as at 31-Dec-2017 after change in economic assumptions	$ 391,313,500
	GAIN/(LOSS) due to actual experience: [5] - [6]	$ 969,800
	GAIN/(LOSS) due to change in assumptions: [6] - [7]	(28,573,700)
	NET GAIN/(LOSS)	$ (27,603,900)

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Actuarial Valuation Report
as at December 31, 2017

Liabilities for Post-Retirement Health Benefits for In-Scope Employees of Manitoba Public Insurance

Submitted: March, 2018

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APPENDICES

I Summary of Benefits

II Summary of Actuarial Assumptions

III Projection of M.P.I. Post-Retirement Health Benefits Liabilities for 2017

1. PURPOSE

The purpose of this Actuarial Valuation Report (Report) is to:

- indicate the liabilities which the Manitoba Public Insurance (M.P.I.) has at December 31, 2017 (Valuation Date) as a result of the provision of Post-Retirement Health Benefits to in-scope employees, and

- provide a formula that can be used by the management of M.P.I. to estimate the increase in these liabilities in the following 12 to 18 months after December 31, 2017.

These liabilities are an estimate of the present value of the benefits that M.P.I. is expected to pay to provide Post-Retirement Health Benefits to in-scope employees after their retirement. The Post-Retirement Health Benefits include eligible health benefits.

A summary of the Post-Retirement Health Benefits is provided in Appendix I.

The liabilities have been computed on a going concern basis. This basis contemplates the continued existence of the Post-Retirement Health Benefits and the funding arrangements for the benefits.

The guidance for the calculation of the liabilities and the preparation of this Report are the Practice-Specific Standards for Post-Employment Benefit Plans of the Canadian Institute of Actuaries and IAS 19, Employee Benefits issued by the International Accounting Standards Committee.

2. DATA

It is anticipated no amendments will be made to the Post-Retirement Health Benefits, other than those described in Appendix I.

The data used in the calculations includes the benefits currently in payment or those that are expected to be in payment.

Information on each in-scope employee covered by the Post-Retirement Health Benefits was obtained from M.P.I. For current in-scope employees, this information included employee number, name, and birth date.

For retired in-scope employees, similar information was provided.

The data was checked for missing information and illogical information. As a result of these checks, the data was found to be sufficient and reliable.

3. POST-RETIREMENT HEALTH BENEFITS PARTICIPATION

The data provided indicated that M.P.I. was the employer of record for the following participants (new entrants, and separately terminations, may include or exclude temporary employees as provided by M.P.I.):

	EMPLOYEES			PENSIONERS & SURVIVORS		
	Males	Females	Total	Males	Females	Total
Participants as at 31-Dec-2016	595	903	1,498	145	194	339
New employees	44	49	93	-	-	-
Retirements	(22)	(33)	(55)	22	33	55
Terminations	(17)	(23)	(40)	-	-	-
Deaths	-	-	-	-	-	-
Adjustments	-	-	-	-	-	-
Participants as at 31-Dec-2017	600	896	1,496	167	227	394

4. ASSUMPTIONS

The actuarial assumptions used in this valuation are shown in Appendix II.

The demographic assumptions are the same as those used for the actuarial valuation report on the pension liabilities that the Manitoba Public Insurance has as at December 31, 2017. In addition, the marital status at the date of retirement was assumed to be the same as the marital status at the valuation date.

The economic assumptions have been chosen by management. The specific choices are made after a review with internal staff and the actuary. The existing economic assumptions were confirmed on March 5, 2018 by management after management's review of the assumptions. The assumptions are the same as those adopted for the actuarial valuation report on the pension liabilities as at December 31, 2017.

For purposes of future increases in premium (benefit) rates, it was assumed that the benefits currently in force at the Valuation Date would increase at the assumed rate of inflation. Based on information from various sources on the escalating cost of health benefits, it is anticipated that the current benefits will increase at 2.00% per year.

The demographic assumptions overall represent a reasonable best estimate basis for these assumptions. The economic assumptions, overall, represent M.P.I.'s best estimate basis for those assumptions.

5. M.P.I. SHARE OF PREMIUMS

It has been anticipated that M.P.I. will continue to pay 100% of the premiums (benefits) required to finance the Post-Retirement Health Benefits for in-scope employees.

6. VALUATION PROCEDURE

The projected benefit method prorated on service has been used to determine the accrued liabilities and the current service cost applicable to each year after the Valuation Date.

For each in-scope employee, the present value of the expected post-retirement premiums (benefits) was determined. The proportion of this amount held as the accrued liability is equal to the ratio of the completed service as at the Valuation Date divided by the total service expected to be completed at the date of retirement.

For each retired in-scope employee, the present value of the expected post-retirement premiums (benefits) was determined. This full amount is held as the accrued liability.

7. VALUATION RESULTS

The following table shows the liabilities that M.P.I. has as at December 31, 2017 and December 31, 2016 as a result of the provision of Post-Retirement Health Benefits to in-scope employees:

Category	Amount at 31-Dec-2017	Amount at 31-Dec-2016
Current Employees	$ 3,186,900	$ 2,881,200
Retired Employees	1,962,900	1,602,600
Total	$ 5,149,800	$ 4,483,800

For this valuation, the liabilities were $27,200 less than projected prior to reflecting changes in actuarial assumptions. The detailed breakdown of the experience is shown in Appendix III.

8. PROJECTION FORMULA FOR LIABILITIES

The following formula can be used to project the estimated increase in liabilities in the 12 to 18 months after the Valuation Date:

- Add interest at the rate of 3.43% per year to the liabilities at the beginning of the period, the current service cost for the period, and the premium (benefit) payments for the period. The interest addition for the current service cost and the premium (benefit) payments should be prorated to recognize investment for half the period, on average.
- Add employer current service cost at the rate of $175 per covered current in-scope employee per year for the period.

9. SENSITIVITY OF RESULTS TO DIFFERENT ASSUMPTIONS

The results obtained are based on the assumptions outlined in Appendix II.

The accrued liability would increase by approximately $0.264 million or 5.13% for each ¼ of 1% increase in the health cost inflation rate. The current service cost would increase by a similar percentage.

The accrued liability would increase by approximately $0.261 million or 5.07% for each ¼ of 1% decrease in the assumed rate of return. The current service cost would increase by a similar percentage.

10. MATURITY ANALYSIS

The following table shows the estimated future benefits as at December 31, 2017 and December 31, 2016:

	Less than 1 year	Between 1 - 2 years	Between 2 - 5 years	Over 5 years	Total
31-Dec-2017	$ 98,100	$ 114,900	$ 445,900	$ 9,262,600	$ 9,921,500
31-Dec-2016	85,400	102,100	406,200	8,794,500	9,388,200

11. ACCOUNTING FOR POST-RETIREMENT OBLIGATIONS

The cost for a period, including the assumed interest, is equal to:

(a) the change in the reserve plus

(b) the premium (benefit) payments plus

(c) the amounts for the amortization of the previous unfunded liability.

The above formula takes no credit for interest that may have been earned on assets supporting the liabilities.

12. ACTUARIAL OPINION

In our opinion, for the purposes of this Report:

- The membership data is sufficient and reliable.
- The assumptions, in aggregate which have been used, are appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- The method which has been used is appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- We are not aware of any other matters or events occurring since the completion of this Report, which will materially affect the calculation of the liabilities as at December 31, 2017.
- This Report has been prepared and this opinion given in accordance with accepted actuarial practice in Canada.

Dated at Winnipeg, this 16th day of March, 2018.

Respectfully submitted,
ELLEMENT CONSULTING GROUP

Dennis Ellement, FSA, FCIA

Brandon Ellement, FSA, FCIA

APPENDIX I

SUMMARY OF BENEFITS

An annual post-retirement health benefits spending account is available, in the amount of $200, for eligible in-scope employees who retired after September 27, 2008.

Effective January 1, 2015, all eligible in-scope retirees who retired after September 27, 2008 had their post-retirement health benefits spending account increase from $200 to $350.

APPENDIX II

SUMMARY OF ACTUARIAL ASSUMPTIONS

	31-Dec-2017	31-Dec-2016
1. Annual Discount Rate:	3.43%	3.89%
2. Post-Retirement Benefit Rates (as at valuation date):		
- increase in post-retirement benefit rates	2.00% for 1.00 year, 2.10% for 1.00 year, 2.00% thereafter	2.20% for 1.00 year, 2.10% for 1.00 year, 2.00% thereafter
- family rate (benefit) per year	$350	same
- single rate (benefit) per year	$350	same
3. Marital Status at Retirement:	same as at Valuation Date	same
4. Annual Rates of Death:	CPM 2014 Public Mortality Projected using Scale B (see TABLE)	same
5. Annual Rates of Termination of Service:	(see TABLE)	same
6. Annual Rates of Disability:	(see TABLE)	same
7. Annual Rates of Retirement:	(see TABLE)	same
8. Portion of Health Spending Account Expected to be Utilized:	65%	same

The age specific rates for the demographic assumptions are shown in the following table:

	Mortality*		Termination		Disability		Retirement	
Age	Males	Females	Males	Females	Males	Females	Males	Females
20	0.08%	0.02%	10.15%	12.60%	-	-	-	-
25	0.10	0.02	6.60	9.20	-	-	-	-
30	0.11	0.03	4.63	6.88	-	-	-	-
35	0.11	0.04	3.39	5.31	0.01%	0.01%	-	-
40	0.13	0.06	2.58	4.26	0.04	0.06	-	-
45	0.18	0.09	2.06	3.64	0.09	0.13	-	-
50	0.25	0.13	1.71	3.22	0.23	0.30	-	-
55	0.36	0.21	-	-	0.66	0.76	24.86%	24.49%
60	0.53	0.35	-	-	-	-	27.10	21.45
65	0.76	0.56	-	-	-	-	100.00	100.00
70	1.17	0.88	-	-	-	-	-	-
75	2.00	1.46	-	-	-	-	-	-
80	3.74	2.71	-	-	-	-	-	-
85	7.22	5.32	-	-	-	-	-	-
90	13.54	10.23	-	-	-	-	-	-
95	24.27	18.86	-	-	-	-	-	-
100	36.64	31.78	-	-	-	-	-	-

* CPM 2014 Public Mortality Projected using Scale B

APPENDIX III

PROJECTION OF M.P.I. POST-RETIREMENT HEALTH BENEFITS LIABILITIES FOR 2017

1.	**Actuarial Liabilities as at 31-Dec-2016**	4,483,800
2.	Interest on liabilities and cash flow (3.89%)	176,200
3.	Current Service Cost for Active Members	231,900
4.	Premium Payments for Retired Members	(137,900)
5.	Adjustment for new entrants	-
6.	Adjustment for data	-
7.	**Projected Liabilities as at 31-Dec-2017**	4,754,000
8.	ACTUAL LIABILITIES as at 31-Dec-2017 before change in economic assumptions	4,726,800
9.	ACTUAL LIABILITIES as at 31-Dec-2017 after change in economic assumptions	5,149,800
	GAIN/(LOSS) due to actual experience: [7] - [8]	27,200
	GAIN/(LOSS) due to change in assumptions: [8] - [9]	(423,000)
	NET GAIN/(LOSS)	(395,800)

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Actuarial Valuation Report as at December 31, 2017

Liabilities for Post-Retirement Health Benefits for Out-of-Scope Employees of Manitoba Public Insurance

Submitted: March, 2018

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APPENDICES

I Summary of Benefits

II Summary of Actuarial Assumptions

III Projection of M.P.I. Post-Retirement Health Benefits Liabilities for 2017

1. PURPOSE

The purpose of this Actuarial Valuation Report (Report) is to:

- indicate the liabilities which the Manitoba Public Insurance (M.P.I.) has at December 31, 2017 (Valuation Date) as a result of the provision of Post-Retirement Health Benefits to out-of-scope employees, and
- provide a formula that can be used by the management of M.P.I. to estimate the increase in these liabilities in the following 12 to 18 months after December 31, 2017.

These liabilities are an estimate of the present value of the future premiums that M.P.I. is expected to pay to provide Post-Retirement Health Benefits to out-of-scope employees after their retirement. The Post-Retirement Health Benefits include Ambulance/Hospital Benefits, Extended Health Benefits, Vision Care Benefits and Dental Benefits. M.P.I. pays premiums to Blue Cross to provide these benefits.

A summary of the Post-Retirement Health Benefits is provided in Appendix I.

The liabilities have been computed on a going concern basis. This basis contemplates the continued existence of the Post-Retirement Health Benefits and the funding arrangements for the benefits.

The guidance for the calculation of the liabilities and the preparation of this Report are the Practice-Specific Standards for Post-Employment Benefit Plans of the Canadian Institute of Actuaries and IAS 19, Employee Benefits issued by the International Accounting Standards Committee.

2. DATA

It is anticipated no amendments will be made to the Post-Retirement Health Benefits.

The data used in the calculations includes the premiums currently in payment or those that are expected to be in payment.

Information on each out-of-scope employee covered by the Post-Retirement Health Benefits was obtained from M.P.I. For current out-of-scope employees, this information included employee number, name, birth date, and single or family coverage.

For retired out-of-scope employees, similar information was provided and, as well, the amount of monthly premium for the coverage. The premium rates effective July 1, 2017 were $161.52 per month for family coverage and $81.68 per month for single coverage.

The data was checked for missing information and illogical information. As a result of these checks, the data was found to be sufficient and reliable.

3. POST-RETIREMENT HEALTH BENEFITS PARTICIPATION

The data provided indicated that M.P.I. was the employer of record for the following participants:

	EMPLOYEES			PENSIONERS & SURVIVORS		
	Males	Females	Total	Males	Females	Total
Participants as at 31-Dec-2016	192	140	332	146	43	189
New employees	12	7	19	-	-	-
Retirements	(10)	(8)	(18)	10	8	18
Terminations	(25)	(25)	(50)	-	-	-
Deaths	-	-	-	-	-	-
Adjustments	-	-	-	-	-	-
Participants as at 31-Dec-2017	169	114	283	156	51	207

4. ASSUMPTIONS

The actuarial assumptions used in this valuation are shown in Appendix II.

The demographic assumptions are the same as those used for the actuarial valuation report on the pension liabilities that the Manitoba Public Insurance has as at December 31, 2017. In addition, the marital status at the date of retirement was assumed to be the same as the marital status at the valuation date.

The economic assumptions have been chosen by management. The specific choices are made after a review with internal staff and the actuary. The existing economic assumptions were confirmed on March 5, 2018 by management after management's review of the assumptions. The assumptions are the same as those adopted for the actuarial valuation report on the pension liabilities as at December 31, 2017.

For purposes of future increases in premium rates, it was assumed that the premium rates currently in force at the Valuation Date would increase at the assumed rate of inflation. The assumed rate of inflation is 2.00%. However, based on information from various sources on the escalating cost of health benefits, it is anticipated that the current premiums will increase at 5.00% per year. For 2016, the rate of escalation of the cost of health benefits was 4.90%.

The demographic assumptions overall represent a reasonable best estimate basis for these assumptions. The economic assumptions, overall, represent M.P.I.'s best estimate basis for those assumptions.

5. M.P.I. SHARE OF PREMIUMS

It has been anticipated that M.P.I. will continue to pay 100% of the premiums required to finance the Post-Retirement Health Benefits for out-of-scope employees.

6. VALUATION PROCEDURE

The projected benefit method prorated on service has been used to determine the accrued liabilities and the current service cost applicable to each year after the Valuation Date.

For each out-of-scope employee, the present value of the expected post-retirement premiums was determined. The proportion of this amount held as the accrued liability is equal to the ratio of the completed service as at the Valuation Date divided by the total service expected to be completed at the date of retirement.

For each retired out-of-scope employee, the present value of the expected post-retirement premiums was determined. This full amount is held as the accrued liability.

7. VALUATION RESULTS

The following table shows the liabilities that M.P.I. has as at December 31, 2017 and December 31, 2016 as a result of the provision of Post-Retirement Health Benefits to out-of-scope employees:

Category	Amount at 31-Dec-2017	Amount at 31-Dec-2016
Current Employees	$ 11,288,500	$ 10,994,400
Retired Employees	10,122,700	8,496,000
Total	$ 21,411,200	$ 19,490,400

For this valuation, the liabilities were $1,702,200 less than projected prior to reflecting changes in actuarial assumptions. The detailed breakdown of the experience is shown in Appendix III.

8. PROJECTION FORMULA FOR LIABILITIES

The following formula can be used to project the estimated increase in liabilities in the 12 to 18 months after the Valuation Date:

- Add interest at the rate of 3.43% per year to the liabilities at the beginning of the period, the current service cost for the period, and the premium payments for the period. The interest addition for the current service cost and the premium payments should be prorated to recognize investment for half the period, on average.
- Add employer current service cost at the rate of $4,093 per covered current out-of-scope employee per year for the period.
- Deduct the actual premiums to Blue Cross for the period.

9. SENSITIVITY OF RESULTS TO DIFFERENT ASSUMPTIONS

The results obtained are based on the assumptions outlined in Appendix II.

The accrued liability would increase by approximately $1.115 million or 5.21% for each ¼ of 1% increase in the health cost inflation rate. The current service cost would increase by a similar percentage.

The accrued liability would increase by approximately $1.137 million or 5.31% for each ¼ of 1% decrease in the assumed rate of return. The current service cost would increase by a similar percentage.

10. MATURITY ANALYSIS

The following table shows the estimated future benefits as at December 31, 2017 and December 31, 2016:

	Less than 1 year	Between 1 - 2 years	Between 2 - 5 years	Over 5 years	Total
31-Dec-2017	$ 392,800	$ 439,300	$ 1,596,500	$ 39,612,800	$ 42,041,400
31-Dec-2016	362,300	408,900	1,506,400	39,956,200	42,233,800

11. ACCOUNTING FOR POST-RETIREMENT OBLIGATIONS

The cost for a period, including the assumed interest, is equal to:

(a) the change in the reserve plus

(b) the premium payments plus

(c) the amounts for the amortization of the previous unfunded liability.

The above formula takes no credit for interest that may have been earned on assets supporting the liabilities.

12. ACTUARIAL OPINION

In our opinion, for the purposes of this Report:

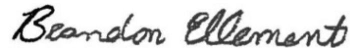
- The membership data is sufficient and reliable.
- The assumptions, in aggregate which have been used, are appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- The method which has been used is appropriate for the purpose of determining the accounting requirements of the Plan on a going concern basis.
- We are not aware of any other matters or events occurring since the completion of this Report, which will materially affect the calculation of the liabilities as at December 31, 2017.
- This Report has been prepared and this opinion given in accordance with accepted actuarial practice in Canada.

Dated at Winnipeg, this 16th day of March, 2018.

Respectfully submitted,

ELLEMENT CONSULTING GROUP

Dennis Ellement, FSA, FCIA



Brandon Ellement, FSA, FCIA

APPENDIX I

SUMMARY OF BENEFITS

AMBULANCE/HOSPITAL BENEFITS

The Plan provides for complete coverage for Ambulance and Hospital Semi-Private charges in Manitoba.

Full payment for reasonable and customary charges for ambulance services provided within the province, and payment of up to $250 per trip, (based on provincial rates) for ambulance services provided elsewhere.

Full payment for the charge of a semi-private room in a Manitoba hospital if the hospital does not normally provide the semi-private room, without charge to any patient.

EXTENDED HEALTH CARE BENEFITS

Prescription drugs are reimbursed at 70%.

Other necessary health expenses are reimbursed at 80%. Various limits and benefit periods apply for these other health expenses.

An annual deductible of $20 per person to a maximum of $40 applies.

Other necessary health expenses include expenses incurred for: travel health care, dental treatment due to accident, athletic therapy, paramedical practitioner, physiotherapy, chiropody, clinical psychology, nutritional counseling, private duty nursing, prosthetic appliances and miscellany, wigs, rental or purchase of medical equipment and cardiac rehabilitation.

VISION CARE BENEFITS

Eligible eye care expenses are reimbursed at 100% up to $150 per person per 24-month benefit period.

Eligible eye care expenses include the cost of eyeglasses, replacement glasses, repairs to existing glasses and contact lenses which are prescribed as a result of an eye examination by a licensed medical doctor, ophthalmologist or optometrist. Various limits and exclusions apply.

DENTAL BENEFITS

Basic Dental Services are reimbursed at 80%.

Major Dental Services are reimbursed at 50%.

Reimbursement for dental services is subject to an annual maximum of $800.

If the cost of the treatment is expected to exceed $500, then pre-treatment authorization is required.

Benefit payments are based on the Dental Fee Guide established by the Manitoba Dental Association.

Various exclusions apply. The exclusions depend on the type of dental treatment or the conditions giving rise to the charges.

SURVIVOR BENEFITS

The surviving spouse of a retired member receives the benefits under the Plan for up to 24 months following the death of the member.

APPENDIX II

SUMMARY OF ACTUARIAL ASSUMPTIONS

	31-Dec-2017	31-Dec-2016
1. Annual Discount Rate:	3.43%	3.89%
2. Post-Retirement Premium Rates (at valuation date):		
- increase in post-retirement premium rates	5.00%	4.90%
- family rate per month	$161.52	$161.73
- single rate per month	$81.68	$81.79
3. Marital Status at Retirement:	same as at Valuation Date	same
4. Annual Rates of Death:	CPM 2014 Public Mortality Projected using Scale B (see TABLE)	same
5. Annual Rates of Termination of Service:	(see TABLE)	same
6. Annual Rates of Disability:	(see TABLE)	same
7. Annual Rates of Retirement:	(see TABLE)	same

The age specific rates for the demographic assumptions are shown in the following table:

	Mortality*		Termination		Disability		Retirement	
Age	Males	Females	Males	Females	Males	Females	Males	Females
20	0.08%	0.02%	10.15%	12.60%	-	-	-	-
25	0.10	0.02	6.60	9.20	-	-	-	-
30	0.11	0.03	4.63	6.88	-	-	-	-
35	0.11	0.04	3.39	5.31	0.01%	0.01%	-	-
40	0.13	0.06	2.58	4.26	0.04	0.06	-	-
45	0.18	0.09	2.06	3.64	0.09	0.13	-	-
50	0.25	0.13	1.71	3.22	0.23	0.30	-	-
55	0.36	0.21	-	-	0.66	0.76	24.86%	24.49%
60	0.53	0.35	-	-	-	-	27.10	21.45
65	0.76	0.56	-	-	-	-	100.00	100.00
70	1.17	0.88	-	-	-	-	-	-
75	2.00	1.46	-	-	-	-	-	-
80	3.74	2.71	-	-	-	-	-	-
85	7.22	5.32	-	-	-	-	-	-
90	13.54	10.23	-	-	-	-	-	-
95	24.27	18.86	-	-	-	-	-	-
100	36.64	31.78	-	-	-	-	-	-

* CPM 2014 Public Mortality Projected using Scale B

APPENDIX III

PROJECTION OF M.P.I. POST-RETIREMENT HEALTH BENEFITS LIABILITIES FOR 2017

1.	**Actuarial Liabilities as at 31-Dec-2016**	19,490,400
2.	Interest on liabilities and cash flow (3.89%)	769,700
3.	Current Service Cost for Active Members	959,900
4.	Premium Payments for Retired Members	(369,600)
5.	Adjustment for new entrants	-
6.	Adjustment for data	-
7.	**Projected Liabilities as at 31-Dec-2017**	20,850,400
8.	ACTUAL LIABILITIES as at 31-Dec-2017 before change in economic assumptions	19,148,200
9.	ACTUAL LIABILITIES as at 31-Dec-2017 after change in economic assumptions	21,411,200
	GAIN/(LOSS) due to actual experience: [7] - [8]	1,702,200
	GAIN/(LOSS) due to change in assumptions: [8] - [9]	(2,263,000)
	NET GAIN/(LOSS)	(560,800)

Benefit security at a reasonable cost

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CAC (MPI) 1-34

Part and Chapter:	Part IV, Value Management	Page No.:	3
PUB Approved Issue No:	9. Cost of operations and cost containment measures		
Topic:	Capital Space Plan		
Sub Topic:			

Preamble to IR (If Any):

"In April 2018, subsequent to the approval of the 2018/19 Capital budget, a business case was prepared for the Five Year Strategic Space Plan and submitted for approval to the Board of Directors. This multi-phase, multi-year project focuses on the redevelopment of MPI's physical facilities. In the first phase, a budget of $2,065,000 was approved for 2018/19. Details of this business case are commercially sensitive, and are the subject of a motion seeking confidential treatment prior to filing with the PUB."

Question:

Realizing that the business case may be commercially sensitive, could MPI elaborate as to the expected 'building expenses' savings in fiscal years 2019/20 and onwards.

Rationale for Question:

To better understand the financial impact on future basic insurance rates.

RESPONSE:

This response is directly related to materials for which the Corporation has sought confidential treatment, has been provided with the confidential module pursuant to PUB Order 89/18.

CAC (MPI) 1-35

Part and Chapter:	Part VIII, EAR Attachment B and Part V Claims Incurred	Page No.:	Part VIII, EAR Attachment B – page 7 and Part V Claims Incurred Page 15
PUB Approved Issue No:	10. Claims Forecasting		
Topic:	Increase in Weekly Indemnity Ultimates		
Subtopic:	Impact on Rate Indication		

Preamble to IR (If Any):

Page 15 of Part V Claims Incurred indicates that "the ultimate loss estimates for the 2010/11 through 2016/17 accident years were increased by $55.8 million over last year's estimates. The increase is driven primarily by the introduction of centralized reserving."

Page 7 of Part VIII, EAR Attachment B states "In 2017, MPI revised its reserving process for long-term PIPP claims by centralizing the process to a dedicated team. The team completed a review of all PIPP claims older than 24 months, ensuring that case reserves are adequate to cover claimants' long-term entitlement to PIPP benefits based on established reserving guidelines."

Question:

a) Please provide the established reserving guidelines.
b) Please give the Corporation's rationale for the decision to change its reserving process and explain who was involved in this decision.
c) Has the Corporation considered, and if not, would the Corporation consider an external third party review of their reserving practices?
d) Please give the impact on the rate indication of the $55.8 million increase of ultimate loss estimates for Weekly Indemnity for the 2010/11 through 2016/17 accident years.

e) The case reserves went up substantially without a full offset in IBNR causing the Ultimates to go up. Is it the Corporation's opinion that the estimated Ultimates were too low for the Weekly Indemnity coverage in the February 2017 valuation? If so, please fully explain why that is. If not, what is the justification for the increase in Ultimates for this coverage in the February 2018 valuation?

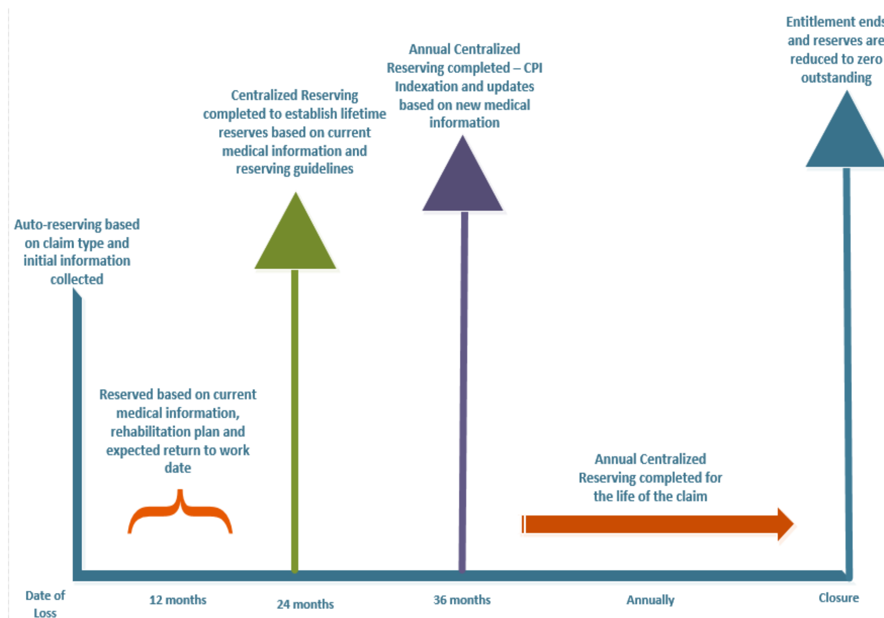
Rationale for Question:

To understand the reserving guidelines, the justification for the new reserving process and its impact on the rate indication.

RESPONSE:

a) Figure 1 demonstrates the reserving process over time.

Figure 1: PIPP Claim Reserving Timeline



At the outset of a claim, based on the claim type and information collected when the claim is opened, reserves are established automatically to cover initial expenses and entitlements. Following that, periodic reviews and reserve updates

are completed as medical information is obtained and rehabilitation plans are established. Starting at 24 months, and annually thereafter, the Centralized Reserving team evaluates and updates each claim, utilizing standardized processes and calculators developed by the actuarial team, to establish reserves on all claims.

b) The reserving guidelines have not changed for PIPP claims open for 24 months or longer. The existing guidelines were not being followed post-BI3 implementation, which is why the Corporation set up the dedicated Centralized Reserving team to remedy this situation. In addition, the Manager of PIPP Support Services (responsible for the Centralized Reserving team), now reports directly to the Chief Actuary, and the Chief Actuary reports directly to the Audit Chair of the Board of Directors. The Chief Actuary now has clear control and can ensure that case reserving guidelines are being followed.

c) The Corporation has yet to consider an external third party review of its reserving practices. The Corporation would need to determine if the cost of engaging a third party would be fiscally prudent before engaging in any such review.

d) The rise in ultimate loss estimates for Weekly Indemnity increased the ultimate forecast for 2019/20 accident year by approximately $8.0 million. However, per <u>*Part V, RM Appendix 10*</u>, as a component of the required rate, *"Total PIPP claims costs (Accident Benefits – Other and Income Replacement Indemnity) increased marginally by $0.53 or 0.3%"*, (i.e. the increase in PIPP claims costs had only a marginal effect on the rate indication).

e) A significant number of income replacement (IR) claims open for more than 24 months were not fully case reserved as per the applicable guidelines. In many cases, the under-reserving was a result of overly optimistic assumptions on the claimants' ability to return to work. However, the Corporation's actuarially based reserving guidelines for longer-term IR claims already incorporates expected recovery rates. So, although well-intentioned, case managers did not reserve appropriately, for claims open for more than 24 months, the Centralized Reserving process takes the case reserving process completely out of their hands, ensuring

that reserving is done consistently and is based on established reserving guidelines.

<u>CAC (MPI) 1-36</u>

Part and Chapter:	**Part IV, Service Delivery Model**	**Page No.:**	**17**
PUB Approved Issue No:	**10. Claims Forecasting**		
Topic:	**Current Status of PIPP**		
Sub Topic:	**Mental Health and Chronic Pain—growth in retained claims**		

Preamble to IR (If Any):

"SDM.1.9.1 Current State of PIPP

The injury and medical environment in which PIPP resides continues to evolve due to an overall increase in the complexity of injury claims caused by the rising number of mental health claims, such as addictions, depression, anxiety, and chronic pain, as well as concussion and post-concussion diagnosis. MPI seeks to continuously improve and adapt to these changes given their significant impact to reserves in 2016 and 2017. The downstream impact of this trend on MPI is significant growth in our retained claims beyond five years from first notice of loss (FNOL). Through the deep dive review of this area in 2017, various process improvements have been initiated that will mitigate this trend."

Question:

a) Please file a copy of the "deep-dive review" referred to in the preamble.
b) Please file an analysis of the financial impact on "reserves" (increase in claims incurred) for 2016 and 2017 relating to injury claims caused by the rising number of mental health claims, such as addictions, depression, anxiety, and chronic pain, concussion and post-concussion diagnosis.
c) Please elaborate on the root causes of the rising mental health claims in the last couple of years, if known.

Rationale for Question:

To understand the financial impact of rising claims incurred relating to the various types of claims referred to in the preamble and their impact on basic insurance rates.

RESPONSE:

a) The PIPP Program Review report (the "deep dive review") is available in *Appendix 1*. Please note that a number of slides have been redacted as they relate to potential legislative amendments.

b) Long-term claim retention is increasing as indicated by Figure 1.

Figure 1: IRI Claim Retention

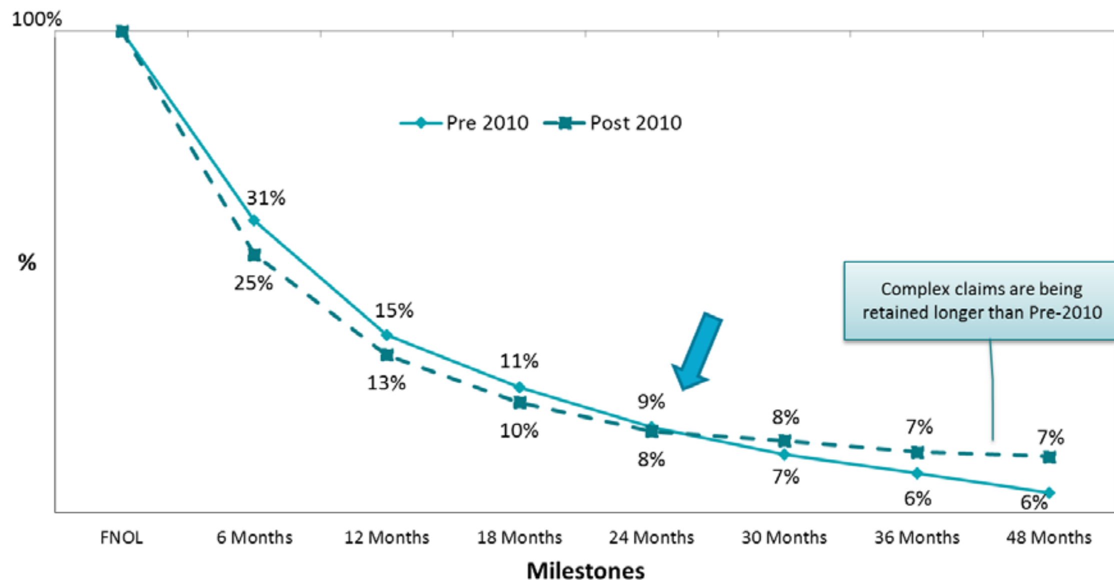
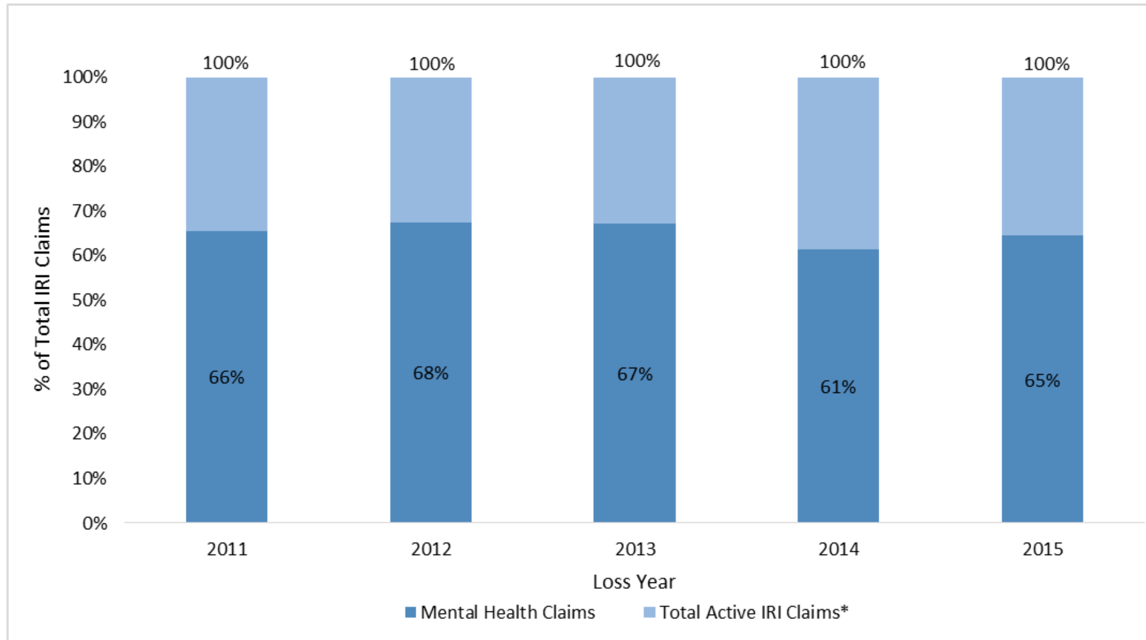


*Chart represents percentage of claims that remain with payments past each milestone

Complex claims are generally those claims involving issues related to mental health. Claimants with issues affecting their mental health also typically have physical injuries. As a result, the Corporation cannot isolate the financial impact of mental health. Figure 1 demonstrates that overall long-term claim retention is increasing. Figure 2 shows that this is primarily attributable to the increase in

claims involving issues related to mental health. Increased claim retention results in an increase in claims incurred.

Figure 2: Long Term Mental Health IRI Claims



*Active or anticipated IRI claims as at Feb. 28, 2018

The effects of mental health claims and the increase in claims retention are expected to continue to permeate in the 2016 and 2017 loss years, however it is unknown as to which claims in these loss years will be retained and contribute to long term retention.

c) The response to CAC (MPI) 1-66 in the 2018 General Rate Application discusses the root causes of the rising mental health claims, and is reproduced (in italics) below for convenience.

In summary, the emergence of psychological and psychiatric impairment claims resulting from physical injury is a trend being experienced by auto insurance companies globally, and one that Manitoba Public Insurance has not been immune to.

The causes of this increase in claims complexity is both complicated and multifaceted. In 2007/08, the medical community declared an opioid crisis[1]. Studies showed an increased reliance on the prescribing of opioid drugs to manage pain from two percent to fifteen percent of cases[2]. This resulted in increased addiction issues, which then increase the complexity of the claim, increasing the likelihood that claim will remain active, longer. Manitoba Public Insurance recognized this trend, and in partnership with the Worker's Compensation Board of Manitoba, implemented an Opioid Medication Policy on November 1, 2012, helping to ensure prescribed opioid medications are done so safely and effectively, following Health Canada guidelines.

In their January 1, 2016 feature article, Canadian Underwriter stated that "The insurance industry has experienced a commensurate increase over the years in claims for psychological and psychiatric injuries"[3]. This is echoed by Claims Canada in their February 1, 2012 edition when they wrote, "In recent years, personal injury claims have increasingly included claims not just for physical injuries but also for psychological or psychiatric impairment, such as anxiety, stress and depression disorders."[4]

In Ontario's tort based auto insurance, they noted an 83% increase in accident benefit costs between 2006 and 2010[5]. The Chartered Insurance Professional Society described the rise in psychological claims as "alarming", and they explain how these types of claims challenge the industry because "Many (psychological claims) involve multiple causes and overlapping impairments. Prior susceptibility is very often an issue."[6]

Though the experiences in Ontario and British Columbia are magnified in comparison to MPI due to the tort environments of those jurisdictions, in both

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[1] journal.cpha.ca/index.php/cjph/article/download/2495/2486
[2] Ibid
[3] http://www.canadianunderwriter.ca/features/psychological-injuries/
[4] http://claimscanada.ca/adjusting-for-angst/
[5] http://clcnow.com/uploads/articles/57/escalating-claims-1.pdf?1414789851
[6] http://www.insuranceinstitute.ca/en/cipsociety/information-services/advantage-monthly/0611-Psychological-Injury-Claims.aspx

raising settlement and legal costs, MPI is aware of this issue, and has been strategizing and implementing processes and procedures to mitigate the impact of the increasing number of complex claims for a number of years.

Adjustments in case management practices, service level agreements and internal policies have allowed MPI to mitigate some of the increasing strain on the system as a result of the increasing complexity of injury claims, as discussed within Part IV SDM.1.9.1 Current State of PIPP.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

MPI is unable to provide portions of the PIPP Program Review that relate to potential legislative amendments to the PIPP program. Legislative changes to the PIPP program are beyond the jurisdiction of the Public Utilities Board.

Attachment A
Agenda 6.3
April 19, 2018

PIPP Program Review

Board of Directors Meeting

April 19, 2018

This report has been prepared as advice, opinions, proposals, recommendations, analyses or policy options developed by or for the public body or a minister, as per Section 23(1) of the Freedom of Information and Protection of Privacy Act

Manitoba Public Insurance

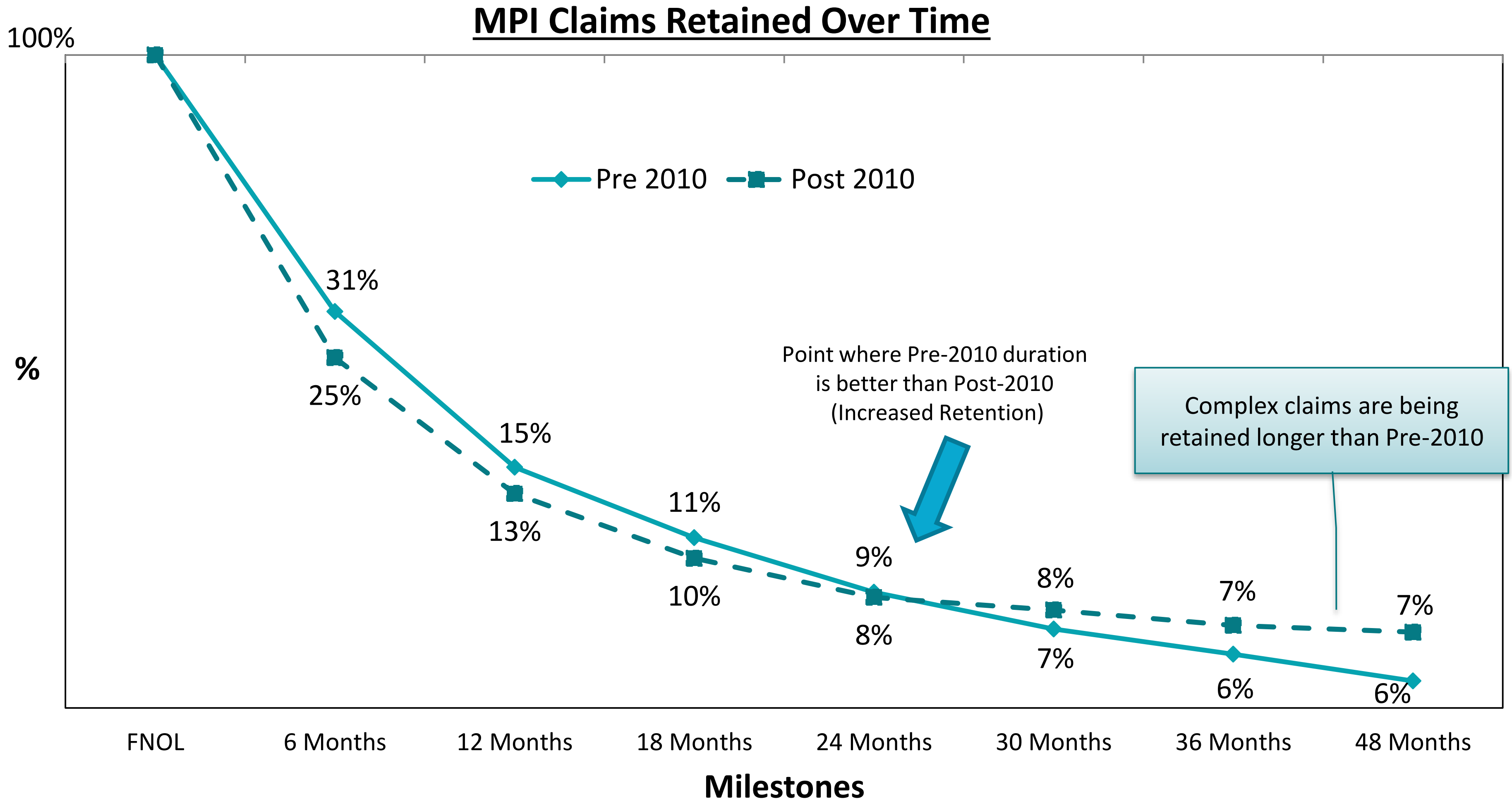
Executive Summary

- The Board requested a deep dive into the Personal Injury Protection Plan (PIPP) in response to substantial IBNR adjustments, year over year variability in claims incurred, and growth in retained claims
- Growth in retained claims has been occurring since 2008. Influences include the implementation of BI3, a reduction in staff, and challenges with complex claims
- The PIPP claims reserving processes were modified in 2010 via BI^3 that resulted in systemic under reserving in operations
- To resolve these problems, three primary improvement areas and their annual claims savings potential have been identified by the deep dive. In order of priority:

	Annual Benefit
1. Recommend resources and work structure:	$2M+
▪ Intake Unit and triage (triage pilot in place since May 2017)	
▪ Proper resources – numbers and talent / qualifications	
▪ Centralized Reserving (implemented March 2017)	
2. Policy and Process Improvements:	$1 to 2M
▪ 180 day / 2 year determinations procedures	
▪ Permanent impairment interest calculations	
▪ Chiropractic Agreement	
▪ Investigation / Surveillance Policy	
3. Legislation and Product Improvements:	[REDACTED]
▪ [REDACTED]	
▪ [REDACTED]	

Manitoba Public Insurance

Claim Retention Curve is Trending Longer



NOTE: Chart represents percentage of claims that remain with payments past each milestone

Manitoba Public Insurance

Priorities

1. **Organizational structure, resourcing, talent management, and workforce planning**
   - Intake and triage
   - Proper resources – numbers and talent
   - Resource to workforce plan

2. **Procedural and policy changes**
   - Investigation / Surveillance Policy
   - 180 day / 2 year determinations procedures
   - Permanent impairment interest calculations
   - Chiropractic Agreement

3. **Act and Regulation changes**
   - [REDACTED]
   - [REDACTED]
   - [REDACTED]

Manitoba Public Insurance

Organizational Structure and Resourcing

Manitoba Public Insurance

Centralized Reserving and Initial Contact

Centralized Reserving:

- Commenced March 1, 2017
- Creates consistency in claim reserving and provides capacity for case managers to focus on returning claimants to work
- Critical to the actuarial process as it relates to claims forecasting
- Identifies areas of opportunity in case management and work processes

Initial Claim Contact:

- Implemented an initial review of medical expense claims handled by the Benefit Administration Unit
- Cost avoidance of **$390 thousand** per year
- Resourcing constraints will determine if this practice can continue

Operational reserving fundamentals - repaired

IRI Case Reserves per Open IRI Claim by Development Age

Loss Year	32mths	44mths	56mths	68mths	80mths
2000	Old Reserving Calculator				$455,386
2001				$391,707	$414,667
2002			$391,091	$477,461	$459,598
2003		$316,207	$358,366	$353,072	$380,131
2004	$249,595	$327,289	$360,786	$422,284	$461,795
2005	$284,933	$355,363	$387,791	$392,269	$413,940
2006	$327,550	$347,656	$387,202	$360,423	$319,583
2007	$198,736	$261,117	$288,562	$309,020	$356,540
2008	$149,199	$181,790	$214,928	$320,605	$320,453
2009	$132,410	$190,437	$262,196	$311,948	$358,438
2010	$97,328	$214,003	$228,508	$342,096	$362,010
2011	$154,895	$186,608	$294,542	$306,692	$501,992
2012	$126,400	$189,522	$222,781	$476,697	
2013	$128,805	$170,559	$389,028		
2014	$137,312	$411,279			
2015	$271,318				

Old Reserving Calculator (case reserving using different mortality table fiscal 2005/06 and prior)

Pre-BI3 Years (case reserving occurs in fiscal years 2006/07 to 2009/10)

BI-3 Implementation Year (case reserving occurs in fiscal year 2010/11)

Post BI-3 Years (case reserving occurs in fiscal 2011/12 through 2016/17)

Centralized Reserving Implementation Year (case reserving occurs in 2017/18)

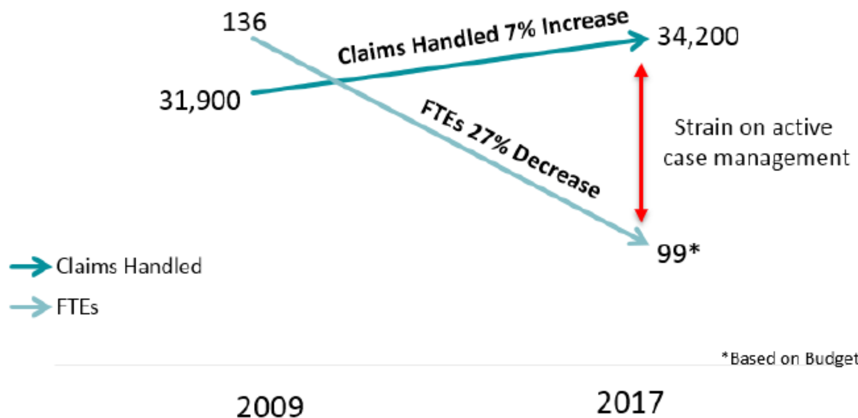
Centralized Reserving

- Effective March 1, 2017
- All claims 24+ months properly reserved
- Reserving process developed through operations and actuarial partnership
- Chief Actuary has dotted line from Ops reserving

Manitoba Public Insurance

Claims staff cut, not proactive in recoveries

Too few Case Management Staff FTE vs. Claims



Need better skills and pro-active approaches

Problem:

- Not enough time to actively adopt return to work practices on claimants
- Claims with psychological factors have increased by 10% from 2009 to 2016
- Sample of claims with a risk assessment show 14% have complex issues and need case management/return to work efforts immediately
- Majority of current case managers come from physical damage, primarily adjusters and are ill-equipped to manage the complexity of claims

Resolution:

- Get 13 more FTE
- Work with HR to recruit staff with specialized skills in social work, occupational therapy, physical therapy, etc.
- More active approach to case management and return to work goal setting

- ICBC also hiring to be more pro-active on return to work

PIPP Support Services: Centralized Intake Unit Proposal

- Adding 13 EFT to improve intake and triage to assign claims appropriately
  - 10 Administration Unit
  - 3 Analytic support & leader
- This maintains a 12% reduction in staffing levels compared to pre-2010 numbers
- Right sizing to occur based on a continuous improvement methodology
- Allow case managers to work on tougher cases and not admin work

Intake and Triage	Complex Claims	Medical Expense (50% of Claims)
Average New Claims Per Day	21	49
Total Minutes Required per Claim	**90**	**25**

Payment Exceptions	
Average daily exceptions	89
Total Minutes Required per Exception	**5**

	Total Daily Time Required (Hours)
Total Hours Required	49.16
Turnover, Vacation, Illness Contingency (15%)	7.37
Total Hours Required	56.54
Total Administrator FTEs Required*	**10**

	FTE Cost
Annual salary	$55,000
FTEs	13
Additional benefit costs	30%
Annual FTE Costs	**$930,000**

*Based on 5.75 hours per day dedicated specifically to intake and exceptions. The remaining productive hours would be focused on administration, training and various other claim related tasks.

Manitoba Public Insurance

Aligning specialized case management skills with complex claims

Problem:

Majority of case managers come from physical damage, primarily adjusters. These may not have the bodily injury or return to work experience MPI needs

Actions:

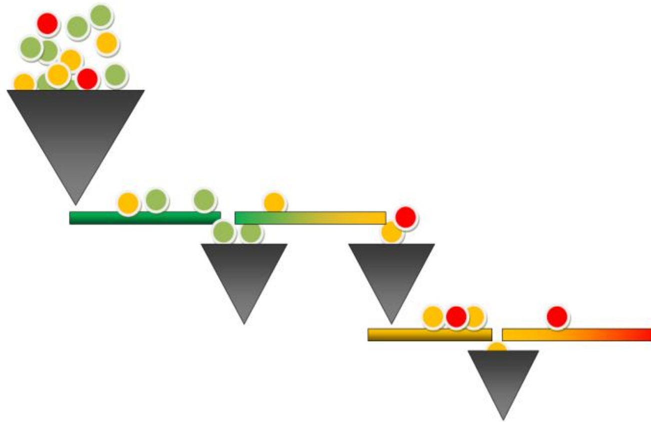
1. Working with Human Resources to attract and recruit staff with specialized skills

2. The education and skills that these professionals possess cannot be easily trained or substituted
   - Additional compensation should not be required

3. Specialized case management skills will result in a more active approach to case management and help achieve return to work goals

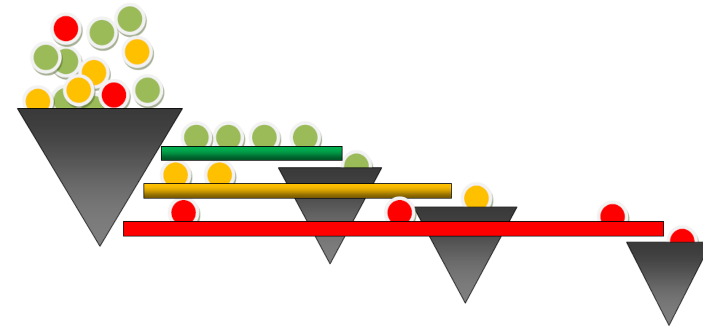
Just in Time Active Case Management

Current Structure



- Complex claims are actively managed only in the later stages of the claim
- Delays are experienced each time a claim is transferred
- Claims retention is impacted by this structure

Recommended Structure



- Intake unit assigns a high or low risk factor to each claim
- High risk claims are case managed immediately
- Accountability on complex claims increases
- Increases hands on approach
- Critical checkpoints reduces disability duration and leakage

Manitoba Public Insurance

Intake & Triage Pilot Results Feel Positive

Triage Pilot

Pilot commenced May 1, 2017 that provides early identification of risk factors of mental health and immediately address in rehab plans – **don't wait!**

Borrowed from the Transport Accident Commission (TAC) in Australia, a two part screening system was implemented:

- **Cognition, Resilience**
- **Social Support**
- **Persistent Pain, and**
- **Pre-Existing Mental Health**

Next Steps:

1. Centralize this function within an intake and triage unit
2. Take this admin function off case managers to free them for pro-active case management

Screening Questions

1. How are you doing with your memory, thinking and concentration?
2. Even at this early stage, are you feeling confident you will get better?
3. Are you getting support from your family and friends?
4. Have you ever seen a doctor or councilor for stress, anxiety, depression, or a mood related condition? (Pre-Existing Mental Health)

✓***Small increase in claims closure rates so far – very positive***

Coverage Opportunities

Manitoba Public Insurance

[REDACTED]

.

Manitoba Public Insurance

[REDACTED]

.

Manitoba Public Insurance

[REDACTED]

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Manitoba Public Insurance

[REDACTED]

.

Manitoba Public Insurance

Permanent impairment interest costs $1M/year

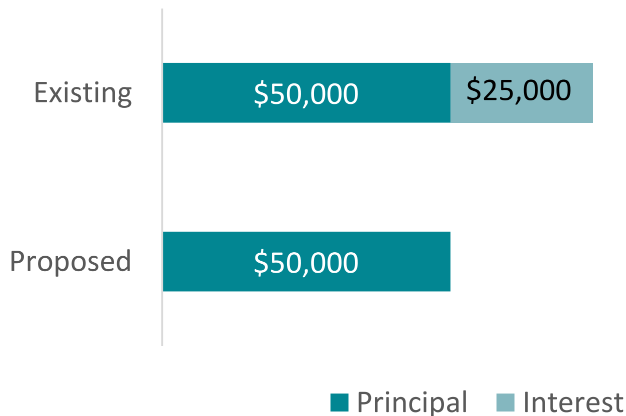
Interest Calculation

Calculated from date of loss

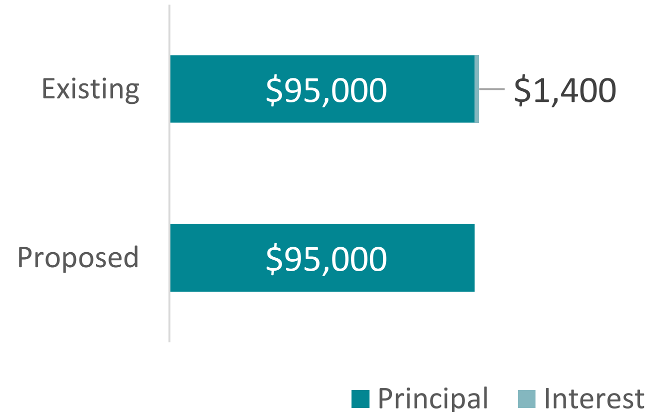
Proposed Interest Calculation

Calculate interest and pay indemnity amounts only in cases that exceed 30 days from the date of maximum medical improvement (MMI) determination

Example 1



Example 2



Manitoba Public Insurance

Permanent Impairment

Meaning of "permanent impairment"

126 In this Division, **"permanent impairment"** includes a permanent anatomicophysiological deficit and a permanent disfigurement.

Lump sum indemnity for permanent impairment

127(1) Subject to this Division and the regulations, a victim who suffers permanent physical or mental impairment because of an accident is entitled to a lump sum indemnity of not less than $500. and not more than $100,000. for the permanent impairment.

Lump sum indemnity for catastrophic injury

127(2) Subject to this Division and the regulations, a victim who suffers permanent physical or mental impairment because of a catastrophic injury resulting from an accident is entitled to a lump sum indemnity of $215,000. for the permanent impairment.

Effect of death on compensation

128(1) Compensation for a permanent impairment is not payable if, on or before the 89th day after the day of the accident, the victim dies of a cause related to the accident.

Compensation where victim dies of other cause

128(2) If the victim dies of a cause unrelated to the accident and, on the day of his or her death, the victim has suffered a permanent impairment resulting from the accident, the corporation shall estimate the amount of compensation that it would have awarded to the victim in respect of the permanent impairment if the victim had not died, and pay that amount to the victim's estate.

Evaluation of permanent impairment under schedule

129(1) The corporation shall evaluate a permanent impairment as a percentage that is determined on the basis of the prescribed schedule of permanent impairments.

Evaluation of permanent impairment when victim dies

129(1.1) If a victim dies before the degree of his or her permanent impairment has been determined, the corporation shall, unless subsection 128(1) applies, estimate the degree of his or her permanent impairment, taking into consideration the available medical information about the victim and any other information about the victim and his or her injuries that the corporation considers relevant.

Impairment not listed on schedule

129(2) The corporation shall determine a percentage for any permanent impairment that is not listed in the prescribed schedule, using the schedule as a guideline.

Computation of lump sum indemnity

130 The lump sum indemnity payable under section 127 for a permanent impairment, other than one resulting from a catastrophic injury, is an amount equal to the product obtained by multiplying the maximum amount applicable under subsection 127(1) on the day of the accident by the percentage determined for the permanent impairment.

Manitoba Public Insurance

When Interest is Paid

Interest where benefit not paid within 30 days after entitlement established

197.1 Where the corporation fails to pay an indemnity, a retirement income or an expense to a person entitled to compensation under this Part within 30 days after the day on which the person's entitlement to the benefit is determined, the corporation shall pay to the person interest on the amount of the indemnity or expense at the prejudgement rate of interest prescribed under section 79 of *The Court of Queen's Bench Act,* computed from the day on which the person became entitled to the benefit

Manitoba Public Insurance

[REDACTED]

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Next Steps

- Adopt more active approach for case management and FTEs required
  - Centralized intake unit (13 FTEs)
  - Attempting to fill using internal MPI FTE where possible
- Approve MPI management to pursue product coverage recommendations for advancement through legislative process where needed
- As changes mature, we will review overall progress quarterly with MPI actuarial department and focus on continuous improvement

Manitoba Public Insurance

CAC (MPI) 1-37

Part and Chapter:	Part IV, Service Delivery Model	Page No.:	17 to 18
PUB Approved Issue No:	10. Claims Forecasting		
Topic:	Centralized Reserving		
Sub Topic:			

Preamble to IR (If Any):

"Centralized Reserving:

On March 1, 2017, injury file reserving moved from being the responsibility of benefit administrators and case managers to that of a centralized reserving unit. The goals were to improve the consistency and reliability of reserves, and build capacity for the benefit administrators and case managers to allow more time to focus on return to health / work efforts. Effective May 1, 2018, the oversight of this unit will be a shared responsibility between the Director, Injury Claims Management and the Chief Actuary, and Vice President, Risk Management. The purpose for this change is to ensure there is open communication and collaboration between the two areas that will result in improved operational effectiveness, and sound actuarial practices related to reserves."

Question:

a) Please explain how the PIPP claims reserving process unfolds in practice from the time a PIPP claim is opened to when it is closed.
b) Please explains the PIPP claims reserve accountability and cost control framework during the life of the PIPP claim in a central reserving unit operation.
c) Please elaborate on the accuracy and confidence level of each PIPP claim reserve within the context of the PIPP claims reserve accountability framework.
d) Does the central reserving unit type of operation impact the accuracy of the PIPP claims incurred forecasts either positively or negatively, please elaborate.

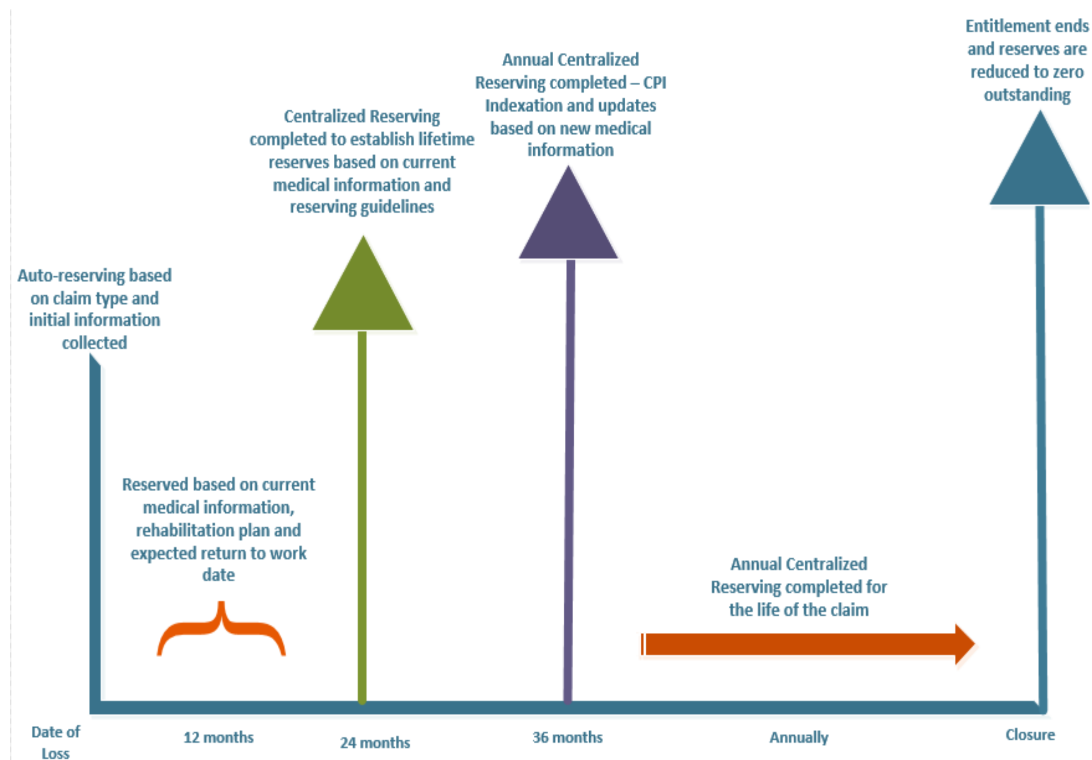
Rationale for Question:

To better understand the centralized PIPP claims processes and the impact of PIPP claims control and forecasting accuracy.

RESPONSE:

a) *Figure 1* demonstrates the reserving process over time:

Figure 1: PIPP Claim Reserving Timeline



At the outset of a claim, based on the claim type and information collected when the claim is opened, reserves are established automatically to cover initial expenses and entitlements. Periodic reviews and reserve updates are then completed as medical information is obtained and rehabilitation plans are established. Starting at 24 months, and annually thereafter, the centralized reserving team evaluates and updates each claim utilizing standardized guidelines

and calculators developed by the actuarial team, to establish reserves on all claims.

b) The implementation of centralized reserving improved the accountability framework. This team is responsible for ensuring that the reserves accurately reflect the anticipated exposure on the claim. The segregation of duties between the case owners and reserving increases the consistency and reliability of the reserves. Centralized reserving solves the problem of overly optimistic reserving practices of case managers, by leveraging actuarial best practices and a standardized approach.

   The Corporation is developing monthly monitoring of reserving and overall claims incurred occurrences as well as a compliance reporting process, as it relates to the reserving timelines. In addition, a monthly review of injury claims was recently introduced to ensure compliance with the centralized reserving guidelines.

c) The Centralized Reserving process will significantly improve the consistency of PIPP reserving for claims beyond 24 months. On average, the Corporation expects the case reserves for long-term claims to be highly accurate based on the historical performance of the Corporation's assumed mortality table and return to work assumptions. However, in the event there is bias in the initial case reserve assumptions, the actuarial valuation adjusts for bias over time, based on observed development experience. For example, the actuarial valuation makes an adjustment for tabular reserved claims open for 10+ years. The Centralized Reserving process will bring automatic/tabular reserving forward to 24 months.

d) The Chief Actuary expects significant improvement in the consistency of reported case reserves because of centralized reserving. This improved consistency will make claims forecasts much more reliable.

CAC (MPI) 1-38

Part and Chapter:	Part VIII, Annual Report, Appendix 3	Page No.:	5, 5
PUB Approved Issue No:	5. Corporate strategic direction 10. Claims Forecasting		
Topic:	Journey of renewal—focus on core business		
Sub Topic:			

Preamble to IR (If Any):

"Vehicle manufacture and repair is undergoing a dramatic shift due to increased use of lightweight complex materials and advanced electronic systems. There are significant cost and repair implications that will need to be managed thoughtfully. In response, we enhanced our claims process, including the launch of our increasingly popular Direct Repair program. Manitoba Public Insurance will continue to collaborate with the repair industry to ensure vehicles damaged in collisions are properly repaired, and we will continue to be proactive in preparing for structural change in the auto industry, including the anticipated introduction of fully autonomous vehicles."

Question:

In the context of the current physical damage repair and distributed estimating model, please elaborate on the steps MPI is taking in controlling physical damage claims incurred costs (collision, comprehensive, property damage) to further inform and improve the financial forecasting process and reduce pressure on basic insurance rates.

Rationale for Question:

MPI needs to be commended for re-focusing its strategic direction toward its core business to enhance policyholder value. With respect to the question, by distributing

estimating activities to other parties, there may be a loss of cost control in prudently managing the various stakeholder relationships.

RESPONSE:

What was previously referred to as 'Distributed Estimating' in prior GRA submissions is now referred to as the Direct Repair (DR) Program. Internally, the Corporation monitors severity and identifies opportunities for improvement in policies and shop performance. The Corporation anticipated the risks associated with DR Program and implemented the following steps to control physical damage claims costs:

- Shop Specific Key Performance Indicators (KPIs):
    - This action ensures that shops writing 'first estimates' are doing so in a fiscally responsible manner by maintaining their KPIs in line with the DR Program objectives and estimating standards.
    - The Corporation maintains control over costs by granting autonomy only to shops with positive KPI results. Shops with high KPI scores earn higher earned approval limits and may be eligible to enter into the Direct Repair Program. High performing KPI shops lessen administrative efforts, use fewer new parts and conduct repairs properly resulting in savings for the Corporation.
- Shop Relationship Advisors:
    - A Shop Relationship Advisor is assigned to and works closely with each shop, not only support them, but to monitor their KPIs and find areas of concerns or opportunities for further improvement, thereby benefiting the shop, customers and the Corporation (through controlled severity).
- Physical Damage and Glass Audit Programs:
    - In place to keep shops in compliance with Estimating Standards and recover incorrect billing.

  - The audit programs have been successful in achieving both direct and indirect benefits. The audit unit recovered in excess of $500,000 in direct claim cost recoveries in the past year. The introduction of the current audit process has increased shop awareness and compliance with the Corporation's estimating standards for the entire Manitoba industry.

- Repair Accuracy Inspections:

  - To ensure the completion of proper repairs and to encourage shops to have the right process in place to prevent negative customer service and additional administrative effort resulting from corrective repairs.

  - "Proper Repair" means that work is completed per the approved estimate in compliance with OEM product/repair specifications for that Light Vehicle. The proper repair includes the necessary parts, materials, repair methods, products, tooling, and equipment. In addition, a trained and qualified individual must complete the repair.

- Compliance with the Accreditation Agreement between Shops and MPI:

  - The Accreditation Agreement is in place to identify all expectations of a repair facility to enforce proper repair, proper billing and compliance to MPI programs.

<u>CAC (MPI) 1-39</u>

Part and Chapter:	Part VIII, External Actuary Review	Page No.:	4
PUB Approved Issue No:	12. Run-off of prior year claims		
Topic:	PIPP Review		
Sub Topic:			

Preamble to IR (If Any):

"*<u>Figure EAR- 6</u>* indicates significant unfavourable runoff for Accident Benefits – Weekly Indemnity and significant favourable runoff for Accident Benefits – Other (Indexed). This is driven primarily by the introduction of centralized reserving. A dedicated team was set up specifically to ensure proper reserving for long-term PIPP claims. The team was tasked with regularly updating PIPP reserves based on established reserving guidelines.

The team completed a review of all PIPP claims older than 24 months to ensure that case reserves for these claims were adequate to cover claimants' long-term entitlement to PIPP benefits based on established reserving guidelines. As a result, the case reserves were increased significantly for Accident Benefits – Weekly Indemnity, and reduced significantly for Accident Benefits – Other (Indexed)".

Question:

Please file a copy of the PIPP review and elaborate on MPI management's PIPP reserving confidence going forward. Please also discuss steps taken to improve the PIPP reserving process and the impact BI3 has had on improving the accuracy of PIPP reserves.

Rationale for Question:

To better understand the PIPP reserving process and accuracy. It seems that the annual PIPP claims incurred volatility is mainly driven by actuarial assumptions, development factors and IBNR selection (judgment) changes (page 6). These belated actuarial changes are, in turn, it seems driven by PIPP adjudicators not case reserving accurately based on guidelines. Need to understand: Could this cycle go on into perpetuity or are there steps taken to stop this cycle?

RESPONSE:

As opposed to a summary review of all PIPP claims, the team reviewed the details of each individual claim and based on this, updated reserves to reflect the established guidelines. As a result, no summary review document exists.

Centralized reserving has brought consistency and reliability to case reserves on claims older than 24 months, which has increased the confidence in PIPP reserving. The implementation of centralized reserving ensures that case reserving aligns with the established guidelines and actuarial best practices, with annual reviews to ensure reserves remain accurate based on new information and changes to each claim. The data available from BI3 enables the centralized reserving team to obtain claim information to support the reserves posted on each claim.

The Chief Actuary expects significant improvement in the consistency of reported case reserves relative to that experienced from 2010 through 2017. This improved consistency will make the claims forecasts much more reliable. In terms of directional impacts, the Corporation tracks the duration of long term claims before and after the implementation of BI3. As indicated in the previous assessment of BI3, while the Corporation is experiencing a reduction is disability duration on shorter tailed, fully developed closed claims, there has been deterioration in the number of long term claims. Although MPI does not fully understand the root causes of this impact, the Corporation is optimistic that recent changes can affect long-term claim persistency.

CAC (MPI) 1-40

Part and Chapter:	**Part V, Pro Formas**	**Page No.:**	**4**
PUB Approved Issue No:	**4. Financial Forecasts**		
Topic:	**DPAC/ Premium deficiency adjustments**		
Sub Topic:			

Preamble to IR (If Any):

Part V, PF.1, page 4 reports the following DPAC/Premium deficiency adjustments ($000) for years 2019B through to 2023F:

"DPAC \ Premium Deficiency Adjustment - (15,750) (28,521) (5,380) (4,243) 3,999 7,997"

Question:

a) Please explain the reasons for these adjustments and provide the detailed analysis comprising these adjustments.
b) Please discuss the condition required for MPI basic insurance rates to be premium sufficient.

Rationale for Question:

To clarify the premium deficiency condition inherent in basic insurance rates.

RESPONSE:

a) The Corporation provides an explanation for these adjustments in *Part V(i) CI.12.5*. These reductions (in DPAC/Premium Deficiency adjustments)

reduce Net Claims Incurred, and result in a positive impact to Net Income. See Appendix 1 for a detailed outline of the calculations for each year.

b) The breakeven rates that the Corporation has applied for in the 2019 GRA cover all expected costs from policies issued in rating year 2019/20. The main condition needed for break-even rates is 'best estimate' (i.e. non-biased) forecasting. Given MPI's break-even mandate, Basic rates will always be on the 'cusp' of premium deficiency. Using a biased forecast, such as the Standard Interest Rate forecast, is an example of how Basic premiums have become deficient in recent years because the interest rates ordered for Basic pricing did not materialize.

Appendix 1
Base Scenario
Deferred Policy Acquisition Expenses and Premium Deficiency

Line No.														
1	A. Claims (Including External Adjustment Expense) Data													
2			Accident Year										Selected	Selected
3			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Undisc	Disc
4	1.	Ultimate Loss Ratio - Total All Coverage	83.09%	72.79%	81.77%	81.34%	74.59%	73.25%	71.97%	72.12%	73.03%	74.02%		
5	2.	Trend/Rate Adjustment for Fiscal Year												
6		2017	0.9142	0.9259	0.9555	0.9697	0.9888							
7		2018		0.9151	0.9384	0.9464	0.9589	0.9937						
8		2019			0.9169	0.9262	0.9399	0.9755	1.0016					
9		2020				0.9271	0.9411	0.9772	1.0037	1.0115				
10		2021					0.9508	0.9856	1.0108	1.0169	1.0132			
11		2022						0.9917	1.0165	1.0222	1.0179	1.0134		
12	3.	Adjusted Loss Ratio for Fiscal Year [(1) x (2)]												
13		2017	75.96%	67.39%	78.12%	78.88%	73.76%						75.95%	80.85%
14		2018		66.61%	76.73%	76.98%	71.52%	72.79%					73.68%	78.38%
15		2019			74.97%	75.33%	70.10%	71.46%	72.08%				72.84%	77.54%
16		2020				75.41%	70.20%	71.58%	72.24%	72.95%			72.26%	77.00%
17		2021					70.92%	72.20%	72.74%	73.34%	73.99%		72.76%	77.61%
18		2022						72.65%	73.15%	73.72%	74.34%	75.01%	73.74%	78.72%

Line No.												
19	B. Actual Data Other Than Losses											
20			Fiscal Year									
21			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
22	4.	Net Earned Premium	764,671	803,881	861,065	907,145	960,142	1,039,407	1,113,119	1,169,526	1,216,815	1,265,684
23	5.	Operating Expenses as % of Earned Premium	11.06%	11.14%	10.26%	9.94%	8.99%	8.98%	8.19%	8.05%	8.06%	8.01%
24	6.	Maintenance Expense Rate [(5) x 1/3]	3.69%	3.71%	3.42%	3.31%	3.00%	2.99%	2.73%	2.68%	2.69%	2.67%
25		Selected					3.16%	2.99%	2.86%	2.71%	2.69%	2.68%
26	7.	ILAE Ratio to Losses - Selected					18.40%	18.40%	18.40%	18.40%	18.40%	18.40%

Line No.			2017	2018	2019	2020	2021	2022
27	C. Equity in Unearned Premium							
28	8.	Net Unearned Premium	468,613	506,193	537,639	559,472	581,724	604,979
29	9.	Additional Expected Cost of Non-Proportional Reinsurance	5,598	5,710	5,824	5,941	6,059	6,059
30	10.	Expected Claims (Including Ext Adj Expenses) [((8) - (9)) x (3)]	383,468	392,259	412,378	426,236	446,776	471,494
31	11.	Reinsurance PFAD	10	-	-	-	-	-
32	12.	Maintenance Expense [a]	13,837	14,989	15,216	14,978	15,458	16,047
33	13.	Internal Loss Adjustment Expense [Sheet 1, Row 11]	70,595	72,176	75,878	78,427	82,207	86,755
34	14.	Expected Claims (Including Ext Adj Expenses) - PIPP Enhancement	3,950	3,950	3,950	3,950	3,950	3,950
35	15.	Equity in Unearned Premium [(8) - Sum((9) to (14))]	(8,845)	17,110	24,394	29,940	27,275	20,674
36	16.	Carried Deferred Policy Acquisition Expenses	32,055	29,489	31,393	32,696	34,029	35,426
37	17.	Write Down Deferred Policy Acquisition Expenses [b]	32,055	12,379	6,999	2,756	6,755	14,752
38		Change	2,363	(19,676)	(5,380)	(4,243)	3,999	7,997
39	18.	Premium Deficiency [c]	8,845	-	-	-	-	-
40		Change	2,001	(8,845)	-	-	-	-

41 Notes:

42 [a] ((8) - (9)) x (6) x Discount to Valuation Date Without Margin

43 [b] Min((16) - (15), (16)) if greater than 0, otherwise 0

44 [c] Negative of (15) if greater than 0, otherwise 0

CAC (MPI) 1-41

Part and Chapter:	Part V, Pro Formas	Page No.:	4
PUB Approved Issue No:	4. Financial Forecasts		
Topic:	Claims incurred-interest rate impact and investment income-interest rate impact		
Sub Topic:			

Preamble to IR (If Any):

Part V, PF.1, page 4 reports the following Claims Incurred – Interest Rate Impact and Investment Income- Interest Rate Impact ($000) for years 2018A through to 2023F:

"(a) Claims Incurred - Interest Rate Impact (15,801) (23,797) (8,203) 8,610 11,453 10,124 10,109"

"(b) Investment Income - Interest Rate Impact 4,589 - - - - - -"

Question:

a) Please provide the detailed analysis comprising the Interest rate impact for both claims incurred and investment income.
b) Please explain the reasons that investment income – interest rate impact for years 2019B through to 2023F is zero.

Rationale for Question:

To clarify the interest rate impact on claims incurred and investment income and understand changes impacting these values.

RESPONSE:

a) Please see *Part VI INV.16.2.1* (Basic Interest Rate Risk with Naïve Forecast) for a full explanation. In short, the forecasted declining MUSH yield and declining allocation to MUSH bonds negatively affect the claims discount rate, which negatively affects net income. There is no offsetting impact from the fixed income portfolio, due to the decline in the claims discount rate from MUSH bonds.

b) The "Investment income – Interest Rate Impact" is zero over the five year forecast because this line shows marketable bond gains or losses from changes in interest rates. There are no marketable bond gains or losses over the five-year forecast because of the naïve interest rate forecast. The naïve interest rate forecast assumes no changes to interest rates over the five-year forecast.

   If interest rates were forecasted to change, the marketable bond gain/loss would not be zero – see *PUB(MPI) 1-28 a)* for an example of Figure INV-47 using the updated 50/50 forecast.

CAC (MPI) 1-42

Part and Chapter:	2018 GRA, CAC (MPI) 1-27	Page No.:	
PUB Approved Issue No:	10. Claims Forecasting 14. Risk Management		
Topic:	Shop-Specific Key Performance Indicators		
Sub Topic:			

Preamble to IR (If Any):

Question:

Please file a copy of the results of the shop-specific key performance indicators to date.

Rationale for Question:

To understand the impact and effectiveness of the shop-specific KPI on claims operations.

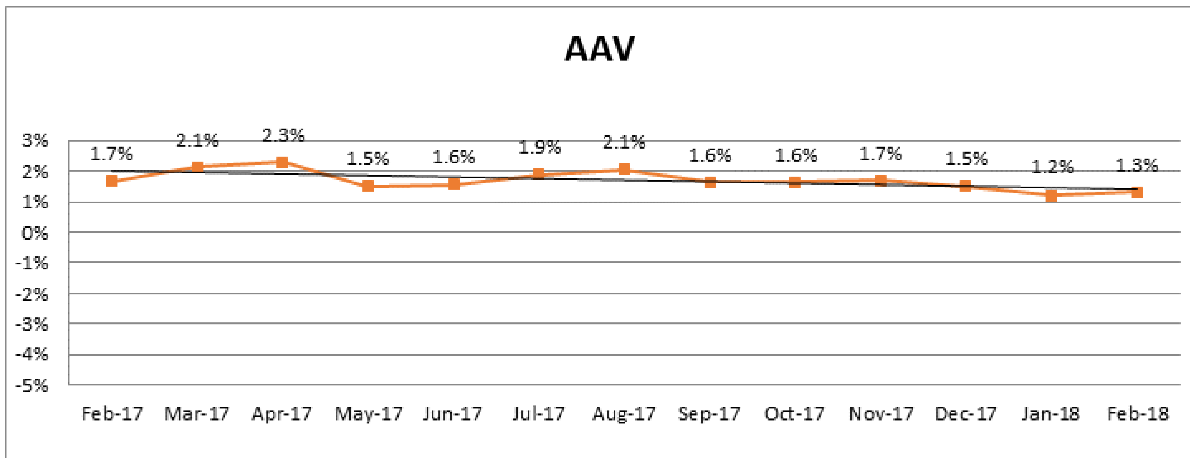
RESPONSE:

Shop specific Key Performance Indicators (KPIs) are essential indicators that provide confidential information regarding the individual performance of a repair facility. The Corporation uses KPIs in alignment with its objectives of controlling costs, improving efficiencies, ensuring proper repair and enhancing customer service, to assess the eligibility of a facility for acceptance in the Direct Repair program (DR) and the Performance Recognition program.

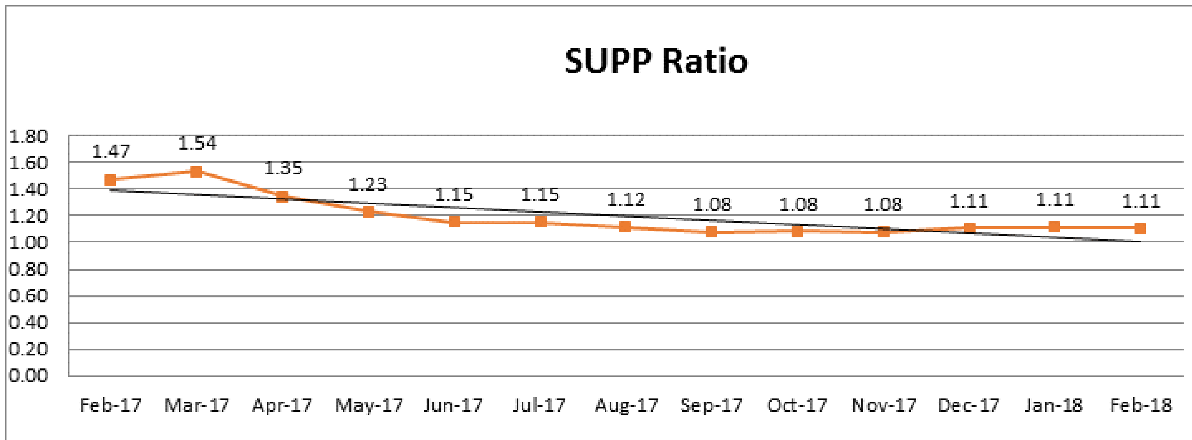
In response to this Information Request, the Corporation provides the industry trend reporting for all Light Vehicle Accredited repair facilities at an industry level over a 13-month reporting period, ending February 28, 2018.

- Shop Measures Information Guide: http://www.mpipartners.ca/documents/Policies_Procedures/Shop-Measures-Information-Guide.pdf

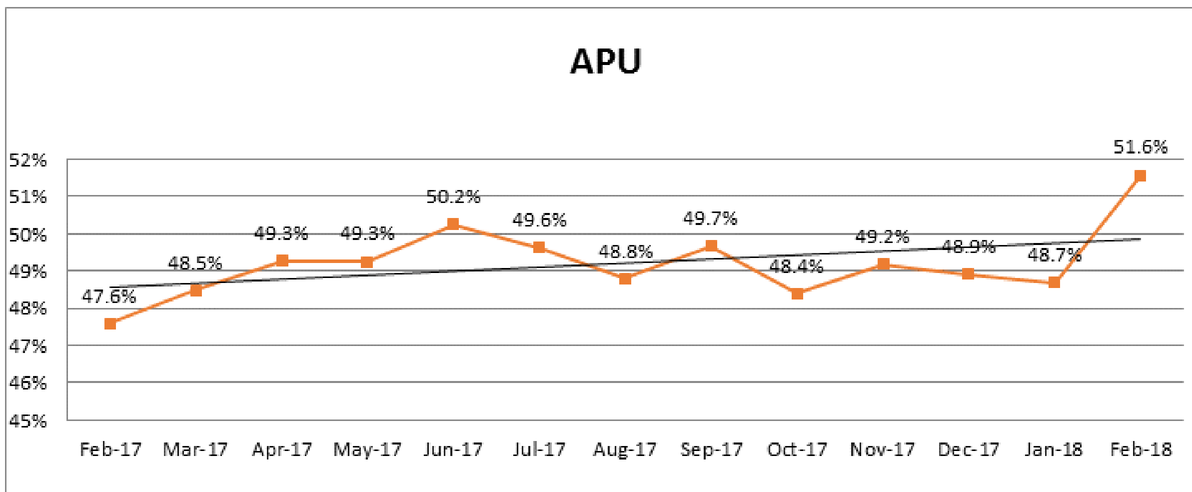
- The **Ask/ Approve Variance (AAV)** KPI is used to control a shop's requests in compliance with the Corporation's Estimating Standards, and reduce its administrative efforts. AAV measures the variance between what the shops request, and what is approved according to the Corporation's Estimating Standards. This KPI measure has improved (decreased) since the release of KPIs and is one of two criteria for the DR and Earned Approval Limit tiers.



- The **Supplement (SUPP) Ratio** KPI is used to control the count of shop requests, in order to reduce the Corporation's administrative efforts and the costs associated to repair cycle times. The SUPP Ratio has improved (decreased) since the release of KPIs by 0.5 (or approximately 50,000 fewer estimate supplements) in the past year.

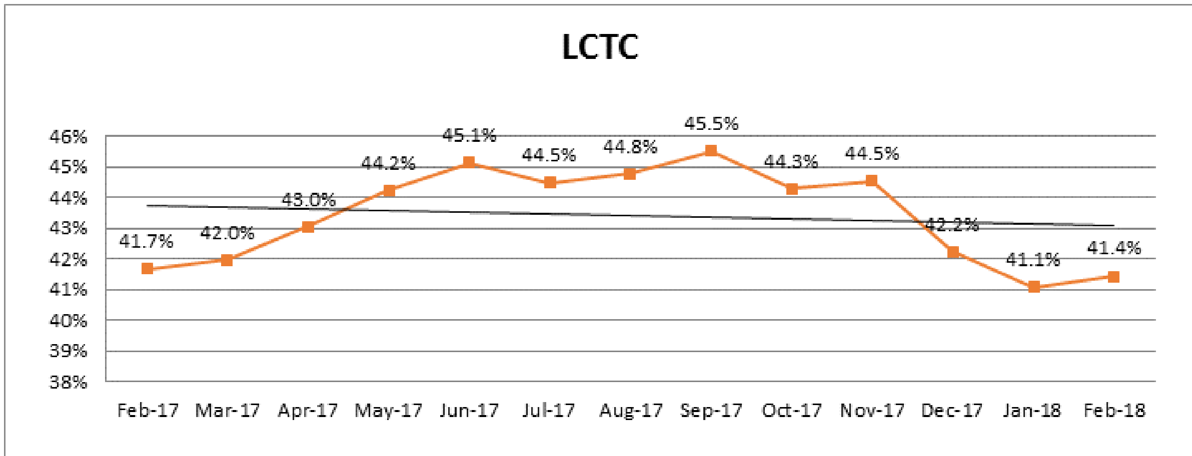


- The **Alternate Parts Usage (APU)** KPI reviews how closely a shop follows the estimating standards for use of alternate parts. Using alternate parts, when cost-effective, reduces the overall cost of repair, while maintaining proper repair standards. APU rates have improved (increased) since the release of KPIs.

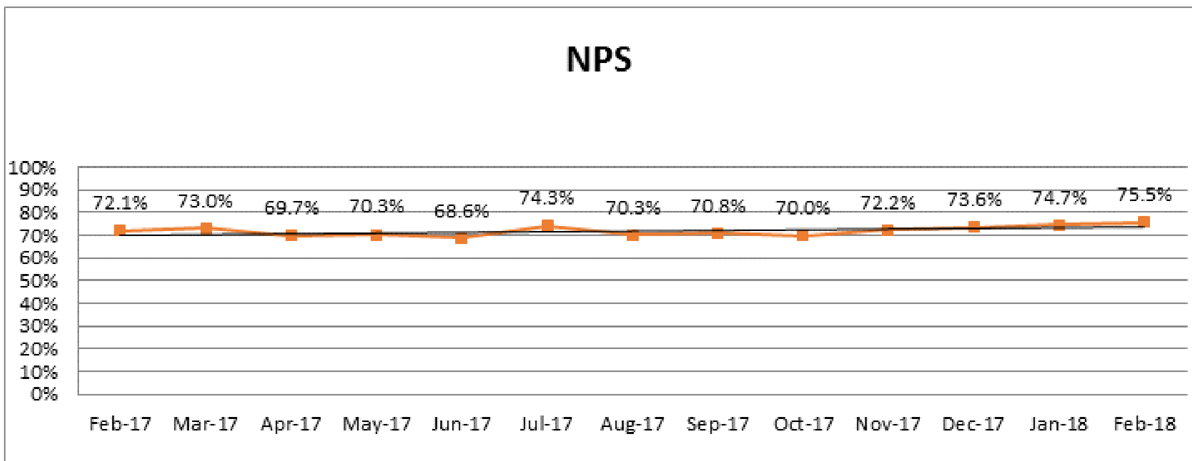


- The **Labour Cost/Total Cost (LCTC)** KPI compares the cost of labour to the total cost of the claim. This measure shows a shop's willingness to repair rather than replace parts, where cost effective and safe. The intent is to encourage shops to save on replacement part costs, when there is an economic alternative. It may also be possible that a shop can reduce their cycle times by beginning a repair task immediately versus waiting to receive replacement

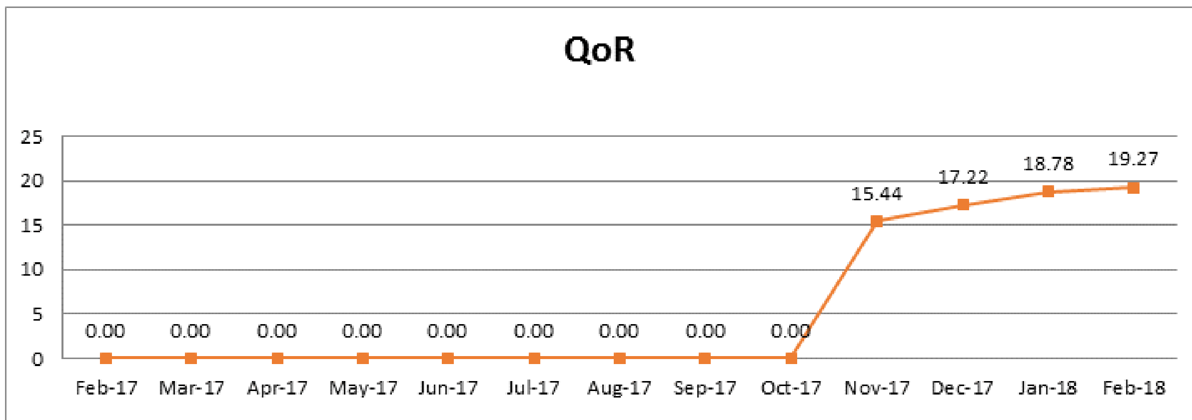
parts. LCTC is influenced by seasonal fluctuations. The Corporation considers the industry is in good standing when LCTC is at 40%.



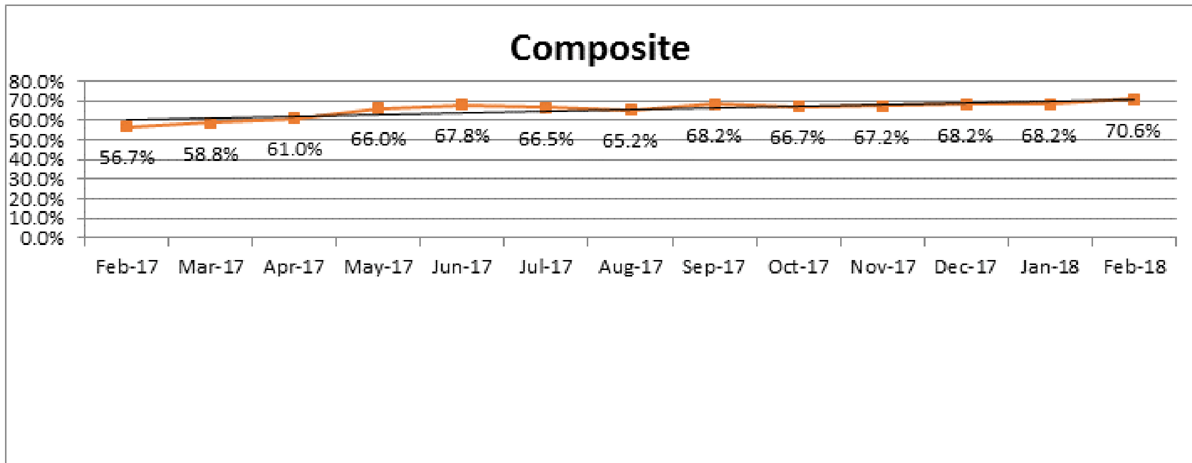
- The **Net Promoter Score (NPS)** KPI measures overall customer satisfaction. NPS compares customers who are most satisfied with their repair experience with those who are least satisfied. NPS is an industry-accepted method of monitoring customer satisfaction. The Corporation has seen a minor increase in customer satisfaction since implementing this KPI. Repair shops can also use the NPS to improve their business and customer satisfaction rates.



- The **Quality of Repair (QofR)** KPI consists of the following:
  - Repair Capability: This indicates a repair shop's ability to perform a proper repair, through a commitment to training and continuous learning;
  - Repair Records on File: This indicator ensures that a repair shop has proper operational procedures supported by timely repair status updates as well as documentation attached to its claims; and
  - Repair Accuracy: This indicator confirms whether a shop is performing collision repair as per its stated capability through in person and virtual process inspections.
- Since it started tracking this KPI in October 2017 (though implemented for facility scoring in April 2018), the Corporation has seen a steady improvement (increase) in the QofR indicator.



- The **Composite Score (CS)** KPI is a weighted ranking of all KPI measures and is one of two criteria's for DR and Earned Approval Limit tiers. The CS has steadily improved (increased) since the implementation of KPIs.



CAC (MPI) 1-43

Part and Chapter:	Part IV, Benchmarking	Page No.:	30
PUB Approved Issue No:	11. Operational Benchmarking		
Topic:	IT Service Delivery Capability		
Sub Topic:			

Preamble to IR (If Any):

"Overall, Gartner benchmarking results indicate that MPI continues to improve its Maturity (at a 3.9% CAGR over 5 years using the ratings from the CIO Scorecard). IT Spending relative to operating expenses has continued to decrease annually. With a reduction in the current project portfolio, it is expected that going forward personnel spending (specifically consultants) will also decrease. In line with Gartner recommendations and subsequent to conducting a comprehensive review of Business Process Management and associated expenses, MPI has redirected its focus on further developing Enterprise Architecture capabilities to advance corporate IT maturity."

Question:

a) Please file a copy of the indicated comprehensive Business Process Management review report, if available.
b) Please elaborate on the statement "MPI has redirected its focus on further developing Enterprise Architecture capabilities to advance corporate IT maturity"

Rationale for Question:

To better understand MPI's new direction on information technology and related expenditures.

RESPONSE:

a) The Business Process Management (BMP) Report was incomplete prior to its being suspended in Q4, 2017/18.

b) The BPM Report and Enterprise Architecture activities required some resources contemporaneously, resulting in conflict. Enterprise Architecture processes and capabilities were required to complete the IT Strategy and to support the development and review of the Legacy Modernization Business Case deliverables (ex. RFI / RFP). Therefore, in order to resolve the conflict, the Corporation prioritized the Enterprise Architecture activities and suspended the completion of the BPM Report. As the contemporaneous need for resources was resolved in Q2/Q3, review of the BPM proposal continues and the Corporation expects completion of the BMP Report in late Q3 2018/19.

CAC (MPI) 1-44

Part and Chapter:	Part IV, Benchmarking	Page No.:	39
PUB Approved Issue No:	11. Operational Benchmarking		
Topic:	Infrastructure and Operations Spending by Cost Category		
Sub Topic:	Unallocated cost category		

Preamble to IR (If Any):

"Since 2015/16, MPI has decreased spending on majority of the cost categories, thus narrowing the gap between its own performance and that of its peers. The unallocated cost category and $9.2 million encompasses the outsourcing expenses after Transmission and Personnel are removed. The outsourcing for the peer groups is included within the allocated categories. Occupancy and software provide opportunities for cost savings."

Question:

a) Please elaborate and explain the unallocated amount of $9.2 million and how this cost category can be brought in line with the Peer Average.
b) Please elaborate on how occupancy and software costs categories provide opportunities for cost savings.

Rationale for Question:

To better understand how the unallocated cost category can be brought in line with the Peer Average costs.

RESPONSE:

a) The unallocated costs reflect data centre related expenditures. MPI is presently working with Gartner to redistribute the $9.2 million to other cost categories (hardware, software, and disaster recovery services) for future score cards. Please note that upon a more granular review by Gartner, some costs included in the $9.2M may be excluded from the Infrastructure and Operations section and recorded in other areas such as Application Support and Development. Please see *CAC(MPI) 1-63 (c)* – which the Corporation is seeking confidentially – for additional actions planned to validate costs are in line with industry.

b) For actions taken by the Corporation that could positively impact the occupancy measure, please see the Space Plan Business Case, filed confidentially pursuant to PUB Order 89/18.

To reduce software costs, the Corporation continues to leverage several approaches:

- MPI is active in its procurement processes, leveraging quotes and tenders as outlined in its corporate directives. This results in competitive market conditions and favorable costs.
- MPI leverages best practices, including those provided by Gartner, to effectively negotiate software agreements resulting in optimal cost structure.
- MPI is diligent in its software asset / license tracking to ensure any unused licenses are recovered / reclaimed in a timely fashion.

CAC (MPI) 1-45

Part and Chapter:	Part IV, Benchmarking, BMK Appendix 1	Page No.:	13
PUB Approved Issue No:	11. Operational Benchmarking		
Topic:	Project delivery process		
Sub Topic:			

Preamble to IR (If Any):

The current status of Gartner Recommendation #5.06 states:

"MPI is refining its project delivery processes in 2018/19 which includes the standardization of many deliverables used in Application Development. Additional standardization of deliverables will be reviewed at the completion of this activity."

Question:

Please elaborate on how MPI is refining its project delivery processes and how the new processes are different from the previous processes.

Rationale for Question:

To obtain a better understanding of the new project delivery processes and how they may impact the IT spend and resulting benefits realization going forward.

RESPONSE:

The Corporation is conducting a review of current processes and the recommendations of Gartner regarding best practices. This review will identify opportunities to refine processes, which management will prioritize for implementation. MPI has a standard deliverable log that lists all project deliverables. MPI reviews and updates this

document and the processes on a regular basis to improve the quality of deliverables, ensure proper ownership for each deliverable, and streamline processes to improve project delivery.

CAC (MPI) 1-46

Part and Chapter:	Part IV, Benchmarking, BMK Appendix 1	Page No.:	22
PUB Approved Issue No:	11. Operational Benchmarking		
Topic:	CIO Scorecard vs. Gartner's IT Score methodology		
Sub Topic:			

Preamble to IR (If Any):

"5.16 Replace the CIO Scorecard with Gartner's IT Score Methodology: Replace the CIO Scorecard with Gartner's IT Score methodology which compares MPI with the insurance industry in similar areas and new ones that expand the scope of the analysis.

Add two additional surveys (Strategy & Execution, Data & Analytics) to the IT Score methodology to assess the maturity of the IT Strategy and information management disciplines. The addition of these two surveys will also increase the overall confidence level of the enterprise view."

Question:

a) Please ask Gartner to provide a side by side comparison and differences of the CIO scorecard and the IT Score methodology and the advantages of the IT Score methodology compared to the CIO Scorecard.
b) Please ask Gartner to provide a description of the two additional surveys: Strategy & Execution and Data & Analytics.

Rationale for Question:

To obtain a better understanding of the various methodologies to be applied to measure MPI's IT maturity and processes in terms of adding value to its Core Business of being an insurance company and administrator of DVL.

RESPONSE:

Response provided by Gartner:

Gartner response to Question A:

i. Comparison and difference of the CIO Scorecard and IT Score Methodology

	CIO Scorecard	IT Score
Toolset Overview	Previously used to assess MPI's process maturity.	MPI provided data for 2016/17.
	This tool has been discontinued by Gartner.	Current tool used by Gartner to perform in-depth maturity assessments.
Comparison Data	While the framework provides a way to perform year on year comparisons of MPI's maturity level, the peer data should be considered out of date.	Provides a way to perform year on year comparisons
		Current peer data is available for the Insurance industry
Scoring	MPI's maturity level assessed at level 3.52 using CIO Dashboard methodology during the 2016/17 period.	IT Score is a different methodology with different weightings in the assessment domains.
		MPI's maturity level assessed at level 3.10 using IT Score methodology during 2016/17 period.
Assessment	Infrastructure and Operations	Infrastructure & Operations

Framework	Applications Organization	Applications Organization
	Business Process Management	Enterprise Architecture
	Enterprise Architecture and Innovation	Vendor Management
	Cost Containment	Program and Portfolio Management
	Open Innovation Readiness	Security and Risk Management - Privacy
	Effectiveness / Innovation Enterprise Viewpoint	Security and Risk Management - Information Security
	Effectiveness / Innovation IT Organization Viewpoint	Enterprise View
	Overall Score	

ii. Advantages of the IT Score Methodology:

1. Provides a way to perform peer comparisons using up-to-date peer data
2. Provides a way to analyze IT management domains relevant to current organizations
3. IT Score is widely in use and supported by Gartner

Gartner response to Question B:

i. Strategy & Execution

The purpose of ITScore for Strategy and Execution is to assess IT's performance within the context of the role IT takes on in the enterprise. Every IT organization takes on a role, either implicitly or explicitly, and that role ranges on a continuum from that of an efficient service provider to one that drives innovation and business transformation. The ITScore for Strategy and Execution survey drills down from the Executive View survey but stands on its own, alongside the other role-based ITScore assessments.

As a stand-alone assessment, ITScore for Strategy and Execution will give CIOs a good understanding of how well the IT organization is positioned to operate as a business, partner with the business and execute against strategy. CIOs can use the assessment to both improve their performance against the business expectations of their enterprise role or better understand how they can broaden their role and raise expectations in the enterprise (for example, to move from the role of efficient service provider to one driving innovation and growth). As with all the role-based ITScore assessments, the ITScore for Strategy and Execution gets rolled up into the aggregated ITScore for the Enterprise, giving further insight into the enterprise's capability to exploit IT to achieve its strategic goals.

ii. Data & Analytics

Data and analytics leaders are increasingly being tasked with the goal of exploiting data and analytics as a strategic asset, so they want to know the steps required to achieve this. Enterprises of any size and in any industry can use this ITScore to gauge their capabilities in general for any data and/or analytics initiative. The tool is built on years of research focused on data and analytics practices, with insights gleaned from thousands of engagements and interactions with data and analytics organizations around the globe. Once initiatives have been evaluated and programs prioritized, further analysis of maturity at the specific program level can then occur. This assessment measures the maturity of a data and analytics organization's processes and capabilities, not of the solutions deployed.

CAC (MPI) 1-47

Part and Chapter:	Part IV, Benchmarking, BMK Appendix 1, Attachment A	Page No.:	10
PUB Approved Issue No:	11. Operational Benchmarking		
Topic:	IT FTEs		
Sub Topic:			

Preamble to IR (If Any):

"Observations:

- MPI's overall staffing level rose slightly from 324 FTEs to 336 FTEs (16.7% to 17%)
- MPI's staffing level is 33% higher than the peers
- MPI continues to transition to third-party services for a number of areas within Infrastructure and Operations
- The benchmark measured a high level of availability for infrastructure functions (service levels increased year over year and are better than peer averages."

Question:

a) Please elaborate on the types of services being transitioned to a third-party within infrastructure and operations and explain the benefit to MPI.
b) Please enumerate the impact of transitioning services to third parties on IT FTEs and service contractors (consultants), if any over the next couple of years.

Rationale for Question:

To better understand the impact on operations of transitioning Infrastructure and Operations services to third parties.

RESPONSE:

a) As part of its Technology Risk Management Program (2017/18), the Corporation issued a tender for 24/7/365 operational, security, monitoring services. Having an around the clock, fully staffed, and scalable service was a new requirement, identified when the Corporation increased its Information Security capabilities in 2016-2018. Leveraging a service provides access to resources based upon transaction volumes (a group to handle all normal requests and the ability to add more or specialized resources for major security events). This avoided incremental staffing requirements (including the potential to over or understaff), and provided stable access to talent (attraction / retention / development of internal security staff has been challenging). The Corporation is not actively pursuing additional third party services, in this area, at this time. If the outcome of activities referenced in *CAC(MPI) 1-63 (c)*, changes this, the Corporation will provide an update in the 2020 GRA.

b) The operational security monitoring service contributed to the reduction of 2 FTEs (removed from IT budgets going forward) and avoided the requirement to hire at least 5 more FTEs. There were no financial implications to external labour (contractors / consultants did not perform this function).

CAC (MPI) 1-48

Part and Chapter:	**Part IV, Benchmarking, BMK Appendix 1, Attachment A**	**Page No.:**	**13**
PUB Approved Issue No:	**11. Operational Benchmarking**		
Topic:	**IT Outsourcing and Maintenance**		
Sub Topic:			

Preamble to IR (If Any):

"Observations:

- Outsourced spending is 3.3X higher than the peer group average
- Maintenance costs are 3X higher than the peer group average
- MPI's outsourcing costs include a prepayment for future upgrades as part of a 'vitality' clause in the IBM contract which avoids large single year increases, but presents a higher yearly cost than might be expected.

Implications:

- MPI may benefit from an assessment of the competitiveness of the outsourcing and maintenance agreements"

Question:

a) Please explain the "vitality" clause in the IBM contract, and whether this a standard industry contract clause to be included in future contracts. If the vitality clause had not been included, please comment whether the IBM contract would have been more competitive.

b) Please advise whether MPI is planning an assessment to determine the competitiveness of the IBM contract. Please comment.

c) Please elaborate on MPI's plans to bring the outsourcing and maintenance spending in line with MPI's peers.

Rationale for Question:

To assess MPI's direction in containing and controlling IT costs and steering MPI back to its core business.

RESPONSE:

a) As part of the IBM data centre agreement, IBM must refresh all physical and virtual equipment and software managed by IBM at agreed to intervals. This refresh is completed at no additional charge by IBM and includes coverage of all equipment and services as well as project management efforts related to the deployment of that equipment. The IBM agreement is a ten year agreement and this vitality clause provides significant benefits at no additional cost, these benefits ensure data center hardware and software currency that guarantees the data centre is operating on supported technology to ensure availability of services. This clause also reduces cyber security risk to the organization by ensuring the data centre is on the latest 3rd party supported technology and not running on unsupported and unpatched technology that would introduce security risks. This option was negotiated into the agreement with guidance from industry experts, and it is MPI's understanding that this was a standard industry contract clause. It is also our understanding that this type of clause is often found in modern service agreements.

b) MPI completed a light assessment of the IBM data centre agreement utilizing Gartner services in 2016. This was executed in preparation for the second part of the 10 year agreement; the 5 year renewal of the IBM data centre agreement. In 2018 MPI plans to complete a full independent benchmark of the IBM data centre agreement.

c) MPI actively reviews its maintenance agreements and leverages tendering and negotiation to secure price stability, and potentially reductions. MPI is also active in the review of its External Labour and is executing a strategy which secures results in this area.

CAC (MPI) 1-49

Part and Chapter:	Part V, Pro Formas	Page No.:	
PUB Approved Issue No:	14. Risk management and assessment		
Topic:	MPI risk profile changes, if any		
Sub Topic:			

Preamble to IR (If Any):

Question:

a) Please indicate, list and explain any technical, process, information technology or management constraints that the PUB should take into consideration in issuing its 2019 GRA ruling effective March 1, 2019, if any.

b) Please indicate, list and explain any financial transactions under consideration or in progress that have not been explicitly reported in the 2019 GRA, either by management, the Board of Directors or Government, which could impact the 2019 GRA proposed rates, if any.

c) Please discuss and elaborate on 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, and investment risk or with respect to any other risk factors, if any.

d) Please discuss and elaborate whether the Corporation expects any changes to its risk profile going forward through the outlook period.

Rationale for Question:

Assess material risk profile changes or material transactions in progress or outstanding potentially impacting the 2019 GRA forecasts, if any.

RESPONSE:

a) The most significant technical issue from the investment and reserves standpoint is the use of the industry standard Minimum Capital Test (MCT) as the appropriate~~e~~ capitalization measure for insurance companies. The Corporation's very low level of capitalization exposes Basic and its ratepayers to additional risk from adverse events~~,~~ (compared to similar companies in Canada that~~ are expected to~~ maintain a minimum of 100% MCT, and to many that maintain an internal target of 150% to 200% MCT). The effect of this constraint on the Corporation'~~'~~s risk tolerance, and the associated opportunity cost is discussed in *CAC (MPI) 1 96.*

The most significant information technology (IT) constraint on the Corporation is its ageing IT infrastructure, which limits its ability to offer new products or services as they enter the licensing or insurance environment in Manitoba (e.g. vehicles for hire, cannabis, etc.), and reduces its ability to adapt~~gility~~ in the face of change. The departure~~ move away~~ from these legacy systems is an expensive undertaking and an assessment of the cost of doing so is currently underway.

b) The two largest transactions underway are ~~the ~~negotiations with the broker community for the~~ roughly~~ $80M~~m~~ per year in broker costs, and ~~the ~~negotiations with repair shops for the ~~roughly ~~$350-400M~~m~~ in repair claims costs annually. Agreements resulting from these negotiations will set the commissions and labour rates that determine if any increases or decreases are ~~to be ~~paid, and consequently affect the rates Manitobans pay. MPI is aligned with the government principles of fiscal prudent management~~nce~~ and have communicated these principles of value for money to all parties involved.

The above financial transactions/events, under consideration or in progress, that are not explicitly set out in the 2018 GRA, will not require changes to the proposed rates in 2019. The Corporation has submitted this Application based on best estimate forecasts at the time of preparing the Application, and is seeking approval of rates on that basis. If the financial circumstance of Basic change sufficiently as to have a material implication for the Corporation and ratepayers, the Corporation

will notify the parties of its intention to amend its Application in response to the extraordinary circumstances.

c) Basic's risk profile is well documented in its MCT calculation found in *Part VI Rate Stabilization Reserve – Appendix 1*.

The most significant change to the risk profile results from the ALM implementation, and the reduction of risk on assets supporting Basic claim liabilities.

d) There are no new changes in strategy apart from a refocus into the core of insurance and licensing (e.g. no new markets ~~n~~or new products of significance) that would shift the risk profile of the Corporation in this Application.

The Corporation anticipates bringing a C~~c~~apital M~~m~~anagement P~~p~~lan for PUB approval in the 2020 GRA, which at this time, ~~it expects~~ will contain a capital build/release framework.

CAC (MPI) 1-50

Part and Chapter:	Part IV, Service Delivery Model	Page No.:	3 to 5
PUB Approved Issue No:	17. DSR		
Topic:	Driver Licensing Initiative		
Sub Topic:	Failing road tests		

Preamble to IR (If Any):

"The overall pass rate for MPI customers attempting to obtain their driver's licence through the road test has been declining since 2014. While pass rates for road testing for all classes of driver's licences have declined, the pass rate for road testing for Class 5 licences, the most frequently taken driver's licence road test, has experienced the greatest decline."

Question:

Has MPI identified the root cause(s) as to why drivers fail the Class 5 driver's licence road test? If yes, please provide a commentary on the root causes of the road test failures.

Rationale for Question:

It appears MPI has implemented a number of initiatives (page 4); however, these initiatives do not appear to address any specific identified causes or issues of road test failures.

RESPONSE:

The Corporation has not definitively identified the root cause(s) for drivers failing the Class 5 driver's licence road test. However, preliminary feedback from driver

examiners and customers attending service centres for road tests indicates the foremost cause as drivers not spending enough time preparing and practicing for the examination. Customer reports of the amount of time spent practicing also supported the existence of a correlation between increased time practicing and improved success rates.

CAC (MPI) 1-51

Part and Chapter:	Part V, Driver Safety Rating	Page No.:	Page 9
PUB Approved Issue No:	17. Driver Safety Rating		
Topic:	Primary Driver Model		
Subtopic:			

Preamble to IR (If Any):

On page 9 of Part V, Driver Safety Rating it is stated "the larger concern is that using the Primary Driver Model is unlikely to provide any significant benefits relative to the Registered Owner Model. This is because MPI expects that customers may simply declare the best-rated driver as the primary driver for all vehicles in the household and thereby undermine the effectiveness of the Model"

Question:

a) Has the Corporation done any research on this topic to validate this statement?
b) If not why does the Corporation make this large assumption?
c) If the Corporation were to collect the primary driver information (ie. ask the question at registration time) for the estimated cost of $217,000 could they analyze that information for impact on premium levels in order to validate or invalidate the statement above?

Rationale for Question:

To understand the Corporations rationale for the statement above that declares the Registered Owner Model would not have "significant benefits"

RESPONSE:

While the Corporation has not researched this topic, current legislation gives legal owners a choice as to how they register and insure their vehicles. Legal owners can register and insure their vehicles themselves or they can give exclusive use of them to others individual who can register and insure them.

By allowing registered owners the ability to declare a primary driver, the Primary Driver Model does not address the perceived inequalities raised by the PUB. The Corporation believes that some customers may simply declare the best-rated driver as the primary driver for all vehicles in the household, thereby undermining the purpose and effectiveness of the Model. Customers acting in their own self-interest (within the confines of the rules) and choosing the option that provides them with the greatest financial benefit (i.e. lower rates) is neither unreasonable nor a particularly large assumption to make in the circumstances.

The Corporation will conduct customer research before proposing any significant changes to the Driver Safety Rating Program.

CAC (MPI) 1-52

Part and Chapter:	Part V, Driver Safety Rating	Page No.:	Page 10
PUB Approved Issue No:	17. Driver Safety Rating		
Topic:	Residual Risk Model		
Subtopic:			

Preamble to IR (If Any):

On page 10 of Part V, Driver Safety Rating it is stated "The driver premium collected from these "non-owners" would then be used to lower vehicle premiums and/or improve the actuarial soundness of the vehicle premium discounts."

Question:

a) Does the Residual Risk Model suggest that the premium collected from the "non-owners" be added to the overall rate indication so that it benefits all those who register a vehicle?
b) If so, does this now add inequity to the vehicle premiums paid as the non-owners premium benefits all?

Rationale for Question:

To understand the Residual Risk Model and whether it adds inequity to the vehicle premiums charged.

RESPONSE:

a) Driver premium is currently used in the vehicle premium rate calculation as a positive (favourable) revenue stream to lower vehicle premiums. The Corporation assumes that this treatment of driver premiums will continue under the Residual Risk Model. The goal of the Residual Risk Model is to collect only the incremental

(additional) risk created by the non-owner that is not adequately collected in the existing registered owner model. Charging rates in this manner addresses the concern that non-owners do not pay their 'fair share', while also ensuring they are not over-charged. While MPI expects rates under the Residual Risk Model to be actuarially sound, depending on the amount of 'rate dislocation', a longer-term implementation / phase-in strategy may be required should it ultimately be selected.

b) See part a).

CAC (MPI) 1-53

Part and Chapter:	Part V, VFH.4 and VFH.9	Page No.:	10-11, 19-21
PUB Approved Issue No:	18. Vehicles for Hire		
Topic:	Vehicles for Hire Rating Model		
Sub Topic:			

Preamble to IR (If Any):

In its General Rate Application, MPI states that it examined and evaluated insurance solution models/options for vehicles for hire. It also states that it evaluated best practices in the TNC industry and that rating models used in other Canadian jurisdictions were not considered suitable with Manitoba's public insurance environment given the compulsory nature of Basic.

Question:

Please identify all industry, gray and peer-reviewed literature that was reviewed by MPI regarding vehicles for hire.

Rationale for Question:

To better understand the basis for MPI's Vehicles for Hire taring model.

RESPONSE:

The Corporation reviewed the following with respect to vehicles for hire:

- MPI's current policies, legislation, framework models, and underwriting rules

Articles

- Canadian Underwriter
- Global News
- Insurance Canada
- Thompson's World Insurance News
- USA today

Studies

- Winnipeg Taxicab Services Review – Final Report December 20, 2016 http://www.gov.mb.ca/mr/taxicab/pubs/wpg_taxicab_review_final_rpt_dec20.pdf

- Study completed by the National Bureau of Economic Research entitled "*The Value of Flexible Work: Evidence from Uber Drivers*" http://www.nber.org/papers/w23296.

Websites

- AVIVA Insurance
- Insurance Corporation of British Columbia
- Intact Insurance
- Saskatchewan Government Insurance
- Uber

Other

- Alberta Standard Automobile Form – Transportation Network S.P.F. 9
- Alberta Superintendent of Insurance Bulletin
- Canadian Municipal TNC bylaws
- Financial Services Commission of Ontario Bulletin
- Government of Alberta Announcements
- Uber Presentation to the Winnipeg Chamber of Commerce

CAC (MPI) 1-54

Part and Chapter:	Part I, Overview 2018 GRA, CAC (MPI) 2-22	Page No.:	13
PUB Approved Issue No:	19. Value Management		
Topic:	MPI not a technology company		
Sub Topic:	The application of Value Management caused projects to be cancelled		

Preamble to IR (If Any):

Reference Part 1, Overview, page 13:

"MPI, however, is an automobile insurance company and administrator of *The Drivers and Vehicles Act*. The "IT Strategic Plan" is to support the business carry out the corporation's mission - *Exceptional coverage and service, affordable rates and safer roads through public auto insurance*. IT expenses are incurred to meet business needs. Business needs are not determined by an IT Strategic Plan.

As previously mentioned, MPI uses a Value Management Process to ensure that IT expenditures will only be incurred when it is appropriate to do so. As the PUB noted in Order 130/17 this process is applied on all new initiatives with a budget in excess of $500,000. The MPI Board of Directors recognized in the same Order, the PUB expressed concerns about IT projects that were currently "in-flight". The Board of Directors directed the Value Management Process be applied to a number of these projects. Based upon the results, Management cancelled the Customer Claims Reporting System (CCRS) initiative."

Reference 2018 GRA, CAC (MPI) 2-22:

"MPI has entered into a co-development agreement with Mitchell International with respect to the Customer Claims Reporting System (CCRS)"

Question:

a) Please file a copy of 2018 GRA, CAC (MPI) 2-22 for the record.
b) MPI has cancelled the CCRS project and written off the development costs of $9.3 million plus an additional amount of about $5.3 million (which may not be entirely related to the CCRS project) (see Part IV, Value Management, pages 32 and 33); based on the co-development agreement with Mitchell, please provide the amount of the write-off recoverable from Mitchell, if any. If there is no amount recoverable from Mitchell, please explain in detail the going-forward business relationship with Mitchell.
c) Please prepare a chart, by project, of projects cancelled and the amount of project development costs write-offs for the last three fiscal years, including the rationale for write-off.

Rationale for Question:

To obtain a clear understanding as to the disposition of policyholders moneys invested in a leading edge system (CCRS) co-developed with Mitchell which has subsequently been cancelled. Who benefited from this work and who is responsible for the loss?

RESPONSE:

a) Please see, *Appendix 1*.

b) None of the amounts written-off are recoverable from Mitchell, as the Corporation spent these amounts mainly for internal development and work on the Customer Claims Reporting System (CCRS) project. Mitchell also invested capital in the CCRS project and the amounts written-off by the Corporation do not reflect this. With the indefinite postponement of the project, the Corporation is negotiating the licence and use of the CCRS software in order to mitigate its losses. These negotiations are close to finalized.

c) Please see table below:

Figure 1: Deferred Development Cost Write-Offs

Line No.	Impairment Projects	2015/16A	2016/17A*	2017/18A**
1	*(C$000s, except where noted)*			
2	Physical Damage Re-Engineering Main/Ph	-	126	993
3	Financial Re-engineering Inititiative	-	-	343
3	SRE Future State	-	-	55
4	High School Driver Education Phase 2	-	-	2,086
5	Enhanced DR Capabilities	-	-	681
6	Customer Claims Reporting System	-	-	15,624
7	PDR Opt Repair - Remote Estimating	-	-	229
8	HR Management System Phase 3 & 4	-	-	247
9	**Total**	**-**	**126**	**20,258**
10	*2016/17 Project cancelled			
11	**2017/18 Projects impaired			

CAC (MPI) 2-22

Volume and Chapter:	**PUB (MPI) 1-2**	**Page No.:**	**PDF Page 3**
Topic:	**Board of Directors Minutes, Minute 17-023**		
Sub Topic:	**Mitchell International Co-Development Agreement re Customer Claims Reporting System (CCRS)**		
Issue:	**See Preamble**		

Preamble to IR (If Any):

Moved by Mr. Chale and seconded by Ms. Wowryk that the members ratify the recommendation of the Planning & Technology Committee authorizing Management to:

• Finalize negotiations to extend the term of the Master Services Agreement between Manitoba Public Insurance and Mitchell International for an additional 5 years.

• Finalize negotiations for a co-development agreement under the Master Services Agreement to create a Customer Claims Reporting System (CCRS). The costs are to total.

• Enter into a co-development agreement and extend the Master Service Agreement with Mitchell International for a 5 year term ending on April 4, 2023 at a total.

CARRIED

Question:

Please advise whether the co-development agreement with Mitchell International relating to the creating and building of a Customer Claims Reporting System (CCRS) includes a revenue sharing clause with MPIC, as a partner, in the event the CCRS is commercialized and sold to other entities by Mitchell International.

Rationale for Question:

MPIC, it appears, is participating financially expending and investing policyholder funds in the creation (development) and building of the CCRS with Mitchell Internationally and thus it may make economic sense for MPIC to participate in the commercialization of the CCRS with Mitchell International and benefit (basic insurance) from the potential profits of this IT product should it be sold and licensed in the market place.

RESPONSE:

MPI has entered into a co-development agreement with Mitchell International with respect to the Customer Claims Reporting System (CCRS). This agreement provides MPI with the following:

a) Confirmation that business requirements and functionality that are important to MPI from a customer experience and/or business case realization are confirmed to be part of the CCRS general market product

b) Joint MPI/Mitchell International commitment to project timelines and delivery dates

c) Project governance, delivery management and issue/risk escalation parameters and structure

d) Protection of MPI intellectual property

e) 10-year confirmed pricing for CCRS software licensing

The specific terms of the agreement are commercially sensitive, including whether it contemplates revenue sharing, and cannot be disclosed.

CAC (MPI) 1-55

Part and Chapter:	Part IV, Value Management	Page No.:	12
PUB Approved Issue No:	19. Technology Modernization		
Topic:	Legacy System Modernization		
Sub Topic:			

Preamble to IR (If Any):

"*Project Description*

The Legacy System Modernization project will develop a business case package, strategy and roadmap to modernize the following enterprise applications (and associated supporting applications) over a multi-year, multi-phase program:

- AOL, DLS and CARS
- SIS replacement for the SRE line of business
- Financial Re-engineering

Two neutral 3rd party consultant partners will be engaged to perform an independent Legacy Modernization assessment. A neutral 3rd party will ensure that a bias free assessment and target solution is recommended."

Question:

Please elaborate on the MPI core business knowledge the two neutral third parties possess to be qualified to recommend a target solution to the replacement of AOL and CARS—MPI's core business systems.

Rationale for Question:

MPI has been spending a significant amount of policyholders' money on various very expensive systems using external contractors just to find out that the benefits promised have allegedly not been realized. In this application significant IT development costs have been written off. Manitobans need to be assured that future IT expenditures add value and improper IT expenditures have negative rating consequences.

RESPONSE:

The rationale for this Information Request assumes facts not in evidence and is largely anecdotal. The Corporation will confine its answer to the germane portion of the question, in a fair and accurate manner, while making note of the prejudicial effect of the premise.

When the Corporation reviewed the request for proposal responses, in the process of selecting two assessments vendors, the vendor's assessment methodology and their qualifications and experience were highly considered and valued factors. A well-defined methodology demonstrates that the vendor has predefined approach to legacy modernization engagements. They know what questions to ask and what information is required to make an informed decision. Their qualifications and experience speak to their record of accomplishment on delivery and their level of performance for various customers.

Deloitte is a recognized leader in the Insurance industry and was able to bring a great deal of business acumen on the trends in the public and private insurance sectors. This vendor presented a very strong modernization and business case methodology, which included a detailed business capability model for Insurance and Driver Vehicle Administration functions.

Avasant is Canadian management consulting firm with experience leading large enterprise transformation and modernization projects in Canada over the last 5+ years, focusing on government clients and other clients subject to government

regulation and oversight. Their proposal placed an emphasis on modernization activities following a strong methodology.

In both cases, each vendor provided numerous client references for whom they performed similar work. The Corporation performed multiple reference checks, which were all positive.

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Part and Chapter:	**Part IV, Value Management**	**Page No.:**	**6**
PUB Approved Issue No:	**19. IT expenses and projects**		
Topic:	**Technology risk management life cycle**		
Sub Topic:			

Preamble to IR (If Any):

"5. A program charter is created for the Technology Risk Management for the fiscal year which guides overall program execution."

Question:

Please file a copy of the Technology Risk Management program charter.

Rationale for Question:

To review the program charter along with the business case filed.

RESPONSE:

Please see *CAC (MPI) 1-56 Appendix 1*.

[Appendix 1 Redacted. The Corporation is seeking confidential treatment of this response].

Manitoba
Public Insurance

Technology Risk Management Charter FY 18/19

Version: 0.7
Date: July 23, 2018

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1 INTRODUCTION

This Program Charter summarizes the business and management aspects of the Technology Risk Management Program. When signed by the sponsor(s), this charter serves as an agreement between the business and the project groups, formally authorizing the existence of the project, and gives authorization for the Project Managers to engage resources in the planning and execution of the project activities based on the conditions established.

2 PROGRAM PURPOSE

MPI recognizes the need to continue to invest in its technical assets, to avoid technology obsolescence, and to achieve the goals identified in the Business plan.

Information Technology focused investments are proposed annually to improve Technology Risk Management. This will provide regular investment in technology systems and processes to avoid significant capital outlays in future years by ensuring that existing technologies stay on current, supported versions and other technology risks are addressed through process and technology improvements.

3 PROGRAM OBJECTIVES

Technology Risk Management

The goal of the Technology Risk Management program is to implement projects that will keep existing technology in a stable and supported state and address other technology risk through process and technology improvements. Return on investment will be realized through risk reduction. This includes reduced risk of running on unsupported or outdated technologies and reducing risks identified in various risk assessments. Improvements are focused on the following areas:

- Application Risk Management
- Infrastructure Risk Management
- Information Security Risk Management
- Risk Registry Remediation

4 PROGRAM SCOPE DEFINITIONS

Application Risk Management: Investments in the remediation of prioritized recommendations identified by the Application Portfolio Management process. This also includes improvements to how MPI monitors and manages applications

Infrastructure Risk Management: Investments in infrastructure upgrades to remain on current and supported technologies. Infrastructure Risk Management invests in technology services and solutions which improves our operation of IT Infrastructure assets within the IBM data center. While some of these costs are covered within the IBM enterprise agreement, it is essential to test and remediate the systems and residing applications after any significant infrastructure upgrades to ensure there is no loss of functionality and to minimize or remove any risk to the business. This may include limited application configuration changes, and related testing, to ensure applications function on updated platforms

Information Security Risk Management: Implement solutions to manage risks identified by the Corporate Information Security Office and as identified through the use of MPI's security risk assessment capabilities.

Risk Registry Remediation: Implement solutions to lessen high priority Enterprise risks. This is currently focused on Business Continuity and Disaster Recovery, reducing risk through better event preparedness and by investing in response capabilities.

Project	ITBT-2018-001 Informatica Update
Upgrade Informatica to version 10.1. Version 10.1 will be supported until 2020 (or later). Informatica is used in the extraction, transformation, and loading (ETL) of data which populates the enterprise data warehouse. It is critical for report generation. This upgrade is covered under an existing maintenance agreement with the vendor and is planned to be completed by leveraging internal MPI resources.	

Project	ITBT-2018-004 Application Performance Management Suite Implementation (APMS)
Install and integrate an APMS suite into the MPI environment to gain full application end to end insight and the following key functions application performance management, end-user monitoring, infrastructure visibility, and application analytics. This enables better identification of negative application performance and facilitates faster response times to these negative events.	
Project	**ITBT-2018-005 VIP Upgrade**
Merge three outdated VIP applications into a single modern application. The three applications in question are VIP Inquiry, VIP2, and VIP_CARS. The focus is to ensure the platform operates on stable / supported infrastructure, uses secure and stable application components, and has the appropriate levels of data protection and auditing. This was recommended by the Application Portfolio Management (APM) process.	
Project	**ITBT-2018-006 Loss of Use - Platform Upgrade**
Upgrade the Loss of Use Web Application (LOU) from its current unsupported VB.NET framework to a current supported environment. This was recommended by the Application Portfolio Management (APM) process.	

Project	ITBT-2018-008 CDW-EDW Migration Strategy
Conduct a review of the Classic Data Warehouse (CDW) and propose a strategy to reduce support risk and shift workload to other internal platforms.	
Project	**ITBT-2018-009 Dollar Universe Upgrade 6.7**
Upgrade the Automic Dollar Universe Application Suite to the latest stable version of the product, as recommended by the vendor. This was recommended by the Application Portfolio Management (APM) process.	
Project	**ITBT-2018-055 Team Foundation Servers (TFS) and Visual Studio Upgrade**
Refresh the Microsoft Team Foundation Server (TFS) and Visual Studio development environments ensuring operation of current supported versions and to gain capabilities required to support modern application development processes.	
Project	**ITBT-2018-010 ITSM Identity and Access Management Self Service Password Reset Management**
Automate common password requests, providing a secure, self service, password reset solution for requests which are traditionally handled by the MPI IT Service Desk.	
Project	**ITBT-2018-025 Data Loss Prevention (DLP)**
Implement information security improvements recommended in a 2017/18 DLP strategy, 2018/19 efforts will focus on: • Creation of an implementation and Organizational Change Management strategy for data tagging and classification • Roll-out of the tagging and classification solution to the organization • Creation of an implementation and Organizational Change Management strategy for DLP	
Project	**ITBT-2018-035 Network and Perimeter Security Enhancement**
Review and enhance current network protection processes and technologies with a focus on network and perimeter network security to protect MPI from current, emerging, and future threats. [Redacted. The corporation is seeking confidential treatment for this part].	
Project	**ITBT-2018-043 Security Awareness Activities for Brokers and Partners**
Formalize a Security Awareness Training Program for Brokers and Partners focused on raising awareness around securing and proper handling of MPI / client information as per industry best practices.	
Project	**ITBT-2018-045 Forensics and Vulnerability Assessment**
Acquire and implement tools and processes to enhance workstation forensics capabilities within MPI. Such tools include the ability to examine IT assets using forensics tools. Expand vulnerability assessments and penetration testing against MPI's Internet facing applications (ethical hacking) in order to identity weaknesses requiring remediation.	
Project	**ITBT-2018-046 Workstation Security Enhancement**
Enhance the workstation security through the implementation of a threat analytics software (second generation anti-virus technology) that provides the intelligence to learn, analyze, and identify normal and suspicious user or device behavior. Review the local administrative privileges on workstations in order to develop an approach to address associated risks.	
Project	**ITBT-2018-003 File Server Storage Solution**
Redefine the file storage environment in order to reduce operational costs while improving efficiencies and accommodating MPI's evolving business needs.	

Project	ITBT-2018-029 Security Device Refresh
Execute a refresh for the hardware and add improvements in technology (i.e. High Availability (HA) or Disaster Recovery (DR) capabilities and storage upgrades for retention improvements) if viable within budget and timeline. The Software version will be upgraded to the latest supported version to ensure MPI is maximizing all available features for the Managed SIEM (Security Incident and Event Management) service.	
Project	**ITBT-2018-030 SAN Storage and TSM Backup Upgrade**
Modernize storage and backup solutions to ensure supportability, capacity, and value.	
Project	**ITBT-2018-031 Windows Server Vitality (2009 -> 2016)**
Reduce the risks associated with running End of Life software in our environment. Execute on IBM contractual agreement to perform a major Operating System upgrade every 4 years and validate the changes through formal testing processes.	
Project	**ITBT-2018-033 Intel Server HW and Vmware ESXi Refresh**
Upgrade plan is to move to execute a “like for like” refresh and expected to move to new IT infrastructure. **Intel Server Hardware Refresh/Vitality** To eliminate and reduce Business impact (IT Security and IT Availability) associated with running End of Life hardware in our environment. HX5 blades (current technology) are no longer in production. To remain current on all major Data Centre platforms, and to execute on IBM contractual agreement to upgrade Data Centre infrastructure once every 5 years. **VMWare ESXi 5.5 Upgrade to ESXi 6.5 (Vitality)** To eliminate and reduce Business impact (IT Security and IT Availability) associated with running End of Life Support platforms in our environment. End of general support for ESXi 5.5 is 2018/09/19. To remain current on all major Data Centre platforms and to execute on IBM contractual agreement to upgrade Operating Systems and Middleware once every 4 years.	
Project	**ITBT-2018-100: Risk Registry Remediation - 2018**
Implement solutions to lessen high priority Enterprise risks. Upcoming investments will focus on improving process maturity for Business Continuity Management (BCM) with specific investments in Information Technology Service Continuity Maturity (ITSC). The goals of this project focus on review, refinement, and testing of MPI’s IT recovery capabilities. This project addresses recommendations from a 2017/18 external review.	

5 PROGRAM STRATEGY

MPI will leverage internal expertise and external advisory services to identify specific opportunities for improved Technology Risk Management. In accordance with the Value Management process, these opportunities are documented and refined until the final list is submitted to Executive and Board for approval.

Upon approval, a program charter will be created for the Technology Risk Management for that fiscal year.

Throughout the delivery of the product(s) or service(s) described in this Charter, the Program Director and Project Managers will leverage the MPI Enterprise Project Management Methodology which will be modified for efficiency and to address the

technical focus of Technology Risk Management projects and the EPMO Toolkit to provide the clearly defined delivery framework for project management consistency.

Each project within the program will follow the process outlined above to produce a project charter and plan specific to the delivery of that project's objectives, scope and defined deliverables. All projects will be governed following the program organizational chart shown below.

6 PROGRAM MANAGEMENT

6.1 DATA REPOSITORY

- A master program site will be created in share point where all program centric information will be maintained.

- Individual project share point sites will be built within the master site where all program specific documents will be retained and managed.

6.2 PROJECT TRACKING

Projects will be created in the most supported version of MS-Project and will be maintained on the PPM site. Project schedules will track the key deliverables identified and approved in the project deliverables document. The information identified in this schedule will be tracked by Gating Stage and sub-deliverable.

Example:
Phase 2 Elaboration

- Project Plan creation
- Architectural Definition Document
- Refined Project Schedule
- Vendor engagement (Contracts and RFS)

All detailed work required to complete the deliverables above will be maintained and tracked in individual detailed work packages, and the progress of these work packages will be reflected in the respective deliverable. This concept will minimize the size of the project schedules making them easier to manage and report against, and provides the project manager with more control on delivering their projects. Projects will create a detailed project plan that will clearly articulate governance, deliverables, costs, schedule and success criteria.

This approach to project management and tracking will apply to all projects with adjustments depending on project costs, complexity and time line. Projects will be reviewed individually by project sponsors and a project management / delivery approach will be identified that will meet acceptable project delivery requirements, auditability and report requirements.

6.3 Project Reporting

Weekly Project status reports will be updated and generated as per BTO-EPMO reporting cycle. Preference will be given to creating one report through the PPM tool.

6.4 Approvals

Approvals for all agreed to deliverables will be work flowed for auditability. Standard document reviews, presentations, CR, DR and "thin" deliverables will have a 5 business day response. More complex documents such as Architectural Definition Documents will require a 10 business day response.

6.5 Escalations

Project risks and issues will be tracked in PPM for all projects and will also maintain issues and risks on their respective project share point sites and will comply with auditability requirements.

Definitions

RED – Immediate action is required. The cost or schedule performance is greater than 20% of the baselined plan; Issues / Risks / Change Requests: 2 weeks past the due dates
YELLOW – Project has significant issues that could impact future milestones, cost or schedule performance and is 15% - 20% of the baselined plan
GREEN – The cost or schedule performance is within 14% of the baselined plan

YELLOW:

- Escalate to Program Director for resolution
- Escalate to Project Sponsors if Program Director cannot resolve
- Resolution required: 5 business days

RED:

- Escalate to Program Sponsors for resolution
- Escalate to VP Business Owner if Project Sponsors cannot resolve
- Resolution required: 2-3 business days

Back to Green Plan:
Each Yellow or Red status should have an associated "back to green" activity associated with it. The activity should describe an achievable solution with status on what activities will be executed to ensure that the project can return to green status.

7 PROGRAM ASSUMPTIONS

- Leveraging internal MPI resources will take priority over engaging external contract resources.

- There is a risk that the following projects will carry over to March/April 2019 in order to complete all deliverables:
  - ITBT-2018-025 Data Loss Prevention (DLP)
  - ITBT-2018-031 Windows Server Vitality (2009 -> 2016)
  - ITBT-2018-033 Intel Server HW and Vmware ESXi Refresh
  - ITBT-2018-035 Network and Perimeter Security Enhancement
- Funds from cancelled project, if applicable, will be re-purposed for enhancements or insertions to scope of remaining projects.
- A program governance document will be created and followed for the duration of the 2018/2019 program.

8 PROGRAM BUDGET

Funding Area	2016/17	2017/18	2018/19	2019/20
Technology Modernization	$6.0M	$4.5M	**$4.5M**	$4.5M

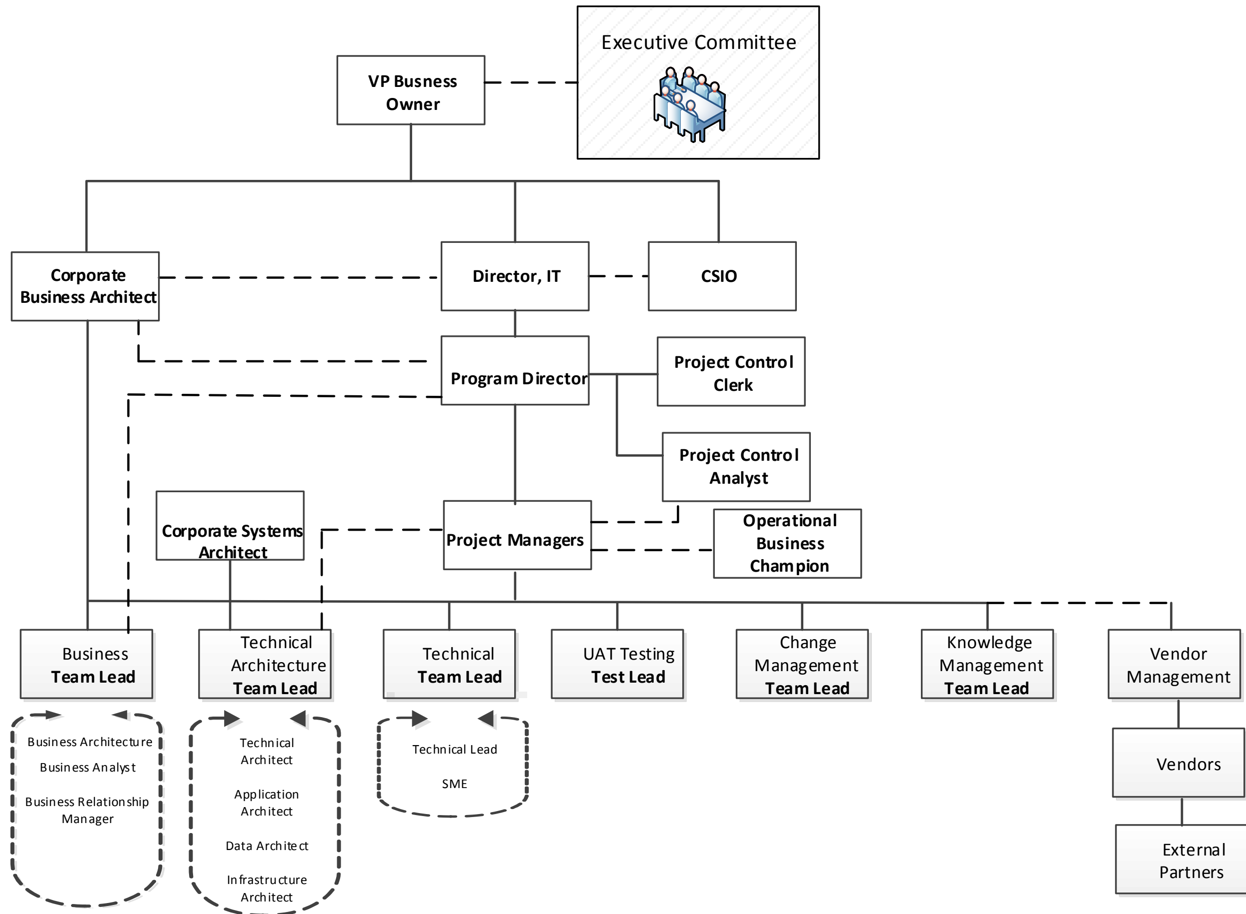
Management intends to seek funding of $4.5M on an annual basis to ensure IT risks are appropriately addressed in a timely manner and capabilities are maintained or developed as required to support the Corporate Strategic Plan. Investments which exceed the proposed funding for 2018/19 to 2019/20 will be evaluated according to the value management process.

Project	Budget
ITBT-2018-103: Application Risk Management - 2018	875,000.00
ITBT-2018-101: Security Risk Management - 2018	1,700,000.00
ITBT-2018-100: Risk Registry Remediation - 2018	300,000.00
ITBT-2018-102: Infrastructure Risk Management - 2018	1,600,000.00

9 PROGRAM ORGANIZATION

The delivery of these projects will follow the approved EPMO delivery approach as it applies to Technology Modernization deliverables. IT Business Services Unit will manage and review the monthly project budgets, expenditures, resource costs and other aspects of project financial management.

EPMO and Vendor Management will assist with resource requests. Project Managers will work with EPMO and QCM to review test cycles and delivery dates to ensure they coincide with the master schedules and the Business and Technical Architecture teams will contribute to, and review all architectural artefacts.


Executive Committee
VP Busness Owner
Corporate Business Architect
Director, IT
CSIO
Program Director
Project Control Clerk
Project Control Analyst
Corporate Systems Architect
Project Managers
Operational Business Champion
Business Team Lead
Technical Architecture Team Lead
Technical Team Lead
UAT Testing Test Lead
Change Management Team Lead
Knowledge Management Team Lead
Vendor Management
Business Architecture
Business Analyst
Business Relationship Manager
Technical Architect
Application Architect
Data Architect
Infrastructure Architect
Technical Lead
SME
Vendors
External Partners

9.1 ROLES AND RESPONSIBILITIES

VP Business Owner
- Support business sponsorship of Projects
- Approve the Project charter giving authority to expend resources on the initiative
- Provide oversight on Program direction, risks, issues, budgets
- Facilitate cross organization dialog and objectives that impact corporate level process

Corporate Business Architect
- Project Sponsor
- Review and approve the Project charter
- Promote the benefits of the project to gain buy-in from stakeholders
- Provide strategic direction
- Facilitate project prioritization
- Signoff/approve key project deliverables; and facilitate approval from Executive Committee members, where applicable

Corporate Information Security Officer
- Project Sponsor for Security Projects
- Review and approve the Project Charter and Project Plans
- Promote the benefits of the project to gain buy-in from stakeholders
- Provide strategic direction
- Facilitate project prioritization
- Signoff/approve key project deliverables; and facilitate approval from Executive Committee members, where applicable

Director, IT
Director, IT is accountable for the planning and successful implementation of Technology Modernization program.

Responsibilities include:
- Project Sponsor
- Review and approve the Project charter
- Provide overall direction and guidance for the program and ensure alignment with overall corporate objectives
- Oversight and ownership of program budget
- Expedite decisions for the program and help to remove roadblocks that could potentially negatively impact the program
- Review and approve the Project charter
- Promote the benefits of the project to gain buy-in from stakeholders
- Provide strategic direction
- Facilitate project prioritization
- Signoff/approve key project deliverables; and facilitate approval from Executive Committee members, where applicable

Business Architect, Information Security Analyst, Technical Solution Architect
The Business Architect, Information Security Analyst, and Technical Solution Architect are accountable to ensure that the solutions align to corporate standards and integrate with future business, technical, and security vision.

Responsibilities include:
- Provide direction and guidance to the project teams and their respective teams, to ensure program/project solutions are in alignment with corporate objectives and future vision
- Ensure that program/project deliverables impacting their perspective areas align with deliverables from other initiatives
- Provide resources to deliver required work packages

Program Director
The program director provides the centralized coordinated management of the program to achieve the program's strategic objectives and benefits.
Responsibilities include:
- Ensures that the program achieves the outcomes for which the program is being initiated. This may involve the creation of new projects, recommendation of scope changes to projects, cancellation of projects, and review/consulting on dotted line projects.
- Monitoring business outcomes being met
- Ensuring that project issues are being resolved in a timely manner and delivery timelines for all the projects being met or adjusted through the change request process
- Provide project managers with support and guidance on individual projects
- Ensure alignment of the projects with the program and organizational performance objectives
- Ensure that the overall technology modernization program structure and program management processes enable the project teams to successfully complete their work
- Ensure projects are organized and executed in a consistent manner
- Leverage resources among the program's projects where feasible
- Manage the program budget

Project Control Analyst (PCA)
The Project Control Analyst resource provides support to the Project Director and Project Managers by ensuring standard processes exist and are followed, and assist with monitoring and reporting project status.
Responsibilities include:
- Consolidate and manage issues, risks, assumptions, CR and DR's
- Ensure compliance with established guidelines and standards for schedule management
- Ensure governance and controls are being adhered to
- Provide support to the Team Leads and Project Managers to ensure projects are being delivered on-time and on-budget
- Work with Team Leads and Project Managers (when required) to facilitate and coordinate project planning

- Consolidate the team project schedules to ensure schedules are integrated at the project level
- Assist Team Leads and Project Managers with creating and updating project schedules in PPM and producing timesheets, if required
- Assist Team Leads with update to project status report
- Record and distribute project meeting minutes, as required
- Identify and communicate process areas for improvement

Project Support Clerk

The Project Support Clerk resource provides support to the Project Director and Project Managers by ensuring standard processes exist and are followed, and assist with monitoring and reporting project status.
Responsibilities include:

- Work with Project Managers to submit and manage project resource requests
- Ensure Share Point compliance with established guidelines and standards
- Ensure deliverable governance, controls and auditability are being adhered to
- Work with Team Leads and Project Managers to facilitate and coordinate project planning when required
- Track weekly status reporting to ensure reporting timelines are met
- Produce weekly status report summary for BTO – EPMO consumption
- Provide program status reports are required
- Record and distribute project meeting minutes, as required
- Point of contact for Program Manager, Team Leads and Project Managers for posting to SharePoint
- Identify and communicate process areas for improvement

EPMO Support

EPMO Support will collaborate with the technology modernization project to coordinate:

- PPM environment activities and updates
- Weekly project status reporting
- Monthly EC reporting
- Quarterly Board reports

Project Managers

The Project Managers are responsible for the timely completion of all deliverables within their team, and planning and management of the work to complete delivery.
Responsibilities include:

- Participate in planning and re-planning
- As per MPI EPMO process and Technology Modernization governance, apply disciplined project management tools, techniques and methods
- Create and maintain project schedules in PPM
- Support issue and risk management processes
- Identify and resolve Project issues/risks and escalate to the Program Director, if required
- Ensure quality of, and delivery of in-scope deliverables
- Defining and managing and controlling scope
- Manage and coordinate resources within the team

- Identify and manage resource needs and submit resource request to EPMO as required
- Monitor and report Team progress using weekly status reports
- Perform monthly resource reviews via Time Card validation
- Track monthly project expenditures

Team Leads

The Team Lead is responsible for working with the Program Director and PCA to establish a work plan including, work assignments, task ordering, and dependencies. They will provide a solution approach for their area of expertise.
Responsibilities include:

- Be the main project point of contact
- Provide expertise, overall direction and accountability for all the deliverables produced by their team
- Provide effort/duration estimates for the work plan/scheduled tasks
- Develop Team Strategy and provide management, monitoring, and control of assigned team activities
- Ensure timely completion of Project deliverable-based milestones
- Identify and resolve Project issues/risks and escalate to the Program Director
- Responsible for Project planning and re-planning within their team
- Advise Program Director on any area that could facilitate integration, efficiencies or improvement.
- Assist with team level procurements
- Working cooperatively and collaboratively across the teams to achieve project goals
- Work with PCA to produce weekly status reports
- Work with PCA to update project schedule in PPM

10 AUTHORIZATION

Deliverable	Approver
Program Charter	Program Sponsor + VP Business Owner
Program Budget	Program Sponsor + Manager, Business Services + VP Business Owner
Program Level CR and DR	Program Sponsor + VP Business Owner
Project Based Deliverables	
Project General Content	Program Sponsors
Business Centric	Program Sponsors + ISO
Security Centric	Program Sponsors + ISO
Technical Architecture	Corporate System Architect + Program Sponsors + ISO
As identified in the approved TRM Delivery Log	Program Sponsors + Director, ESS

Name:		**Signature:**	*See SharePoint Workflow*
Role:	Director, IT	**Date:**	
Name:		**Signature:**	*See SharePoint Workflow*
Role:	Corporate Business Architect	**Date:**	
Name:		**Signature:**	*See SharePoint Workflow*
Role:	Vice President, IT, Business Transformation & CIO	**Date:**	

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Part and Chapter:	Part IV, Value Management	Page No.:	23, 41, 43
PUB Approved Issue No:	19. IT projects and expenses		
Topic:	BI3		
Sub Topic:			

Preamble to IR (If Any):

MPI, as per the statement below (page 23, Value Management, Part IV), is required contractually to upgrade BI3/Fineos.

"In order to comply with the contractual provisions of the software licensing agreement between MPI and Fineos, MPI must maintain a 4-year vitality cycle on the Fineos platform. The last Fineos upgrade was completed in early 2016. Therefore, MPI must complete an upgrade of the Fineos platform before the end of calendar year 2020 to maintain status quo annual licensing rates."

On page 41, Value Management, Part IV, MPI updated the NPV (net present value) analysis of the Physical Damage Re-engineering (PDR) project. This analysis now indicates negative NPVs of $49 million to $58 million depending on the discount rate and the time period applied. In last year's GRA, Volume I, PDR, page 19-Gartner Report, the PDR project was to deliver a NPV of 13.7 million with an Internal Rate of Return of 7%.

MPI, it appears, has realized that the likelihood of these major projects (PDR and BI3), with an implementation time frame in excess of 5 years, tend not to deliver positive NPVs. To this end MPI has made revisions to the project governance framework that formally incorporates the Value Management Process as stated below (ref. Part IV, Value Management, page 43:

"In recognition of the evolution and increased maturity of the value management process, as well as the involvement of the Value Management Office in the development, review and post implementation reviews of business case realization, as well as the corporate objective of more actively and engaging operational management in the projects associated with their respective business cases, MPI Management has decided to change key project leadership roles and responsibilities and introduce a new role "Operational Business Champion". As well as more actively engaging the Value Management Office in the entire lifecycle of the project."

Question:

a) With respect to BI3, please indicate whether a current NPV cost benefit analysis similar to the one prepared for PDR on page 40 and 41 of Part IV, Value Management has been conducted. If it has been conducted, please provide it.
b) Using a methodology consistent with the NPV update for PDR (ie p. 41), please prepare and provide an analysis of the net cost, by expense category, to ratepayers as at February 28, 2018 of the PDR project and the BI3 project. The benefits realization, if any, should be shown in a separate column.
c) Please define the PDR and BI3 IT projects either as a success or a failure and provide the rationale supporting MPI's conclusion.

Rationale for Question:

To better understand the magnitude of the net costs to basic insurance policyholders of the PDR and BI3 IT projects which appeared to have been driven by IT euphoria as oppose to business needs. It is comforting to read in this GRA that MPI is turning its attention back to its core business of operating an insurance company.

RESPONSE:

a) The BI3 – Fineos Upgrade 2020 project is supported by a business case and financial analysis submitted in Appendix 4 and 4a of the Value Management Chapter Part IV (ii). No NPV cost benefit analysis has been conducted for the original BI3 project as this initiative was completed in 2010. The Post

Implementation Review conducted by Ernst & Young and submitted in the 2018 GRA addresses original project benefits realization.

The Corporation recognizes that, since implementation of BI3, an increase in long-tail claims occurred and that this increase could be partially due to the planned reduction in employees in 2009/2010, as part of BI3 implementation. While MPI has no definitive evidence that these employee reductions had an affect the duration of injury claims, it is currently expanding its capacity in the bodily injury department to increase case management capacity it believes is necessary to manage this longer duration trend.

More proactive case management and return to work practices will assist customers to do all that is necessary to return to their normal lives, which in many cases helps both parties as it also reduces the income replacement claim costs. Given the long-term nature of this claims impact and the various environmental variables that exist such as increasing concussion claims or mental health claims, trying to isolate the true NPV of the BI3 project eight years after conclusion would be very imprecise and not lead to a different strategy for this area of claims.

b) The PDR project cost categories and the corresponding total financial forecasted benefits realization for the period 2017/18 to 2021/22 are as follows:

Program/Project	Spend as of March 31, 2018	Forecasted Financial Benefit Stream 2017/18 to 2021/22	Benefit Stream Description
PDR Phases 1&2	$3.11 M		
Appointment Manager	$1.45 M		
Enhanced Direct Repair & Parts	$1.80 M	$7.07 M	• All Loss of Use • Internal efficiencies & process improvements • Labour rate • Customer Service
Portal	$2.56 M		• Risk Reduction • Service Improvement
Mitchell Data Services (Tableau) - MDS	$0.15 M	$2.52 M	• Contributes to Claims Audit recoveries • Fraud Risk reduction
PDR Program Management	$5.0 M		
Website Redesign and Portal Consolidation	$4.54 M		• Fraud Risk reduction • Service Improvement
Collaborative Estimating (CE) & Autochex	$10.75 M		• Labour Rate
Direct Repair (DR) – previously Distributed Estimating (DE)	$5.26 M	$22.14 M	• Labour rate (DR is the primary driver) • Internal efficiencies & process improvements • Customer Service
Accreditation	$1.12 M		• Fraud Risk reduction
Shop Support Administration	$1.7 M		
Shop Training Management	$0.12 M		
Predictive Analytics / Loss Prevention	$2.19 M	$2.08 M	• Loss Prevention
JSST (Joint Solution Support Team)	$0.05 M		
PDR Re-Visioning	$0.47 M		
Customer Claims Reporting System	$16.08 M		
Remote Estimating	$0.24 M		
Total	**$56.59 M**	**$33.81 M**	

c) For PDR, please refer to the conclusion reported on page 41 Value Management, Part IV (ii). As stated, the Corporation has concluded the PDR Program did not attain the desired results from a project delivery, value management and realization perspective.

Regarding BI3, the corporation believes that there are incremental claims costs that were incurred as a result of reducing the case management employee base and the process changes that created a more passive approach to injury management since 2010. These incremental claims costs would reduce the overall NPV that had previously been submitted to the PUB, which declared the BI3 project as a success without considering claims impacts.

At this point and for the reasons identified above, there is little point to try to develop a new NPV given that BI3 closed eight years ago and the variables affecting claims duration are many. Therefore, claims impact from BI3 can be difficult to identify with confidence to the NPV. That said, the reduction of paper and the move towards a software system of injury management was and continues to be appropriate. Comparable companies also chose Fineos (TAC, RBC, Sunlife) for the purpose of reducing administration work and gaining controllership, but perhaps did not reducing case management capacity to justify the expense.

Over time, the Corporation will seek to reduce the amount of customization that occurred to the standard Fineos software and, more importantly, take a more 'proactive' approach to injury case management. As it considers future software or systems implementations, the Corporation will look at ways to reduce the amount of customization so future upgrades are faster, cheaper and less risky.

CAC (MPI) 1-58

Part and Chapter:	Part IV, Value Management, Appendix 3 (MPI Exhibit 2)	Page No.:	1, 4, 7, 8
PUB Approved Issue No:	19. IT projects and expenses		
Topic:	Customer self-service		
Sub Topic:			

Preamble to IR (If Any):

"This project will introduce a new customer self-service channel via the Internet and mobile platforms to meet current and future customer service expectations and needs. Building on the **business architecture and technology infrastructure being introduced by the Physical Damage Re-engineering program (PDR)** with respect to shop appointment booking as well as the portal technology for the business partner portal, this project will leverage these foundational corporate technology investments and assets to introduce an extended customer self-service channel for high volume/low/value transactions for maximum impact**." Emphasis added**

"This business case in its current form is not providing a near-term positive financial return on investment. It will however start to provide a positive financial return after year 7."

Total estimated range of project cost is $3,179,498 (page 7) and Net Present Value – negative $(2,227,360) (page 8)

Question:

a) Please explain and rationalize the requirement of 100% use of external labour (VM Appendix 3a, page 3), and no use of internal labour, in the amount of $3,179,498; to deliver this project.

b) Please elaborate on MPI's confidence using the business architecture and technology infrastructure introduced by PDR.
c) Please elaborate on MPI's confidence that the implementation of customer self service, using the PDR architecture and infrastructure, will deliver a positive NPV after 7 years.

Rationale for Question:

To better understand MPI's approval of an IT project delivering a negative NPV just after experiencing the PDR project latest NPV analysis.

RESPONSE:

a) The project costs and external resource percentage allocation depicted in (*VM Appendix 3a, page 3*) are specified as such to complete the Corporation's value management project financial analysis on a 'worst case scenario' basis. Where possible, the Corporation assigns its internal resources to all corporate initiatives (including the PDR project), to use them effectively, manage project expenses and provide opportunities for staff growth.

b) The business and technical architecture implemented by PDR is stable and meets the Corporation's current and future business needs. The Corporation is confident that it can extend this business and technical architecture to the customer self-service delivery channel, as required. The Corporation is however, evaluating other technical alternatives, which may be cheaper to implement and operate, thereby improving the overall value management for the customer self-service project.

   While it remains early in the overall project delivery cycle, the Corporation is confident that customers will embrace the customer self-service delivery channel and its expanded capabilities, features and services, as they become available. The results of recent customer surveys and the feedback from customer focus groups regarding the Customer Claims Reporting System give the Corporation reason to be confident. The Corporation is also confident in the business case and

value management realization (targets and timeframes) and therefore plans to continue with the project and future phases.

c) As per the response to question b) above, while it is early in the overall project delivery cycle, the Corporation is confident that the PDR business and technical architecture is well aligned to the needs of the customer self-service project. That said the Corporation is evaluating other technical alternatives that are potentially cheaper to implement and operate. As customer adoption rates increase in future years and as online services expand, the Corporation is confident that it will achieve the forecasted NPV and positive return within the projected timeframes. Incrementally, the customer self-service business architecture will provide customers with the option to elect electronic mailings vs. paper mail, secure text messaging regarding claims status, expanded hours of service (near 24/7), and easy access to high volume/low complexity MPI products and services.

CAC (MPI) 1-59

Part and Chapter:	Part IV, Value Management, VM Appendix 4	Page No.:	2, 4
PUB Approved Issue No:	19. IT projects and expenses		
Topic:	BI3/Fineos Upgrade 2020		
Sub Topic:			

Preamble to IR (If Any):

"Based on the preliminary scope determination and approach, MPI has identified 11 pieces of custom code that can be retired and migrated to out-of-the-box functionality. This will result in a reduction in the annual MPI customization support/licensing fees related to these identified customizations." (Page 2)

"The last upgrade of the Fineos platform was a large upgrade and the first upgrade completed since the initial project implementation. The project experienced many challenges from a technical, complexity and project schedule and costs over-run perspectives. MPI is still immature on this platform from an upgrade path perspective, thus, there are inherent risks regarding project complexity, size, and associated project schedule and costs. The project approach to reduce the MPI customizations will reduce overall complexity of the upgrade. Incrementally, this is not a 'major' platform and version release like the previous upgrade in 2016. Therefore, based on feedback and advice from Fineos experts, the upgrade will not be as complex." (Page 4)

Question:

In this upgrade MPI is planning on decommissioning 11 pieces of custom code. Please provide a cost analysis of building the pieces of custom codes that were required for the BI3 Fineos system to meet MPI PIPP business requirements and compare this cost to the BI3 Fineos 'vanilla' system cost.

Rationale for Question:

To understand the quantum and magnitude of modifying a system that is deficient in meeting business requirement and get a sense of the lingering issues of customizing a 'out of the box' system for which rate payers hold financial responsibility.

RESPONSE:

The Corporation cannot provide a breakdown of the actual cost of the 11 customizations of the BI3 system from its original implementation as FINEOS built them into its overall delivery charges. However, the initial costs can be estimated by taking the number of days of effort for each customization and multiplying that by the daily rate charged by FINEOS. Using this approach, the Corporation estimates that these 11 customizations cost approximately $436,800 in 2008.

The BI3 system required customization because the version of the software the Corporation implemented in 2008 was deficient in some areas. Since that time, FINEOS has continued to invest and make improvements its software. The new core system now closely aligns with the Corporation's business and requires minimal changes to use or can be used in its original form without significant impact.

The Corporation budgets $60,000 towards the use of FINEOS resources to assist in the implementation of the upgrade. The Corporation estimates that this upgrade will eliminate $80,000 in ongoing customer support expenditures, beginning July 2019.

CAC (MPI) 1-60

Part and Chapter:	**Part IV, Value Management, VM Appendix 5**	**Page No.:**	**1, 2, 5**
PUB Approved Issue No:	**19. IT projects and expenses**		
Topic:	**Finance Re-Engineering Project**		
Sub Topic:			

Preamble to IR (If Any):

"In 2015, MPI issued an RFP to hire a consulting firm to review the Finance Division in order to determine the Finance Division vision, mission, and structure to ensure the best use of corporate resources and consistently meet all the Divisional objectives and deadlines in a timely manner. This Finance Division Review was conducted and completed by Deloitte with a report submitted in March 2015.

The Finance Division Review identified opportunities to improve the finance systems and processes to support the success of Finance operations. These opportunities were further explored during a separate engagement in 2015, conducted by Deloitte, which resulted in documented business requirements to simplify, standardize and streamline processes, increase automation and improve the timeliness and visibility of financial information. These requirements formed the basis for the Finance Re-Engineering (FRE) project.

Due to other priorities and limited funding, the original FRE project was deferred.

In conjunction with the Legacy Systems Modernization and HRMS - Human Resource Management System Phase 3 / 4 project, the 2018/19 funding for this renewed project will involve an assessment of the long-term strategic fit and viability of the Infor suite of products, potential expanded utilization of the Infor suite as part of the strategy to decommission the Legacy Systems (AOL, DLS, CARS) as well as re-

validation of the business vision, roadmap, budget and business case for the Finance Re-Engineering program.

The key deliverables from the 2018/19 spend will be a business case, strategy and roadmap, including updating the business requirements established in 2015. This will determine the estimated future spend in 2019/20 and beyond."

"This project will be responsible for reassessing the original 2015 FRE business case and recommending and validating and confirming the need for MPI to take future actions. This current project will include the following deliverables:

- Detailed business case
- Financial analysis for updating the financial systems and processes
- Business vision – a strategic description of the business end state
- Project charter
- Project road map"

Question:

a) Please file a copy of Deloitte's 2015 recommendations to improve Finance's processes and procedures, for the record.
b) Please justify MPI's rationale to spend $500,000 on external consulting fees to re-review a 2015 consultant's report.
c) Please elaborate on MPI's internal staff skill set to update a previously prepared Finance Re-Engineering business case.
d) Please elaborate whether MPI is considering using the Infor Suite of products in its Legacy Systems Modernization process (AOL, CARS, DVL). If so, please comment on the appropriate timing to perform this investigation.

Rationale for Question:

To better understand the rationale for spending an additional $500,000 of rate payers' money on a project that was completed in 2015 and may need to be brought to current.

RESPONSE:

a) [Redacted. The Corporation is seeking confidential treatment for this response.]

b) As noted above and in *Part IV Value Management*, the purpose of the renewed Finance Re-Engineering (FRE) project is to review the consultant report and deliver on the following project objectives: detailed business case, financial analysis, business vision, project charter and project road map. The cost of the project at this stage are to ensure that the previous consultant's report is still current and relevant to the business. Please note that the $500,000 was not linked exclusively to external consulting fees, but also relate to internal resources and anticipated training requirements.

c) A third party provided the FRE Business Case to the Corporation. MPI's internal staff is highly suited to update the previously prepared business case as the internal staff have detailed business knowledge and experience which will allow them to validate recommendations and create a detailed work plan for the FRE project and create an end solution that is feasible for the business needs.

d) The Corporation cannot indicate which platform it will consider using as the Legacy Systems Modernization project will not recommend a platform until the end of fiscal year 2018/19.

CAC (MPI) 1-61

Part and Chapter:	PART IV, Information Technology, IT Appendix 1	Page No.:	1, 2
PUB Approved Issue No:	19. IT Expenses--staffing		
Topic:	Corporate Reorganization		
Sub Topic:			

Preamble to IR (If Any):

"Figure 1: Corporate Reorganizations occurred in 2017/18 and 2018/19 which resulted in 35.6 internal FTE being transferred into the division from other areas of the corporation. The increase has been identified as a separate line item in Figure 1 below."

Question:

Please elaborate on the rationale, efficiency and effectiveness of moving two internal departments to the IT division.

Rationale for Question:

To better understand the operational impact of the re-organization.

RESPONSE:

As part of a corporate review, finalized in June 2017, the Corporation identified that it could develop efficiencies through the combination of four data and analytics working groups into two departments. The move resulted in in the reduction of four positions (two management and two staff). At the time of the reorganization, these two departments (both very technical in their given subject areas) were identified as a

good fit for the Information Technology and Business Transformation division, which includes other technical departments.

Since the restructuring, the two departments have significantly improved delivery on combined operational activities, resulting in benefits such as reduced cycle time, increased volume and quality of outputs (dashboards and reports) and increased capability (cross training, automation). The two departments have also created a draft Data Strategy, leveraged in the development of the IT strategy, that will help guide data and analytics practices at MPI for the fiscal year. Moving forward, these teams will continue to enable corporate IT and Business capabilities by developing/deploying governance (eg. decision making, access and permissions) and managing common infrastructure (eg. Data Warehouses, Data dictionaries).

CAC (MPI) 1-62

Part and Chapter:	PART IV, Information Technology, IT Appendix 1	Page No.:	8, 9
PUB Approved Issue No:	19. IT Expenses--staffing		
Topic:	External IT Resources		
Sub Topic:			

Preamble to IR (If Any):

Per Figure IT App 1-12, pages 8 and 9, there is a listing of external consultants along with a brief description of their individual role.

Question:

a) Please explain the organizational reporting relationship of these consultants within MPI's management team.
b) Please explain the knowledge transfer process of these expert consultants' expertise to MPI staff experts.

Rationale for Question:

To better understand the knowledge transfer process and organizational business control structure the assumption being MPI staff have the business expertise.

RESPONSE:

a) All DXC and IBM project consultants report directly to the manager, Enterprise Project Management Office (EPMO). The EPMO is responsible for all project resourcing, which includes working with the vendors, resource planning, tracking, and reporting. These resources are assigned to project teams and have a reporting relationship to a manager of the Corporation for the role they are

serving. This manager provides day to day direction and performance management. The consultants work closely with the Corporation's teams and project teams to ensure there is effective knowledge transfer (see b).

Operational consultants report directly to the manager, Application Services who provides day-to-day direction and performance management.

b) The Corporation has successfully implemented the knowledge transfer approaches for the last four years. This has allowed project teams to disband at closure of a project and operational teams to assume full responsibility for the support of "in production" systems. Successes occur over time as internal staff take larger roles on project activities (such as updates and upgrades) previously staffed by the vendor or contractors.

There are several methods of knowledge transfer between contractors and operational units at the completion of initiatives.

1. <u>Operational resources work directly on the project</u> – Operational resources join the project and fully participate, as subject matter experts (SME's), in the analysis, design, and implementation of new solutions. At the completion of the project, they return to their operational unit with a deep understanding of the initiative and play a key role in operationalizing the initiative.

2. <u>Operational resources participate in the project</u> – Operational resources join the project and cross train with SME's (internal, contract, and vendor resources), in the analysis, design, and implementation of new solutions. At the completion of the project, they return to their operational unit and have additional capabilities for supporting or enhancing the solution in future.

3. <u>Formal knowledge transfer</u> – Projects create and execute a plan, which identifies the transition from production to operations. The specific deliverables vary by project, but may include a support model, vendor documentation, process documents, procedure documents, and training documents.

4. Operational Consultants embedded in teams – Operational consultants are used primarily as staff augmentation and are embedded in teams so that knowledge that they gained is easily shared amongst the team.

5. Consultant Conversion: As part of the External Labour Strategy, several consultants have joined the Corporation as employees. This is a not a primary strategy to retain knowledge, but has resulted in knowledge retention in several key areas.

CAC (MPI) 1-63

Part and Chapter:	PART IV, Information Technology, IT Appendix 1	Page No.:	3
PUB Approved Issue No:	19. IT Expenses--staffing		
Topic:	IBM Master Service Agreement and HP Master Service Agreement		
Sub Topic:			

Preamble to IR (If Any):

Per Figures IT App 1-3 and 1 – 4 on page 3 show the annual expenses for these two agreements.

Question:

a) Please indicate the date these agreements expire.
   IBM Data Centre Statement of Work (SOW)
   IBM Master Services Agreement (MSA)
   DxC Agreement
b) Please indicate whether MPI believes it receives value for money from these agreements.
c) Is MPI contemplating changes to these agreements going forward, if yes, please elaborate.

Rationale for Question:

To determine and understand whether MPI receives value for money spent on these agreements.

RESPONSE:

d) [Redacted. The Corporation is seeking confidential treatment for this response]

e) The Corporation believes that it is currently receiving value for money from these agreements and actively reviews them to ensure it continues to do so.

f) [Redacted. The Corporation is seeking confidential treatment for this response]

<u>CAC (MPI) 1-64</u>

Part and Chapter:	I, Overview PART IV, BMK Benchmarking, BMK Appendix 1	Page No.:	13, 1
PUB Approved Issue No:	19. Value Management		
Topic:	MPI not a technology company		
Sub Topic:	The application of Value Management caused projects to be cancelled		

Preamble to IR (If Any):

Reference Part 1, Overview, page 13:

"MPI, however, is an automobile insurance company and administrator of *The Drivers and Vehicles Act*. The "IT Strategic Plan" is to support the business carry out the corporation's mission - *Exceptional coverage and service, affordable rates and safer roads through public auto insurance.* IT expenses are incurred to meet business needs. Business needs are not determined by an IT Strategic Plan.

As previously mentioned, MPI uses a Value Management Process to ensure that IT expenditures will only be incurred when it is appropriate to do so."

Reference: Part IV(i) 03 BMK Benchmarking Appendix 01 Gartner Recommendations

"13 As noted in Part IV(i) BMK Benchmarking Attachment A, page 15 Gartner transitioned from the CIO Dashboard to the IT Score assessment tool. As part of this, Gartner conducted a review of all outstanding recommendations provided using the CIO Dashboard tool and confirmed that they remained appropriate and measurable using the IT Score tool."

Question:

a) Can MPI confirm that this IT Strategic Plan principle/mandate (i.e. MPI is not a technology company) is in alignment with Gartner's consulting recommendations to MPI?
b) In support of this principle, does MPI intend to use the Gartner IT Scoring Assessment tool as one means of tracking IT spend against related business value?
c) With this principle in mind, what is the intended purpose of future IT Strategic planning efforts?

Rationale for Question:

MPI has expressed a strategic guiding principle that IT Strategy will be driven by business priorities (and not vice-versa). This is desirable, and consistent with recommended practice that positions IT as a business enabler.

As part of the annual scorecard review, Gartner provides MPI with recommendations to improve process maturity where it concerns Information Technology. In view of the assertion that MPI is not a technology company, this question seeks to understand how MPI will use Gartner's processes and tools to support/measure IT expense tracking against business value/results. It is also intended to understand how MPI will be employing IT Strategic Planning going forward.

RESPONSE:

a) The Corporation's IT Strategy focuses on the development of its IT capabilities, which support the business capabilities required to meet the Corporation's business objectives.

   As part of its annual benchmarking assessment, Gartner provides recommendations for improvement of IT capabilities based upon its experience, research and its observance of comparable organizations.

Both documents prepared by Gartner recommend the development of the Corporation's IT capabilities. The difference is that the IT strategy recommendations directly relate to the Corporation's business plan through its business capabilities and business objectives.

The Gartner recommendations are appropriate for a company within the Insurance or Government sectors that is comparable in size to the Corporation. However, these recommendations do not specifically consider the Corporation's business plan, business capabilities, and business objectives. For this reason, the Corporation carefully reviews each Gartner recommendation to confirm its alignment / value prior to its implementation. Recommendations that have value, are in alignment with the business strategy and can be executed within the fiscal year are incorporated into the annual IT strategy.

b) The Gartner IT Score solution includes an IT Budget Assessment and an Infrastructure and Operations (I&O) scorecard, which has a financial component. The Corporation uses these assessments to benchmark IT against a comparable peer group and highlight potential opportunities for improvement. For example, Gartner identified higher spending on external labour, which resulted in the creation of the External Labour Strategy and ultimately an expense savings. The Gartner IT Score solution does not connect IT expenditure to business value. The Corporation uses the Value Management process to show the business value associated with capital investments.

c) On an annual basis, the Corporation will update its business plan including changes to business context, objectives and strategies. Following the release of its annual business plan, the Corporation will update and communicate its IT Strategy reflecting the IT capabilities, which support the business capabilities required to meet the Corporation's business objectives. In this way, the IT strategy provides direction in the current fiscal year and guidance for future fiscal years.

CAC (MPI) 1-65

Part and Chapter:	**Part IV, Value Management**	**Page No.:**	**12**
PUB Approved Issue No:	**19. Technology Modernization**		
Topic:	**Legacy Systems Modernization**		
Sub Topic:			

Preamble to IR (If Any):

"Project Description

The Legacy System Modernization project will develop a business case package, strategy and roadmap to modernize the following enterprise applications (and associated supporting applications) over a multi-year, multi-phase program:

- AOL, DLS and CARS
- SIS replacement for the SRE line of business
- Financial Re-engineering

Two neutral 3rd party consultant partners will be engaged to perform an independent Legacy Modernization assessment. A neutral 3rd party will ensure that a bias free assessment and target solution is recommended."

Questions:

a) How exactly is the multi-year Legacy Modernization initiative to be structured from a program governance perspective? Is there a high-level description of the proposed phased approach over that multi-year horizon?
b) What are the key program milestones and expected outcomes at each milestone?
c) How will responsibility, accountability and program performance for this initiative be managed?

Rationale for Question:

It is our opinion that the need for business case justification, validation of strategy and detailed roadmaps are critically important first steps. However, it is not clear that the initiative has been structured as an ongoing program with well-defined phases, continuity of purpose and measureable outcomes. The assessment project that is presented appears to be only the initial phase of a multi-year program.

The proposed Business Case and Strategy for the IT Legacy Modernization initiative is an initiative that is already underway in 2018. The 'first phase' focuses on the selection of a qualified independent 3rd party to review and assess MPI's legacy systems risk and confirm what action MPI should take with respect legacy system modernization. MPI has indicated that a detailed business case, risk assessment, plan, roadmap, and financial forecast that defines the multi-year program will be prepared for review and approval by the MPI Board of Directors prior to any Legacy Modernization implementation actions being taken.

It must be noted that projects aimed at the modernization of legacy IT systems typically involve significant levels complexity, as well as a requirement for precision in terms of strategy and planning. Although it is prudent to outsource the initial assessment phase of this initiative, MPI would be advised to ensure that accountability for overall program governance is managed internally. As such, a strategic plan for the multi-year program should be addressed.

RESPONSE:

To all questions posed above:

The Corporation has not defined a detailed governance structure at this point. The 2018/19 Technology Modernization Assessment Project will be reviewing the recommendation from both Assessment Vendors and developing a detailed program plan for the Corporation's Planning and Technology Committee by Feb 28th, 2019. This detailed program plan will include the following components:

- Business Vision
- Program Charter – includes a description of the program governance
- Conceptual Architecture
- Program implementation plan and high-level schedule
- Preliminary Financial analysis
- Future state Roadmap

The information requested is not currently available. Both Legacy assessment engagements must be completed before the Corporation can finalize its Legacy Modernization program. The Corporation will develop a governance structure before it issues any request for proposals.

CAC (MPI) 1-66

Part and Chapter:	Part IV, Benchmarking Appendix 1	Page No.:	7 of 22
PUB Approved Issue No:	19. IT - GARTNER'S RECOMMENDATIONS – STATUS UPDATE		
Topic:	IT Process Maturity		
Sub Topic:	Item 4.09		

Preamble to IR (If Any):

"4.09 Communicate technical debt to IT and business leadership and develop a long-term program to remove it from the MPI environment (e.g. through increased adherence to technology standards and application re-use) and track the success of those efforts

See recommendation 5.01

In Progress (Q4 - 2017/18)

IT leaders presented an update on Application Portfolio Management to Executive in Q1 – 2018/19 which aligns to this recommendation. Additionally, MPI continues to invest in the Technology Risk Management program which is specifically focused on addressing technical debt. Going forward, this recommendation has been replaced by recommendation 5.01."

Question:

a) Can MPI clarify what is meant by Gartner when the term 'technical debt' is used. Has this term been defined?
b) Can MPI provide a copy of the reference report '…an update to Application Portfolio Management'?

Rationale for Question:

To understand the details of IT investment performance reporting, and to determine how well informed MPI business leadership is regarding any significant technology deficits/challenges and priorities

RESPONSE:

a) As shared in 2018 GRA – CAC(MPI) 1-60

This response includes segments of / references to a proprietary Gartner Article "A Primer on Technical Debt", published October 5, 2016.

Gartner defines technical Debt as

"the deviation of a system from any of its non-functional requirements."

In the article, Gartner further explains

"It would be completely impossible to eliminate technical debt in the portfolio of applications that support a modern business. On the other hand, the gradual accumulation of technical debt in such a portfolio can lead to a level of suboptimal performance, such that there will be significant and measurable negative impact on business performance."

MPI is concerned about the impact of technical debt on business performance and has taken the actions to better understand and manage technical debt.

b) [Redacted. The Corporation is seeking confidential treatment for this response]

CAC (MPI) 1-67

Part and Chapter:	Part IV, Value Management, Appendices 1a to 1d	Page No.:	Page 2 of appendices 1a, 1b, 1c, 1d
PUB Approved Issue No:	19. IT expenses and projects		
Topic:	Part IV VM Value Management Appendices		
Sub Topic:	Appendices (1a) through (1d)		

Preamble to IR (If Any):

"Project Specific Assumptions (please list)

1 The ability to secure external resources with the necessary skills for the outlined rate."

Question:

a) Please advise how MPI intends to manage the risk and challenges associated with procuring and maintaining the required skills at a manageable cost for the duration of time required?

b) What strategies with MPI use to ensure knowledge transfer to full time staff?

Rationale for Question:

For each of the Technology Risk Management Program's initiatives, this project specific assumption seems to be repeated, highlighting a potential pervasive risk of not being able to source and retain the required IT talent.

RESPONSE:

a) The Corporation conducts resource forecasting for all of its initiatives at a project and portfolio level and identifies the key skills needed for upcoming projects.

Where possible, the Corporation fills project roles with internal resources. The Corporation works closely with DXC Technology to source resources for specific skill sets that are not available internally and for additional resources above internal capacity. The Corporation assesses the risks related to resources and works with DXC Technology to manage this risk. The portfolio view allows the Corporation to prioritize resource allocation to specific needs that it deems high priority.

b) The Corporation has successfully implemented the knowledge transfer approaches for the last four years. This has allowed project teams to disband, at closure of a project and operational teams to assume full responsibility for the support of "in production" systems. Successes occur over time as internal staff take larger roles on project activities (such as updates and upgrades) previously staffed by the vendor or contractors.

There are several methods of knowledge transfer between contractors and operational units at the completion of initiatives:

1. Operational resources work directly on the project – Operational resources join the project and fully participate, as subject matter experts (SME's), in the analysis, design, and implementation of new solutions. At the completion of the project, they return to their operational unit with a deep understanding of the initiative and play a key role in operationalizing the initiative.

2. Operational resources participate in the project – Operational resources join the project and cross train with SME's (internal, contract, and vendor resources), in the analysis, design, and implementation of new solutions. At the completion of the project, they return to their operational unit and have additional capabilities for supporting or enhancing the solution in future.

3. Formal knowledge transfer – Projects create and execute a plan, which identifies the transition from production to operations. The specific deliverables vary by project, but may include a support model, vendor documentation, process documents, procedure documents, and training documents.

4. <u>Consultant Conversion</u>: As part of the External Labour Strategy, several consultants have joined the Corporation as employees. This is a not a primary strategy to retain knowledge, but has resulted in knowledge retention in several key areas.

CAC (MPI) 1-68

Part and Chapter:	Part IV, Value Management, Appendices 1a to 1d	Page No.:	1
PUB Approved Issue No:	19. IT projects and expenses		
Topic:	Part IV VM Value Management Appendices		
Sub Topic:	Appendices (1a) through (1d)		

Preamble to IR (If Any):

EXAMPLE APPENDIX PAGE:

June 15, 2018 2019 GENERAL RATE APPLICATION
VM Appendix 1c

PROJECT NAME: ITBT-2018-102 Technology Risk Management Program (2018) Infrastructure Risk Management

Line No.		2018/19 Year 1	2019/20 Year 2	2020/21 Year 3	2021/22 Year 4	2022/23 Year 5	Total
1	Project Costs	(1,625,000)	0	0	0	0	(1,625,000)
2	Project Benefit	175,000	470,000	514,500	560,113	605,740	2,325,353
3	Net Project Impact	(1,450,000)	470,000	514,500	560,113	605,740	700,353
4	Cumulative Net Project Impact	(1,450,000)	(980,000)	(465,500)	94,613	700,353	
5	**Net Present Value**	356,312	based on discount rate of	6.50%			
6	**IRR**	17.0%					
7	**Payback Period in years**				3.83		
8	**Return on Investment**	-89%	-60%	-29%	6%	43%	
9	**Discounted Payback Period in years**					4.19	

Manitoba Public Insurance Page 1

Draft for Screening

Question:

Please explain, in qualitative terms, how the MPI Value Management program intends to monitor and report on the performance of the various Technology Risk Management initiatives over the coming five year period (in terms of project benefit and project impact). How does IT Management participate in the process of validating performance against project forecasting?

Rationale for Question:

To understand how the VM process intends to monitor project performance against forecast, and to understand the role that IT Management will play in this aspect of value management.

RESPONSE:

Each Technology Risk Management project has specific objectives and deliverables outlined at the start of the project. The Change Request (CR) process manages any variance from these objectives and deliverables. Value Management (VM) will review CRs affecting the business case (achievement of objectives and benefits, cost to implement, changes to project scope and schedule, identified risks) and track revisions to the business case. IT Leadership must approve CRs as well as the revised business case objectives and deliverables. In addition, IT Leadership, Finance and Value Management perform monthly financial reviews of these initiatives to ensure proper forecasting and to assess variances to actual costs.

At the completion of a project, the Corporation will create project documents that link project results to the updated project objectives. VM will review these documents to verify that the results are in line with the project's objectives (adjusted for any approved CRs). Completed projects then transition from the project team to an operational team "to production" for the ongoing delivery of services. VM interacts with operational leaders to understand the value of "in production" solutions and ensure any ongoing benefits are met. The process involves IT Management throughout its implementation. IT Management may identify needs or opportunities

that become objectives for a project. IT Management and their teams often contribute directly to projects (in the work effort, governance activities, and as subject matter experts) and are often involved in the transition from project to operations. VM will engage IT Management for updates / outcomes on "in production" solutions as required, to verify outcomes. VM will report on the results of post-implementation reviews.

CAC (MPI) 1-69

Part and Chapter:	Part IV, BMK Attachment A	Page No.:	4, 6, 7
PUB Approved Issue No:	19. IT Expenses		
Topic:	IT Benchmark and Maturity Assessment – Executive Report		
Sub Topic:	Key takeaways from Gartner analysis		

Preamble to IR (If Any):

On page 4 of BMK Attachment A, it is stated:

> *"MPI is a hybrid organization – it is an Insurer, but its public mission is to serve Manitobans, not maximize revenues."*

This Gartner statement is further emphasized by the comment:

> *"If MPI is successful in its Mission -returning more benefits to Manitobans while driving down prices – revenues will be lower than those of similar organizations who focus on profit maximization"*

Key takeaways from the analysis

DRAFT FOR SCREENING

Key Findings

- Personnel spending and staffing levels remain higher than peers, with a slight increase in IT to Company FTE ratio (16.7% to 17%)
- Similar to previous years, the focus for MPI IT investment is on reliability, availability, and lowering risk. These investments, along with initiatives to provide better access and a better user experience, increase the IT footprint, resulting in higher steady-state IT expenses.
- MPI improved its overall Maturity rating from 3.42 in 2015/16 to 3.52 in 2016/17.
- Similar to previous years, MPI spends 62% of the IT budget on Personnel vs. 45% for the peers. 32% of MPI's IT staff is made up of contractors vs. 24% for the peers. Higher staffing levels relative to peers is particularly evident in Infrastructure and Operations.
- Business Process Management and Enterprise Architecture maturity remains generally low and appears to be an opportunity for improvement.

Implications and Recommendations

- With the accomplishment of modernization and technical updates, MPI should maintain IT assets and continue to invest in technology refreshes to avoid significant capital outlays in future years.
- MPI's IT organization should focus on establishing linkages through enterprise architecture and focus future investments on delivering transformative value to the business operations.
- MPI should develop stronger relationships with business stakeholders.
- Maturity improvements should be focused on governance and metrics to track value delivered to the business and achievement of business outcomes.
- MPI should continue the efforts currently underway to review the size of its retained staff and the number of contractors as it increases its use of third-party support for infrastructure services.
- Internal skills development and training should be a priority.
- MPI should replace the CIO Scorecard with Gartner's IT Score methodology which compares MPI with the insurance industry in similar areas and new ones that expand the scope of the analysis.

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MPI's IT spending has become more stable in recent years and with an improved ratio vs. business operating expense.

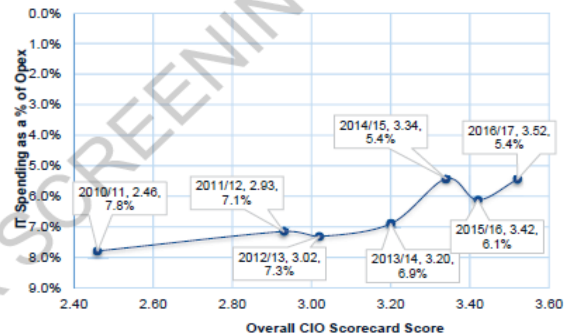
Observations:

- IT spending as a percentage of business operating expense is a better performance indicator for MPI. MPI is supporting a growing business workload with modest increases in IT spending (OPEX increased by 18.8% but IT spending only increased 5.8%.)
- IT Maturity continues to improve and should help MPI contain costs providing leverage in new initiatives.
- Six of the peer organizations from 2015/16 updated their data and this updated data is used in the 2016/17 peer analysis. IT Spending as a % of OPEX has been trending lower for the peer group.

Implications:

- OPEX spending is higher due to higher claims payouts*. Gartner has observed that mature IT operations contribute towards business efficiencies (lower overall operating expense) in the enterprise. MPI IT should unlock efficiency to the business, which will in turn contribute towards a reduction in OPEX spending (not withstanding other non-IT related expenses.)
- Continuing to work on process maturity will assist in improved efficiency in the IT operations and the delivery of additional value to the organization's business operations.

* **Source:** Manitoba Public Insurance 2016 Annual Report



	Maturity Score	IT as a % of Opex
2010/11	2.46	7.8%
2011/12	2.93	7.1%
2012/13	3.02	7.3%
2013/14	3.20	6.9%
2014/15	3.34	5.4%
2015/16	3.42	6.1%
2016/17	3.52	5.4%
2016/17 Peer	2.84	4.8%

DRAFT FOR SCREENING

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Question:

a) Does MPI have a 5-year achievable target for what the organization would consider to be a reasonable and acceptable spend for IT spend?

b) How would this target be measured, described and reported going forward?

Rationale for Question:

MPI is faced with the ongoing challenge of addressing and managing increasing IT costs, even though MPI's IT spending as a % of Operating Expense has decreased by year over year. This challenge is seen clearly in anticipated complex IT initiatives such as the Legacy IT Modernization program. This question seeks to understand what MPI will consider to be an acceptable target rate of spend on IT.

RESPONSE:

a) The Corporation does not have a separate 5-year target for IT expenditures. MPI provides annual reporting on all IT-related expenditures in its general rate application, including reporting on both historical and future budget expenditures. This reflects both ongoing operations and new capital initiatives, incorporating any known and material future considerations. The Corporation also provides the Gartner Scorecard, related recommendations for improvement and a status on each of those recommendations.

   These two reporting mechanisms ensure that the Corporation accurately presents past, present, and future IT expenditures and that these expenditures align with a comparable industry peer group. They also provide increased consistency and predictability over a single percentage or fixed financial target, which would not reflect industry changes or align to the changing business needs and challenges facing the Corporation.

b) Please see response to a) above.

CAC (MPI) 1-70

Part and Chapter:	**Part IV, Value Management, VM Appendix 4**	**Page No.:**	**2, 4**
PUB Approved Issue No:	**19. IT projects and expenses**		
Topic:	**BI3/Fineos Upgrade 2020**		
Sub Topic:			

Preamble to IR (If Any):

"Based on the preliminary scope determination and approach, MPI has identified 11 pieces of custom code that can be retired and migrated to out-of-the-box functionality. This will result in a reduction in the annual MPI customization support/licensing fees related to these identified customizations." (Page 2)

"The last upgrade of the Fineos platform was a large upgrade and the first upgrade completed since the initial project implementation. The project experienced many challenges from a technical, complexity and project schedule and costs over-run perspectives. MPI is still immature on this platform from an upgrade path perspective, thus, there are inherent risks regarding project complexity, size, and associated project schedule and costs. The project approach to reduce the MPI customizations will reduce overall complexity of the upgrade. Incrementally, this is not a 'major' platform and version release like the previous upgrade in 2016. Therefore, based on feedback and advice from Fineos experts, the upgrade will not be as complex." (Page 4)

Question:

Where an IT organization makes the decision to decommission custom code, it means that the related business processes and functions have been changed or rationalized. Please explain what business process changes were made, and identify any costs incurred to make the vanilla system work.

Rationale for Question:

To understand the extent to which the business functions and business requirements needed to be adjusted by the line of business.

RESPONSE:

The Corporation is still in the planning stages of reducing customization and has targeted 11 pieces of custom code for reduction. These 11 pieces were targeted because the base product has evolved to a point where it more closely aligns with the Corporation's business processes and requires minimal business process changes to use the 'out of the box' functionality. It is anticipated that end users will not be required to significantly modify their daily work processes and, in many cases, the changes are back-end changes which will not impact work processes in any way. Additionally the business is engaged in this IT work to ensure that business deliverables and work processes are not negatively impacted. Overall, these changes will improve the end user experience when the upgrade is completed. The internal support team, with some support from the vendor, is doing the work. The Corporation will be tracking the costs and benefits of each change as it executes these changes.

CAC (MPI) 1-71

Part and Chapter:	Part V, Proformas	Page No.:	Pages 4 and 15
PUB Approved Issue No:	20. Capital Maintenance Provision		
Topic:	Need for capital maintenance provision		
Subtopic:	How DPAC is related to this need		

Preamble to IR (If Any):

The main item creating a difference in Net Income, other than premiums, on the statement of operations with 0% rate change versus 2.2% is the DPAC/Premium Deficiency Adjustment.

Question:

a) Please give the detailed calculation of the DPAC/Premium Deficiency Adjustment on PF.1 and PF.8.
b) Is the difference between these two numbers essentially the Corporation's justification for the Capital Maintenance Provision? If not, please explain what is the justification referencing PF.1 and PF.8 for understanding.

Rationale for Question:

To fully understanding the differences between PF.1 (2.2% rate change) and PF.8 (0% rate change) and how the Capital Maintenance Provision impacts the statement of operations.

RESPONSE:

a) Refer to *Appendix 1* and *Appendix 2,* which provide detailed calculations of the DPAC/Premium Deficiency Adjustment for PF.1 and PF.8 respectively.

b) The Corporation's justification for seeking the Capital Maintenance Provision (CMP) is to maintain capital adequacy. As stated in *Part I, Overview, page 18*, the Corporation believes that "*having adequate capital reserves is a pillar of prudent fiscal management.*" Further, the CMP "*is an extremely important development towards ensuring long term rate stability for customers and satisfactory financial status for the shareholder.*"

   The Corporation's position is grounded in PUB Order 130/17 which states "*the Board appreciates the need to protect Basic's capital position against depletion due to the natural growth in Basic's risk profile….*" and "the *Board believes that a properly constituted Capital Maintenance Provision… can legitimately be considered as a necessary Basic expense cash flow for rate-setting purposes while remaining consistent with the breakeven objective.*"

   Per *Part V, Ratemaking, page 31*, the net CMP was determined such that "*the Minimum Capital Test (MCT) ratio… at fiscal year-end 2019/20 is unchanged from fiscal year-end 2018/19.*" This required "*an additional 2.1% (overall) rate increase.*"

   The difference between PF.1 and PF.8 simply reflects the effect on the Statement of Operations as a result of applying a 2.2% required overall rate increase (vs. 0.0% rate change), of which 2.1% is for the Net CMP. Neither PF.1 nor PF.8 provides the justification for the CMP.

Appendix 01
Base Scenario
Deferred Policy Acquisition Expenses and Premium Deficiency

Line No.			Accident Year										Selected	Selected
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Undisc	Disc
1	**A. Claims (Including External Adjustment Expense) Data**													
4	1.	Ultimate Loss Ratio - Total All Coverage	83.09%	72.79%	81.77%	81.34%	74.59%	73.25%	71.97%	72.12%	73.03%	74.02%		
5	2.	Trend/Rate Adjustment for Fiscal Year												
6		2017	0.9142	0.9259	0.9555	0.9697	0.9888							
7		2018		0.9151	0.9384	0.9464	0.9589	0.9937						
8		2019			0.9169	0.9262	0.9399	0.9755	1.0016					
9		2020				0.9271	0.9411	0.9772	1.0037	1.0115				
10		2021					0.9508	0.9856	1.0108	1.0169	1.0132			
11		2022						0.9917	1.0165	1.0222	1.0179	1.0134		
12	3.	Adjusted Loss Ratio for Fiscal Year [(1) x (2)]												
13		2017	75.96%	67.39%	78.12%	78.88%	73.76%						75.95%	80.85%
14		2018		66.61%	76.73%	76.98%	71.52%	72.79%					73.68%	78.38%
15		2019			74.97%	75.33%	70.10%	71.46%	72.08%				72.84%	77.54%
16		2020				75.41%	70.20%	71.58%	72.24%	72.95%			72.26%	77.00%
17		2021					70.92%	72.20%	72.74%	73.34%	73.99%		72.76%	77.61%
18		2022						72.65%	73.15%	73.72%	74.34%	75.01%	73.74%	78.72%

Line No.			Fiscal Year									
			2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
19	**B. Actual Data Other Than Losses**											
22	4.	Net Earned Premium	764,671	803,881	861,065	907,145	960,142	1,039,407	1,113,119	1,169,526	1,216,815	1,265,684
23	5.	Operating Expenses as % of Earned Premium	11.06%	11.14%	10.26%	9.94%	8.99%	8.98%	8.19%	8.05%	8.06%	8.01%
24	6.	Maintenance Expense Rate [(5) x 1/3]	3.69%	3.71%	3.42%	3.31%	3.00%	2.99%	2.73%	2.68%	2.69%	2.67%
25		Selected					3.16%	2.99%	2.86%	2.71%	2.69%	2.68%
26	7.	ILAE Ratio to Losses - Selected					18.40%	18.40%	18.40%	18.40%	18.40%	18.40%

Line No.			2017	2018	2019	2020	2021	2022
27	**C. Equity in Unearned Premium**							
28	8.	Net Unearned Premium	468,613	506,193	537,639	559,472	581,724	604,979
29	9.	Additional Expected Cost of Non-Proportional Reinsurance	5,598	5,710	5,824	5,941	6,059	6,059
30	10.	Expected Claims (Including Ext Adj Expenses) [((8) - (9)) x (3)]	383,468	392,259	412,378	426,236	446,776	471,494
31	11.	Reinsurance PFAD	10	-	-	-	-	-
32	12.	Maintenance Expense [a]	13,837	14,989	15,216	14,978	15,458	16,047
33	13.	Internal Loss Adjustment Expense [Sheet 1, Row 11]	70,595	72,176	75,878	78,427	82,207	86,755
34	14.	Expected Claims (Including Ext Adj Expenses) - PIPP Enhancement	3,950	3,950	3,950	3,950	3,950	3,950
35	15.	Equity in Unearned Premium [(8) - Sum((9) to (14))]	(8,845)	17,110	24,394	29,940	27,275	20,674
36	16.	Carried Deferred Policy Acquisition Expenses	32,055	29,489	31,393	32,696	34,029	35,426
37	17.	Write Down Deferred Policy Acquisition Expenses [b]	32,055	12,379	6,999	2,756	6,755	14,752
38		Change	2,363	(19,676)	(5,380)	(4,243)	3,999	7,997
39	18.	Premium Deficiency [c]	8,845	-	-	-	-	-
40		Change	2,001	(8,845)	-	-	-	-

41 **Notes:**

42 [a] ((8) - (9)) x (6) x Discount to Valuation Date Without Margin

43 [b] Min((16) - (15), (16)) if greater than 0, otherwise 0

44 [c] Negative of (15) if greater than 0, otherwise 0

Appendix B
Base Scenario with 0.00% Rate Change
Deferred Policy Acquisition Expenses and Premium Deficiency

A. Claims (Including External Adjustment Expense) Data

	Accident Year										Selected	Selected
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Undisc	Disc
1. Ultimate Loss Ratio - Total All Coverage	83.09%	72.79%	81.77%	81.34%	74.59%	73.25%	72.80%	73.65%	74.58%	75.59%		
2. Trend/Rate Adjustment for Fiscal Year												
2017	0.9142	0.9259	0.9555	0.9697	0.9888							
2018		0.9151	0.9384	0.9464	0.9589	0.9937						
2019			0.9371	0.9465	0.9605	0.9969	1.0119					
2020				0.9467	0.9611	0.9979	1.0133	1.0115				
2021					0.9710	1.0065	1.0203	1.0169	1.0132			
2022						1.0127	1.0262	1.0222	1.0180	1.0134		
3. Adjusted Loss Ratio for Fiscal Year [(1) x (2)]												
2017	75.96%	67.39%	78.12%	78.88%	73.76%						75.95%	80.85%
2018		66.61%	76.73%	76.98%	71.52%	72.79%					73.68%	78.38%
2019			76.62%	76.99%	71.64%	73.03%	73.67%				74.44%	79.25%
2020				77.01%	71.69%	73.10%	73.77%	74.49%			73.79%	78.63%
2021					72.42%	73.73%	74.28%	74.89%	75.56%		74.30%	79.25%
2022						74.19%	74.71%	75.28%	75.92%	76.60%	75.30%	80.39%

B. Actual Data Other Than Losses

	Fiscal Year									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4. Net Earned Premium	764,671	803,881	861,065	907,145	960,142	1,039,407	1,100,359	1,145,257	1,191,557	1,239,399
5. Operating Expenses as % of Earned Premium	11.06%	11.14%	10.26%	9.94%	8.99%	8.98%	8.28%	8.22%	8.24%	8.19%
6. Maintenance Expense Rate [(5) x 1/3]	3.69%	3.71%	3.42%	3.31%	3.00%	2.99%	2.76%	2.74%	2.75%	2.73%
Selected					3.16%	2.99%	2.88%	2.75%	2.74%	2.74%
7. ILAE Ratio to Losses - Selected					18.40%	18.40%	18.40%	18.40%	18.40%	18.40%

C. Equity in Unearned Premium

	2017	2018	2019	2020	2021	2022
8. Net Unearned Premium	468,613	506,193	526,656	548,037	569,826	592,596
9. Additional Expected Cost of Non-Proportional Reinsurance	5,598	5,710	5,824	5,941	6,059	6,059
10 Expected Claims (Including Ext Adj Expenses) [((8) - (9)) x (3)]	383,468	392,259	412,738	426,275	446,813	471,535
11 Reinsurance PFAD	10	-	-	-	-	-
12 Maintenance Expense [a]	13,837	14,989	14,984	14,911	15,464	16,054
13 Internal Loss Adjustment Expense [Sheet 1, Row 11]	70,595	72,176	75,944	78,435	82,214	86,762
14 Expected Claims (Including Ext Adj Expenses) - PIPP Enhancement	3,950	3,950	3,950	3,950	3,950	3,950
15 Equity in Unearned Premium [(8) - Sum((9) to (14))]	(8,845)	17,110	13,216	18,526	15,327	8,235
16 Carried Deferred Policy Acquisition Expenses	32,055	29,489	30,706	31,980	33,285	34,651
17 Write Down Deferred Policy Acquisition Expenses [b]	32,055	12,379	17,489	13,455	17,958	26,416
Change	2,363	(19,676)	5,110	(4,035)	4,504	8,458
18 Premium Deficiency [c]	8,845	-	-	-	-	-
Change	2,001	(8,845)	-	-	-	-

Notes:

[a] ((8) - (9)) x (6) x Discount to Valuation Date Without Margin

[b] Min((16) - (15), (16)) if greater than 0, otherwise 0

[c] Negative of (15) if greater than 0, otherwise 0

CAC (MPI) 1-72

Part and Chapter:	Part I, OV Overview, OV.4.3	Page No.:	18
PUB Approved Issue No:	20. Capital Maintenance Provision		
Topic:	Consensus on the requirement for a CMP		
Sub Topic:			

Preamble to IR (If Any):

Page 18 of the Overview section states "A PUB ordered technical conference was held, and from MPI's perspective, there was consensus on the requirement for a Capital Maintenance Provision to be incorporated into the rate making process."

Question:

a) Please explain what MPI means by a consensus.
b) Please explain how this consensus was achieved and recorded
c) Please explain whether a specific motion was tabled and voted on during the technical conference
d) Please point to the page numbers of the transcript of the technical conference on the Capital Maintenance provision that indicates a consensus on the need and methodology.

Rationale for Question:

The PUB ordered technical conference with stakeholders was meant to achieve a consensus on the establishment of a Capital Maintenance Provision. It is important to understand why the Corporation feels that consensus on the need and methodology behind a capital maintenance provisions was reached.

RESPONSE:

To all questions posed above:

The PUB states in Order 130/17, at page 5:

> *"The Board nonetheless recognizes MPI's need to protect against the depletion of Basic's capital position, and finds that a Capital Maintenance Provision could be considered a legitimate necessary Basic expense for rate setting purposes. The Board finds that it would be premature to base its decision on the inclusion of a Capital Maintenance Provision at this time, as it was not a significant area of focus in this Application, but directs that a technical Conference be held on the issue, and any findings therefrom be incorporated into the 2019 General Rate Application (GRA)." [Emphasis Added]*

At page 8 of Order 130/17, the PUB also states:

> *"Additionally, the Board has ordered that the Corporation participate in a Technical Conference regarding the possible inclusion of a Capital Maintenance Provision for future rate applications. The Board notes that the use of a Capital Maintenance Provision would serve to protect against the depletion of Basic Total Equity." [Emphasis Added]*

At page 28 of Order 130/17, the PUB states:

> *"The Board believes a properly constituted Capital Maintenance Provision, loosely based on that developed by Saskatchewan Auto Fund, can legitimately be considered as a necessary Basic expense cash flow for rate-setting purposes while remaining consistent with the break-even objective.*
>
> *Since the estimation of a Capital Maintenance Provision was not a focus of these proceedings and has not been fully considered by the Corporation, the Board believes it is premature to base its decision on inclusion of a Capital Maintenance Provision. Accordingly, and for this Application only, the Board accepts the Corporation's approach to estimating the Basic overall rate indication, excluding consideration of the expected return on investment assets supporting Basic Total Equity, which the Board considers to conceptually overlap with the Capital*

Maintenance Provision, as evidenced by the Corporation's early estimates of the longer term Capital Maintenance Provisions." [Emphasis Added]

In sum, PUB Order 130/17 sets out the belief of the PUB that the Corporation should consider inclusion of a Capital Maintenance Provision for the 2019 GRA. However, the PUB also recognized that the 2018 GRA did not sufficiently examine the matter and therefore directed the holding of a Technical Conference for further consideration.

After hearing from PUB advisers and representatives from SGI and the CAC, the Corporation agreed that it was appropriate to include a Capital Maintenance Provision in the 2019 GRA. The PUB explicitly suggested the use of a Capital Maintenance Provision in Order 130/17 and the Corporation accepts the suggestion. Therefore, the Corporation believes a consensus, that is, a judgment arrived at by most of those concerned, exists for the inclusion of a Capital Maintenance Provision in the 2019 GRA.

The Corporation also notes that the excerpt from the Overview (above) does not speak to methodology.

CAC (MPI) 1-73

Part and Chapter:	Part I, OV Overview, OV.4.3	Page No.:	18
PUB Approved Issue No:	20. Capital Maintenance Provision		
Topic:	On-going CMP requirement		
Sub Topic:			

Preamble to IR (If Any):

". . . it must be noted that MPI forecasts, if there are no expected variances in the coming 5 years, that there will not be an on-going requirement for Capital Maintenance Provision increases, capital build requirements or transfers from the Extension line of business to maintain adequate capital reserves."

Question:

a) Please explain why a five-year plan for annual CMP provisions of approximately 0.42% per year would not satisfy the capital maintenance requirement "if there are no expected variances in the coming 5 years".
b) Please explain why it is in the interest of motorists for to satisfy the capital maintenance requirement in one year rather than over a five-year plan.

Rationale for Question:

A CMP provision of 2.1% in one year is more rate destabilizing than an equivalent five-year plan for annual CMP provisions.

RESPONSE:

The rationale to this Information Request assumes facts not in evidence and is largely anecdotal. MPIC will confine its answer to the germane portion of the question, in a fair and accurate manner, while making note of the prejudicial effect of the premise.

a) The logic implied in the question is not correct, and there appears to be a fundamental misunderstanding of the purpose of the Capital Maintenance Provision (CMP). CMP is to maintain Basic's capital position from one year to the next. Spreading the collection of one year's CMP requirement over five years is contrary to the purpose of the CMP, as Basic's capitalization would decline over that period. Secondly, if this approach were to be taken the CMP increases are not eliminated in future fiscal years in the Corporation's forecast. The forecast assumes the approval of the 2019/20 Net CMP and that it *remains* built into the rates over the forecast period. In reality, the CMP will be recalculated in every application (i.e. if less capital is required to maintain the MCT ratio, the 2.1% CMP would be lowered in the 2020 GRA).

b) The Corporation believes that an annual approach to capital maintenance is fair and appropriate for current year policyholders, as they would contribute to the incremental cost of maintaining capital (RSR) in each GRA. Without the CMP, Basic's capitalization will naturally deteriorate over time until the RSR falls below the minimum capital requirement. Policyholders in that year would then be required to pay for the lack of capital maintenance over the previous fiscal years. As a result, a 5-year CMP is not fair or in the best interests of policyholders. The CMP does not attempt to build or release capital; it simply tries to maintain capital year to year. It is most appropriate for policyholders to fully contribute to this maintenance cost annually, as part of their Basic rates. The Corporation maintains that a stable, properly funded RSR is in the best interests of all motorists. Applying over a 5-year horizon may be more appropriate in the context of a build / release provision where a capital level is being incrementally moved towards a target, as compared to CMP which simply seeks to hold the MCT level constant year over year.

CAC (MPI) 1-74

Part and Chapter:	Part V, Ratemaking	Page No.:	Page 31
PUB Approved Issue No:	20. Capital Maintenance Provision		
Topic:	Capital Maintenance Methodology		
Subtopic:			

Preamble to IR (If Any):

On page 31 of Part V, Ratemaking it indicates that a net capital maintenance provision was calculated and added to the rate indication so that the projected MCT ratio at year end 2019/20 would equal the MCT ratio at year end 2018/19. The addition of the capital maintenance provision to the required rate causes an increase of 3.3%.

Question:

a) Please explain the Corporation’s use of an MCT ratio equal to the projected ratio at year end 2018/19 as the “ideal” MCT ratio to rate to?
b) Please explain the Corporation's use of an MCT ratio in ratemaking. That is, how is this methodology justified?
c) Does the Corporation agree that the use of a capital maintenance provision in a rate indication is not actuarial best practice? If not, please fully explain how it is actuarial best practice.
d) Would the use of the capital maintenance provision, as calculated in the current rate application, result in the need for a rebate in the future? If not please explain how that could be.

Rationale for Question:

To understand the Corporations rationale for the use of the 2018/19 projected MCT as the basis for this rate application's rate requirement and how the Corporation justifies using untested assumptions.

RESPONSE:

a) The Corporation does not believe that the use of an MCT ratio equal to the projected ratio is the "ideal" MCT ratio to rate to. In this case, it is simply the MCT ratio at which capitalization is maintained for the 2019/20 fiscal year, the year the rates applied for are written. It is inappropriate to target a capital maintenance provision (CMP) beyond the fiscal year 2019/20, as any rate changes approved in the 2020 GRA could affect the 2020/21 fiscal year.

b) The Corporation uses the MCT ratio each year to determine whether capitalization is maintained. The MCT ratio is a standard industry measure of capitalization that can be forecasted into future years.

c) Unlike most other insurers, MPI does not have a natural means to grow and/or maintain capital. While private insurers factor capitalization levels into product pricing, the Corporation's Basic product does not generate profit. As a result, the Corporation requires a unique approach maintain capital. Saskatchewan Government Insurance (SGI) faces a similar situation and developed a CMP in response. Although the approach taken by SGI is not the 'gold standard,' it appears to meet the unique needs of their program.

d) The use of a CMP, as calculated in the current rate application, does not result in the need for a rebate in the future. Rebates would be determined based on the upper RSR target and/or the application of a Capital Release provision (presently not in place). Regardless of the capitalization level of Basic, the Corporation still calculates the appropriate CMP for the policyholders in a particular year. The Corporation then determines the need for a build (surcharge) or release (rebate), based on the current level of the MCT, relative to the lower and upper RSR targets.

If the MCT ratio were above the upper RSR target range, the Corporation would likely request a rebate.

The Corporation is currently developing a Capital Management Plan to, among other things, address this question. However, for the current GRA, the 2018/19 MCT ratio is within the calculated lower and upper RSR target. As a result, the Corporation did not request either a rebate or surcharge.

CAC (MPI) 1-75

Part and Chapter:	**Part V, RM Ratemaking and Pro Formas**	**Page No.:**	**31**
PUB Approved Issue No:	**20. Capital Maintenance Provision (CMP)**		
Topic:	**Accounting for RSR and CMP**		
Sub Topic:			

Preamble to IR (If Any):

Part V, Ratemaking, page 31 it states:

"The Net CMP of 2.1% is comprised of a 1.2% decrease in the required rate change from the investment income earned on the Rate Stabilization Reserve (RSR), offset by a 3.3% increase in the required rate change to maintain capital adequacy in fiscal year 2019/20."

"We then applied the ratio of 1.1% as a cost offset to the required rates. This has the effect of decreasing the required rate change by 1.2% from 0.1% (per *Ratemaking RM.4.2.6*) to -1.1%."

"After applying the required rate change of -1.1%, we compared the MCT ratio at fiscal year-end 2019/20 to fiscal year-end 2018/19. To ensure that the MCT ratio at fiscal year-end 2019/20 remains unchanged from fiscal year-end 2018/19, we had to revise the required rate change to 2.2%, which reflects an increase of 3.3% (from -1.1%). Including the additional 2.1% required rate increase from the Net CMP results in a final required rate change of 2.2%."

Question:

a) For greater clarity please confirm or explain the following:
   i. Applying the investment income earned by the RSR amount to basic insurance rate making would indicate a rate reduction for 2019/20 of 1.1%.
   ii. To maintain the RSR amount at the February 28, 2018 MCT ratio would require an RSR rebuilding rate increase of 3.3% if the proposed CMP plan is not accepted.

b) Please file the studies MPI reviewed or approaches examined in support of the proposed CMP methodology, if any.

c) Currently, per PF.3 page 6, MPI does not account for the proposed CMP provision or the interest income earned by the RSR separately. Please elaborate how MPI proposes to account for the proposed CMP, interest income earned by the RSR and potentially an RSR rebuilding fee.

Rationale for Question:

To clarify the various rate components and the accounting of the CMP and RSR components to ensure policyholder transparency of moneys held in trust, on their behalf, by MPI.

RESPONSE:

a)

i. Confirmed.

ii. If the proposed CMP plan is not accepted, per *Part V, Ratemaking, page 40*, the required overall rate increase based on breakeven rates would be 0.1%. The Net CMP, equivalent to an additional 2.1% required overall rate increase, would be removed. The Corporation reiterates that the Net CMP is required to maintain capital adequacy in fiscal year 2019/20 by ensuring that the MCT ratio at fiscal year-end 2019/20 is unchanged from fiscal year-end 2018/19. The Corporation does not seek the Net CMP to rebuild the RSR.

b) Please see *CAC (MPI) 1-78*.

c) It is neither the Corporation's policy nor its practice to account for different sources of premium revenue or interest income separately within the Statement of Changes in Equity. Standard accounting practice is to record the premium revenue and interest income in the Statement of Operations, which is what the Corporation proposes for the CMP and the interest income earned by the RSR. The Corporation would then allocate these two items to RSR in order to maintain its capital position.

As stated in part (a), the proposed CMP is to maintain capital adequacy in fiscal year 2019/20. The additional capital is required to ensure that the level of capitalization is unchanged from fiscal year 2018/19 and that it reflects and supports the level of risk for fiscal year 2019/20.

CAC (MPI) 1-76

Part and Chapter:	Part VI, Dynamic Capital Adequacy	Page No.:	Page 7
PUB Approved Issue No:	7. Update of DCAT 20. Capital Maintenance Provision		
Topic:	Capital Maintenance Provision in Base Scenario		
Subtopic:			

Preamble to IR (If Any):

The Corporation has taken the position that "including the Capital Maintenance Provision in the calculation of the PUB's lower and upper RSR targets is not appropriate." The Capital Maintenance Provision (CMP) is part of the applied for rate increase so should be built in to the base scenario of the DCAT. Since the CMP is not approved the DCAT should be completed with two base scenarios, with the CMP and without.

Question:

Please give the Corporation's justification for excluding the Capital Maintenance Provision that is built in to the Corporation's rate request from the base scenario of the DCAT analysis.

Rationale for Question:

To understand why the Corporation did not include the Capital Maintenance Provision in the DCAT base scenario.

RESPONSE:

Please see *PUB(MPI) 1-17(b)*.

CAC (MPI) 1-77

Part and Chapter:	DCAT.1.2	Page No.:	7
PUB Approved Issue No:	7. Update of DCAT, target capital analysis and the target Basic total equity threshold levels based upon methodology approved in Board Order 130/17 20. Capital Maintenance Provision		
Topic:	Modified base scenario		
Sub Topic:			

Preamble to IR (If Any):

"The inclusion of the CMP, or a future capital build and release provision, should not impact the calculation of the RSR targets themselves. The CMP is designed to maintain capital at the existing Minimum Capital Test (MCT) ratio in the rating year, preferably at a level that is within the lower and upper regulatory capital targets."

Question:

a) Please confirm that the CMP or a future capital build and release provision is a separate calculation from the RSR targets determination that is used "to protect motorists from rate increases that would otherwise have been necessary due to unexpected variances from forecasted results and due to events and losses arising from non-recurring events or factors."
b) Please explain how the lower and upper regulatory capital targets are defined and determined outside the DCAT process designed to determine the RSR target range.

Rationale for Question:

To clarify that there is no link between the CMP or a future capital build and release provision and the risks facing MPI as defined by the purpose of the RSR.

RESPONSE:

a) As per *PUB (MPI) 1-17 (b)* the Corporation's position is that the calculation of the RSR range (i.e. lower and upper RSR targets) should be separate from the determination of how to operate within those targets (i.e. CMP, Capital Build and Release).

b) The lower and upper RSR targets continue to be determined based on the DCAT process.

CAC (MPI) 1-78

Part and Chapter:	Part I, LA, OV 4.3	Page No.:	LA p. 2, OV p. 18
PUB Approved Issue No:	20. Capital Maintenance Provision		
Topic:	The need for and the methodology to establish a capital maintenance provision		
Sub Topic:			

Preamble to IR (If Any):

MPI's overall requested rate increase includes a "2.1% increase for a Net Capital Maintenance Provision to maintain MPI's capital position through the rating year, as measured by the Minimum Capital Test. The Capital Maintenance Provision accounts for the positive impact of investment income on Basic's Rate Stabilization Reserve, and collects only the residual amount required to maintain Basic's capital position."

Question:

Please identify all industry, gray and peer-reviewed literature that was reviewed by MPI regarding the need for and the methodology to establish a Capital Maintenance Provision.

Rationale for Question:

To better understand the basis for MPI's application for the implementation of a Capital Maintenance Provision.

RESPONSE:

The Corporation is not aware of the existence of any industry, gray and peer-reviewed literature regarding the need for and the methodology to establish a Capital Maintenance Provision (CMP) for non-profit, monopoly, public auto insurers, and

therefore did not review any. The CMP is simply a tool for maintaining capitalization from year-to-year, based on a standard industry measure of capitalization (i.e. the Minimum Capital Test ratio). Even if such literature existed, the Corporation does not believe it was necessary, in the circumstances, to review it in order to recognize the need for a CMP and to establish the methodology.

CAC (MPI) 1-79

Part and Chapter:	PART VI, Investments	Page No.:	6
PUB Approved Issue No:	8. Investment portfolio 10. Claims forecasting		
Topic:	De-risking the basic claims portfolio; no equities in the investment portfolio		
Sub Topic:			

Preamble to IR (If Any):

"2. De-risking the Basic Claims portfolio by eliminating exposure to growth assets. Interest rate risk associated with the Basic line of business is expected to be significantly reduced from the separating of investment assets into unique portfolios."

Question:

Please elaborate and rationalize the statement "De-risking the Basic Claims portfolio by eliminating exposure to growth assets" (ie. equities) by contrasting the risk characteristic of a bond investment portfolio to the risk characteristics of the PIPP liability portfolio.

Rationale for Question:

The PIPP liability risk characteristics profile seems to align more with pension plan risk characteristics profile and a Workers Compensation liability profile and it is strange that MPI would propose to have an investment portfolio totally comprised of bonds to support basic insurance liabilities. Trying to better understand MPI's rationale in this respect.

RESPONSE:

Fixed income securities (bonds) and PIPP liabilities have the following risks:

Bond Risks	**PIPP Risks**
Real interest rates	Real interest rates
Inflation	Inflation
Default	Mortality
	Under reserving
	Legislative enhancements to benefits

The present value of PIPP liabilities is interest rate-sensitive, due to the long-tail nature of some of the liabilities. This risk is mitigated by holding bonds of similar duration, which are also interest rate-sensitive. The other risks associated with the PIPP liabilities cannot be hedged with investments in financial assets. See the response to *PUB (MPI) 1-80* for a discussion of inflation risk.

Growth assets such as equities, real estate and infrastructure have unique idiosyncratic risks (i.e.: financial performance, regulatory, legal, competition, financing, etc.), which can cause the price of these securities to be volatile. These risks are not present in the PIPP liabilities. Therefore, removing these asset classes from the Basic Claims portfolio should reduce the risk of the combined portfolio of assets and liabilities.

CAC (MPI) 1-80

Part and Chapter:	**PART VI, Investments**	**Page No.:**	**39**
PUB Approved Issue No:	**8. Investment portfolio** **10. Claims forecasting**		
Topic:	**Duration matching**		
Sub Topic:			

Preamble to IR (If Any):

"As per Section 8.4 of the Investment Policy Statement (*INV Appendix 1*), the marketable bond duration is matched to the claims duration to minimize the interest rate risk of MPI. In last year's rate application, the total fixed income portfolio including MUSH bonds was matched to the claims duration. The duration matching policy has been changed this year to exclude MUSH bonds due to a change in the calculation methodology for the claims discount rate, which is now based upon the dollar weighted yield of the fixed income portfolio rather than the duration weighted yield of the fixed income portfolio."

Question:

For greater clarity, please explain the terms "dollar weighted yield" and "duration weighted yield" and explain the reason for changing the calculation methodology for the claims discount rate. Did the change in discount rate result in changes to the unpaid claims liabilities? If yes please quantify the change.

Rationale for Question:

To clarify investment terminology.

RESPONSE:

The duration weighted yield of the fixed income portfolio is calculated using the yield to maturity of each security in the total fixed income portfolio, and weighting the yield of each security in the portfolio by duration. Dollar weighted yield is the market value weighted yield, or the yield to maturity of the fixed income portfolio. See *CAC(MPI) 1-86 (c)* for a full discussion of the impact of change.

CAC (MPI) 1-81

Part and Chapter:	Part VI, Investments	Page No.:	6
PUB Approved Issue No:	8. Investment portfolios		
Topic:	Five unique investment portfolios—reporting and disclosure		
Sub Topic:			

Preamble to IR (If Any):

"Asset Liability Management (ALM) Study Update

The ALM study was completed in late 2017. The benefits of implementing the outcomes of the ALM study are:

1. 1. Separation of the commingled investment portfolio into five unique portfolios that back the corporation's liabilities and surplus. The five portfolios are Basic Claims, Basic Rate Stabilization Reserve (RSR), Pension, Extension and Special Risk Extension (SRE), and each will have unique asset allocations at the end of fiscal 2018/19. This will allow MPI to develop investment portfolios that better reflect the associated liabilities (where there are liabilities) and the investment goals of each portfolio."

Question:

a) Please describe how the various individual investment portfolios will be disclosed, discussed and reported in the Universal Compulsory Automobile Insurance and Corporate Annual Financial Statements.
b) Please describe the Pension portfolio allocation methodology amongst the various lines of business.

Rationale for Question:

To clarify and understand the disclosure of the various investment portfolios in financial statements; financial and performance reporting.

RESPONSE:

a) At this time, the only additional disclosure is anticipated to be in relation to describing the portfolios in the accounting policy section of the 2019/20 audited statements. No other disclosures or reporting is anticipated at this time.

b) The forecasted employee future benefit asset portfolio and associated income has been allocated amongst the various lines of business by use of the same formula allocating employee future benefit liabilities, which is the payroll ratio. The payroll ratio is the percentage of salary and benefits expenses allocated to each line of business as calculated using the approved allocation methodology. The base forecast uses a static percentage ratio based on a four-year historical average.

CAC (MPI) 1-82

Part and Chapter:	Part VI, Investments	Page No.:	
PUB Approved Issue No:	8. Performance of the investment portfolio		
Topic:	Investment performance report		
Sub Topic:			

Preamble to IR (If Any):

Investment performance for the last fiscal year and current quarter as measured by a third party.

Question:

Please file a copy of the February 28, 2018 and May 31, 2018 investment performance reports prepared by a third party, if any.

Rationale for Question:

To assist in understanding the most recent corporate investment portfolio's investment performance prepared by a third party compared to benchmark performance.

RESPONSE:

A copy of the February 28, 2018 report is included as *Attachment A*. The next available report was as of June 30, 2018 which is included as *Attachment B*.

Manitoba Public Insurance

Manitoba
Public Insurance

Executive Summary

As of February 28, 2018

Submitted: April, 2018

Ellement
Pensions | Benefits | Investments

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Observations

Based on the implied market valuation of the portfolio, the portfolio increased $87.1 million over fiscal 2018. Net contributions during 2018 were -$23.0 million, and market value stands at $2,812.6 million at the end of the fiscal 2018 with the largest shift in assets belonging to Canadian Bonds whose asset allocation increased by 2.3%. Currently Infrastructure has the largest underweighting at 1.3% from the Policy mix, while Real Estate is the most overweight at 1.7%.

The MPI investment portfolio with Implied Market Valuation returned 4.1% in fiscal 2018 ranking in the 2nd quartile of the Custom Universe but lagged the Custom Benchmark by 0.2%. Portfolio performance ranks above the Custom Universe median over the 4-year trailing period, but now trails the Custom Benchmark.

Total Bonds with Implied Market Valuations was a source of underperformance in fiscal 2018, returning 2.5% and underperforming the Custom Bond Benchmark by 1.4%. Total Bonds with Implied Market Valuations now trails the Custom Bond Benchmark by 0.7% over the 4-year trailing period, despite outperforming the peer universe median by 0.5%.

Canadian Equity was a source of outperformance in fiscal 2018 with a return of 4.9%. Manager C and Manager D both ranked in the first quartile of their respective peer universes earning 7.6% and 4.1% in fiscal 2018. Manager A struggled in fiscal 2018, ranking in the bottom quartile and earning 1.9%. The Canadian Equity portfolio has added 1.3% over its Custom Benchmark during the 4-year trailing period.

Large capitalization US value companies earned stronger returns during fiscal 2018 than mid-capitalization US value companies as the Russell 1000 Value (C$) returned 4.1% versus the -0.4% return of the Russell 2000 Value (C $). MPI was hurt by investing in the value indexes as the S&P 500 (C$) outperformed the Russell 1000 Value (C$) by 9.0%. MPI US Equity returned 3.2% in fiscal 2018.

Real Estate & Infrastructure produced strong returns in fiscal 2018 earning 11.2% and 9.8%, respectively. Both asset classes have outperformed their respective benchmarks over the 4-year trailing period.

Market Update

Manitoba Public Insurance

As of 2/28/2018

Canadian markets were relatively flat during fiscal 2018. The FTSE TMX Canada Universe Bond returned 1.0%, as fixed income returns were hurt by the Bank of Canada increasing the key overnight lending rate 0.75% over the fiscal year. The Canadian Equity market lagged behind the Global Equity markets, with the S&P/TSX Capped Composite earning 3.2%. Active management added some value with the median manager return being 4.4%.

The S&P 500 returned 17.1% in US$ during fiscal 2018 and 13.3% in C$ as the Canadian dollar appreciated throughout the fiscal year. Global markets had a strong year as the bull market continued, with the MSCI EAFE (C$) and MSCI World (C$) indexes earned 16.8 % and 14.2% during fiscal 2018, respectively. The median active manager was able to outperform the EAFE (C$) Index, but not the S&P 500 (C$) index.

Major Indices	Recent		Annualized					Annual				
Fixed Income												
	3 Mo	YTD	1 Yr	2 Yr	3 Yr	4 Yr	5 Yr	2018	2017	2016	2015	2014
FTSE TMX Canada Universe Bond	-1.06	1.01	1.01	1.45	0.85	3.16	2.82	1.01	1.89	-0.33	10.40	1.48
FTSE TMX Canada LT Bond	-1.64	4.33	4.33	3.22	1.26	5.66	4.50	4.33	2.12	-2.55	20.05	0.01
FTSE TMX Canada MT Bond	-1.54	-0.95	-0.95	0.61	0.72	3.05	2.84	-0.95	2.20	0.94	10.35	2.04
FTSE TMX Canada ST Bond	-0.40	-0.40	-0.40	0.53	0.61	1.43	1.56	-0.40	1.48	0.75	3.93	2.10
FTSE TMX Canada All Government Bond	-1.23	0.74	0.74	0.69	0.44	3.02	2.61	0.74	0.64	-0.06	11.19	0.95
FTSE TMX Canada All Corp Bond	-0.59	1.72	1.72	3.48	1.96	3.55	3.40	1.72	5.27	-1.01	8.49	2.78
Median	-0.95	1.13	1.13	1.93	1.17	3.25	2.99	1.13	2.77	-0.36	10.18	1.69
Canada												
S&P/TSX Composite	-3.23	3.23	3.23	12.79	3.47	5.14	6.92	3.23	23.24	-12.93	10.32	14.34
BMO Small Cap Blended (UW)	-2.06	-3.10	-3.10	18.23	3.76	0.44	2.86	-3.10	44.26	-20.09	-8.87	13.09
Median	-2.68	4.37	4.37	12.74	4.24	6.39	8.81	4.37	22.00	-11.32	12.48	19.20
US (C$)												
S&P 500 (C$)	2.41	13.29	13.29	17.66	12.10	16.40	19.90	13.29	22.19	1.77	30.29	35.00
Russell 1000 Value (C$)	-0.19	4.25	4.25	14.72	8.96	13.44	17.09	4.25	26.25	-1.72	28.01	32.91
Russell 2000 Value (C$)	-5.26	-0.39	-0.39	17.31	8.96	10.98	15.57	-0.39	38.14	-5.99	17.27	35.87
Median	2.38	13.10	13.10	17.58	11.60	15.41	19.30	13.10	21.74	0.44	29.60	35.00
US (US$)												
S&P 500 (US$)	2.96	17.10	17.10	20.97	11.14	12.22	14.73	17.10	24.98	-6.19	15.51	25.37
Russell 1000 Value (US$)	0.35	7.75	7.75	17.96	8.02	9.36	12.04	7.75	29.13	-9.41	13.49	23.44
Russell 2000 Value (US$)	-4.75	2.96	2.96	20.61	8.03	7.00	10.59	2.96	41.29	-13.35	3.96	26.19
Median	2.93	16.90	16.90	20.90	10.64	11.27	14.16	16.90	24.51	-7.42	14.89	25.38
International												
MSCI EAFE (C$)	1.38	16.76	16.76	15.23	7.07	8.58	12.38	16.76	13.72	-7.57	13.24	28.97
Median	1.29	17.88	17.88	15.65	7.65	9.25	12.34	17.88	13.24	-7.62	13.48	27.71
Global												
MSCI World (C$)	1.83	14.16	14.16	16.68	9.75	12.77	16.33	14.16	19.25	-2.90	22.33	31.73
Median	1.86	14.01	14.01	16.29	9.61	12.33	15.65	14.01	18.36	-2.81	21.37	29.35

Manitoba Public Insurance

Performance Summary

Manitoba Public Insurance

As of 2/28/2018

Performance Summary

Asset Class and Manager	MV in Millions	MRQ	YTD	12 Month Results 2018	2017	2016	2015	4 Year
Total Fund	**$2,768.7**	(0.2)	5.1	5.1	7.1	(0.5)	10.3	5.4
Total Fund w/ Imp	**$2,812.6**	(0.5)	4.1	4.1	6.7	(1.6)	11.7	5.1
Custom Benchmark [1]		(0.6)	4.2	4.2	6.6	(1.2)	12.2	5.3
Custom Universe Median		(0.6)	3.2	3.2	6.0	(0.8)	10.2	4.7
Value Added (TF w/ IMP vs Benchmark)		**0.1**	**-0.2**	**-0.2**	**0.0**	**-0.4**	**-0.5**	**-0.3**
Value Added (TF w/ IMP vs Median)		**0.1**	**0.9**	**0.9**	**0.7**	**-0.8**	**1.5**	**0.4**

Note: Value Added vs Custom Benchmark

[1] Current Benchmark weight: 70% MPI Claim Liability, 8.5% S&P/TSX Capped Composite, 1.5% BMO Small Cap Blended Unweighted, 4% Russell 1000 Value (C$), 1% Russell 2000 Value (C$), 5% Can CPI + 5%, 10% IPD All Property Index (lagged by one quarter)

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Short Term	**$19.5**	0.3	0.9	0.9	0.5	0.6	0.9	0.7
Callable Short Term	**$11.5**	0.3	0.9	0.9	0.5	0.7	0.9	0.8
Manager C Short Term	**$4.5**	0.2	0.8	0.8	0.5	0.5	0.8	0.7
Manager D Short Term	**$3.5**	0.2	0.8	0.8	0.5	0.5	0.9	0.7
FTSE TMX CA 91 Tbill		0.2	0.7	0.7	0.5	0.5	0.9	0.7
Median		0.3	1.1	1.1	0.8	0.8	1.2	1.0

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Bonds	**$1,913.2**	(0.7)	3.9	3.9	2.5	0.2	10.8	4.3
MPI w/ Imp	**$1,957.1**	(1.1)	2.5	2.5	2.0	(1.5)	12.9	3.9
Marketable	**$1,281.2**	(1.6)	3.6	3.6	1.5	(2.5)	14.5	4.1
Non Mkt Imp	**$675.9**	(0.3)	0.8	0.8	3.1	0.0	10.7	3.6
Non Mkt Book	**$632.0**	1.1	4.6	4.6	4.8	4.9	5.0	4.8
Custom Bond Benchmark [2]		(0.8)	3.9	3.9	2.5	(1.0)	13.4	4.6
Median		(0.9)	1.3	1.3	2.9	(0.4)	10.2	3.3
Value Added (Bonds)		**0.1**	**0.0**	**0.0**	**-0.1**	**1.3**	**-2.7**	**-0.3**
Value Added (MPI w/Imp)		**-0.3**	**-1.4**	**-1.4**	**-0.5**	**-0.4**	**-0.5**	**-0.7**
Value Added (Marketable)		**-0.7**	**-0.3**	**-0.3**	**-1.1**	**-1.4**	**1.1**	**-0.5**
Value Added (Non Mkt Imp)		**0.6**	**-3.1**	**-3.1**	**0.6**	**1.0**	**-2.7**	**-1.0**
Value Added (Non Mkt Book)		**2.0**	**0.7**	**0.7**	**2.2**	**5.9**	**-8.4**	**0.3**

Note: Value Added vs Custom Bond Benchmark

[2] Current Benchmark weight: 100% MPI Claim Liability

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Canadian Equity	**$256.1**	(3.0)	4.9	4.9	27.7	(13.3)	7.8	5.8
Custom CE Benchmark [3]		(3.0)	2.3	2.3	26.3	(14.0)	7.3	4.5
Median		(2.6)	4.7	4.7	22.5	(10.6)	11.5	6.6
Value Added (CNEQ vs Custom CE bmk)		**0.0**	**2.7**	**2.7**	**1.4**	**0.6**	**0.6**	**1.3**
Manager A	**$80.5**	(5.9)	1.9	1.9	24.5	(16.1)	9.3	3.8
Manager C	**$120.8**	(1.9)	7.6	7.6	31.4	(13.6)	7.5	7.0
S&P/TSX Capped Comp.		(3.2)	3.2	3.2	23.2	(12.9)	10.3	5.1
Median		(2.6)	4.7	4.7	22.5	(10.6)	11.5	6.6
Value Added (Manager A vs S&P/TSX)		**-2.7**	**-1.3**	**-1.3**	**1.3**	**-3.2**	**-1.0**	**-1.3**
Value Added (Manager C vs S&P/TSX)		**1.3**	**4.4**	**4.4**	**8.1**	**-0.7**	**-2.8**	**1.9**
Manager D	**$54.9**	(1.0)	4.1	4.1	28.3	(4.2)	1.8	6.8
BMO Small Cap Blended (UW)		(2.1)	(3.1)	(3.1)	44.3	(20.1)	(8.9)	0.4
Median		(2.5)	0.2	0.2	24.5	(11.4)	4.0	4.5
Value Added (Manager D vs BMO SC Blended UW)		**1.1**	**7.2**	**7.2**	**-15.9**	**15.9**	**10.6**	**6.4**

Note: Value Added vs Respective Benchmark

Note: Rounding issues may arise

[3] Current Benchmark weight: 85% S&P/TSX Capped Composite, 15% BMO Small Cap Blended (Unweighted)

Manitoba Public Insurance

Performance Summary

Manitoba Public Insurance

As of 2/28/2018

Performance Summary

Asset Class and Manager	MV in Millions	MRQ	YTD	12 Month Results 2018	2017	2016	2015	4 Year
US Equity	**$145.1**	(1.3)	3.2	3.2	28.7	(3.0)	25.7	12.8
Manager G	**$116.9**	(0.3)	4.1	4.1	26.4	(2.3)	27.9	13.2
Manager H	**$28.2**	(5.3)	(0.4)	(0.4)	38.3	(6.4)	17.3	10.9
Russell 1000 Value (C$)		(0.2)	4.2	4.2	26.3	(1.7)	28.0	13.4
Russell 2000 Value (C$)		(5.3)	(0.4)	(0.4)	38.1	(6.0)	17.3	11.0
[4] Custom US Benchmark		(1.2)	3.3	3.3	28.6	(2.5)	25.9	13.0
Median		2.0	12.3	12.3	21.3	(0.4)	29.7	15.2
Value Added (USEQ vs Custom US bmk)		**-0.1**	**-0.2**	**-0.2**	**0.0**	**-0.5**	**-0.2**	**-0.2**

Note: Value Added vs Custom US Benchmark

[4] Current Benchmark weight: 80% Russell 1000 Value (C$), 20% Russell 2000 Value (C$)

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Real Estate	**$329.0**	3.0	11.2	11.2	7.1	8.5	8.1	8.7
Direct Real Estate	**$66.0**	2.0	6.9	6.9	6.0	16.8	14.2	10.9
Manager F	**$263.0**	3.3	12.4	12.4	7.5	6.2	6.2	8.1
IPD All Prop (Lag)		2.3	7.1	7.1	6.4	7.7	7.6	7.2
Median		1.7	5.9	5.9	5.5	5.0	6.2	5.9
Value Added (Real Estate)		**0.7**	**4.1**	**4.1**	**0.7**	**0.8**	**0.5**	**1.5**
Value Added (Direct RE)		**-0.3**	**-0.2**	**-0.2**	**-0.4**	**9.2**	**6.7**	**3.7**
Value Added (Manager F)		**1.0**	**5.3**	**5.3**	**1.1**	**-1.5**	**-1.4**	**0.9**

Note: Value Added vs IPD All Property (lagged by one quarter) Index

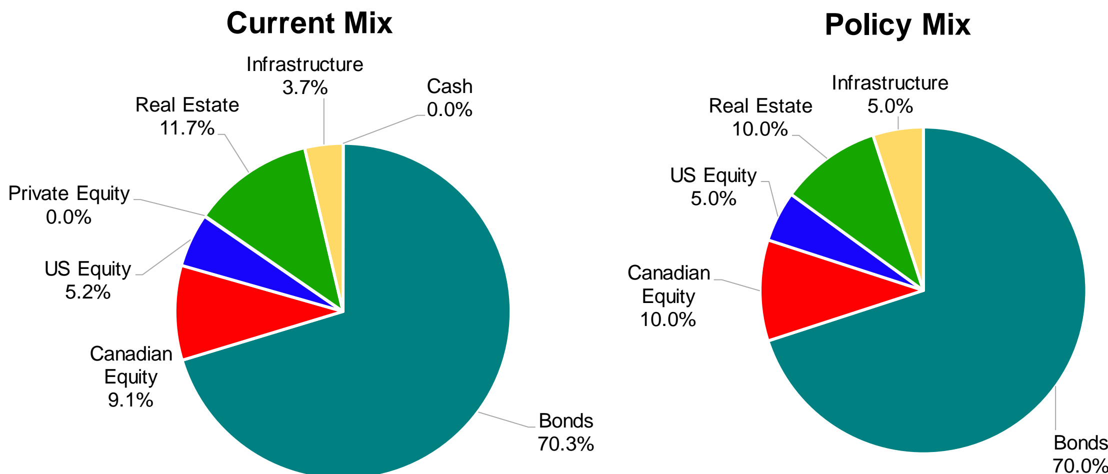
Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Infrastructure	**$103.3**	8.4	9.8	9.8	3.9	7.2	7.4	7.1
CPI + 5% (lag)		1.8	6.8	6.8	7.3	7.2	6.0	6.8
Value Added (Infra)		**6.5**	**3.0**	**3.0**	**-3.4**	**0.0**	**1.4**	**0.2**

Note: Value Added vs CPI + 5% (lagged one month)

Note: Rounding issues may arise

Note: Market values may not add due to cash component

Current vs Policy Asset Mix



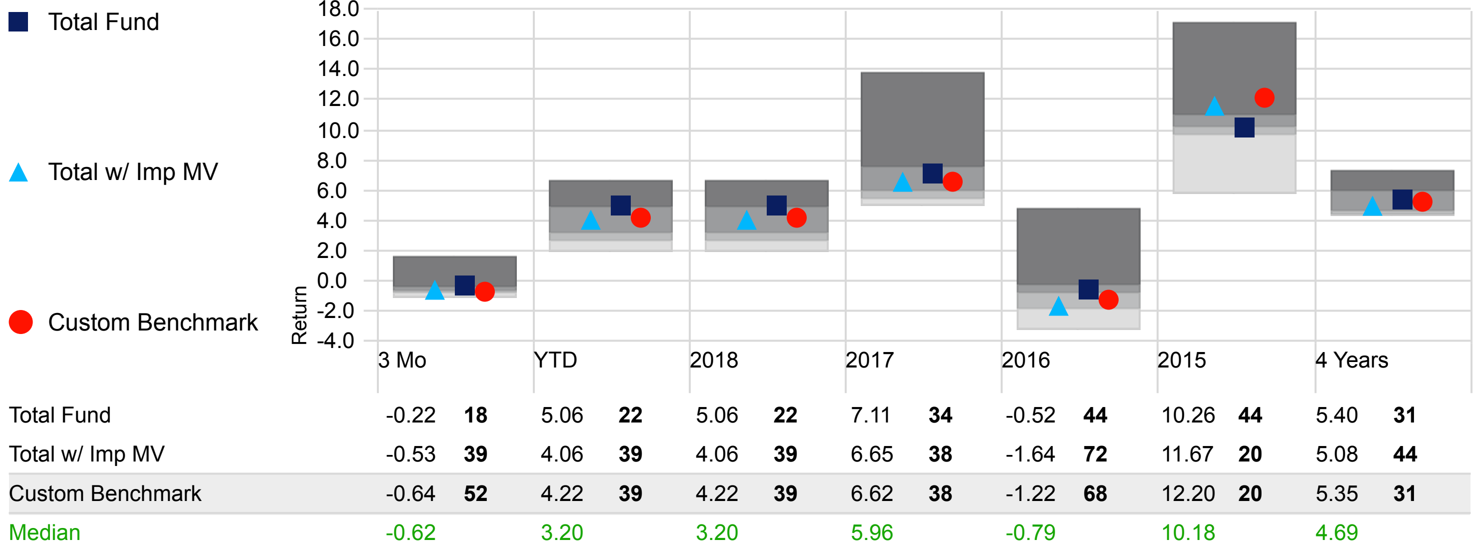
Note: Bonds include Short Term

Total Fund

Manitoba Public Insurance

As of 2/28/2018

Trailing Performance

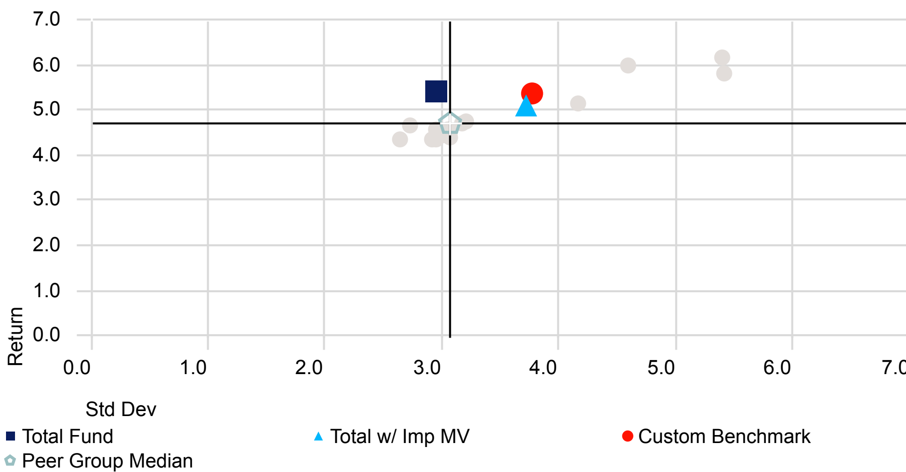


	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Total Fund	-0.22	**18**	5.06	**22**	5.06	**22**	7.11	**34**	-0.52	**44**	10.26	**44**	5.40	**31**
Total w/ Imp MV	-0.53	**39**	4.06	**39**	4.06	**39**	6.65	**38**	-1.64	**72**	11.67	**20**	5.08	**44**
Custom Benchmark	-0.64	**52**	4.22	**39**	4.22	**39**	6.62	**38**	-1.22	**68**	12.20	**20**	5.35	**31**
Median	-0.62		3.20		3.20		5.96		-0.79		10.18		4.69	

The MPI with Implied Market Value on Non Marketable Bonds has a 4-year trailing return of 5.1%, ranking in the 44th percentile of the Custom MPI Universe. This return exceeds Custom Universe median by 0.4%, but lags the Custom Benchmark by 0.3%. During fiscal 2018, the portfolio ranked in 2nd quartile of the Custom Universe, underperforming its Custom Benchmark by 0.2%, but outperforming its Custom Universe median by 0.9%.

MPI Total Fund returned 5.1% in fiscal 2018 and 5.4% over the 4-year trailing period. Over both time periods, the Fund outperformed the Custom Benchmark and Custom Universe median.

Risk-Reward 4 Year



	Return	Std Dev
Total Fund	5.40	2.96
Total w/ Imp MV	5.08	3.72
Custom Benchmark	5.35	3.76
Median	4.69	3.07

The volatility of the MPI with Implied Market Value on Non Marketable Bonds over the 4-year trailing period is below the Custom Benchmark but above the Custom Universe median. Total Fund volatility is lower than both the median and the Custom Benchmark.

Bonds

Manitoba Public Insurance

As of 2/28/2018

Trailing Performance

Peer Group (5-95%): Universe - Canadian Fixed Income

	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Total Bonds	-0.71	**15**	3.89	**1**	3.89	**1**	2.48	**77**	0.23	**14**	10.75	**11**	4.27	**1**
Total Bonds w/ Imp	-1.15	**86**	2.49	**3**	2.49	**3**	2.05	**86**	-1.46	**90**	12.94	**1**	3.87	**8**
Marketable	-1.60	**100**	3.57	**1**	3.57	**1**	1.49	**95**	-2.47	**97**	14.55	**1**	4.10	**2**
Non Mkt Imp	-0.29	**3**	0.78	**81**	0.78	**81**	3.13	**39**	0.03	**20**	10.71	**12**	3.58	**18**
Non Mkt Book	1.10	**1**	4.64	**1**	4.64	**1**	4.77	**5**	4.89	**1**	5.05	**100**	4.84	**1**
FTSE TMX CA Universe	-1.06	**78**	1.01	**70**	1.01	**70**	1.89	**90**	-0.33	**42**	10.40	**34**	3.16	**72**
Custom Bond Benchmark	-0.85	**35**	3.91	**1**	3.91	**1**	2.55	**73**	-1.02	**81**	13.43	**1**	4.58	**1**
Median	-0.94		1.26		1.26		2.90		-0.41		10.15		3.34	

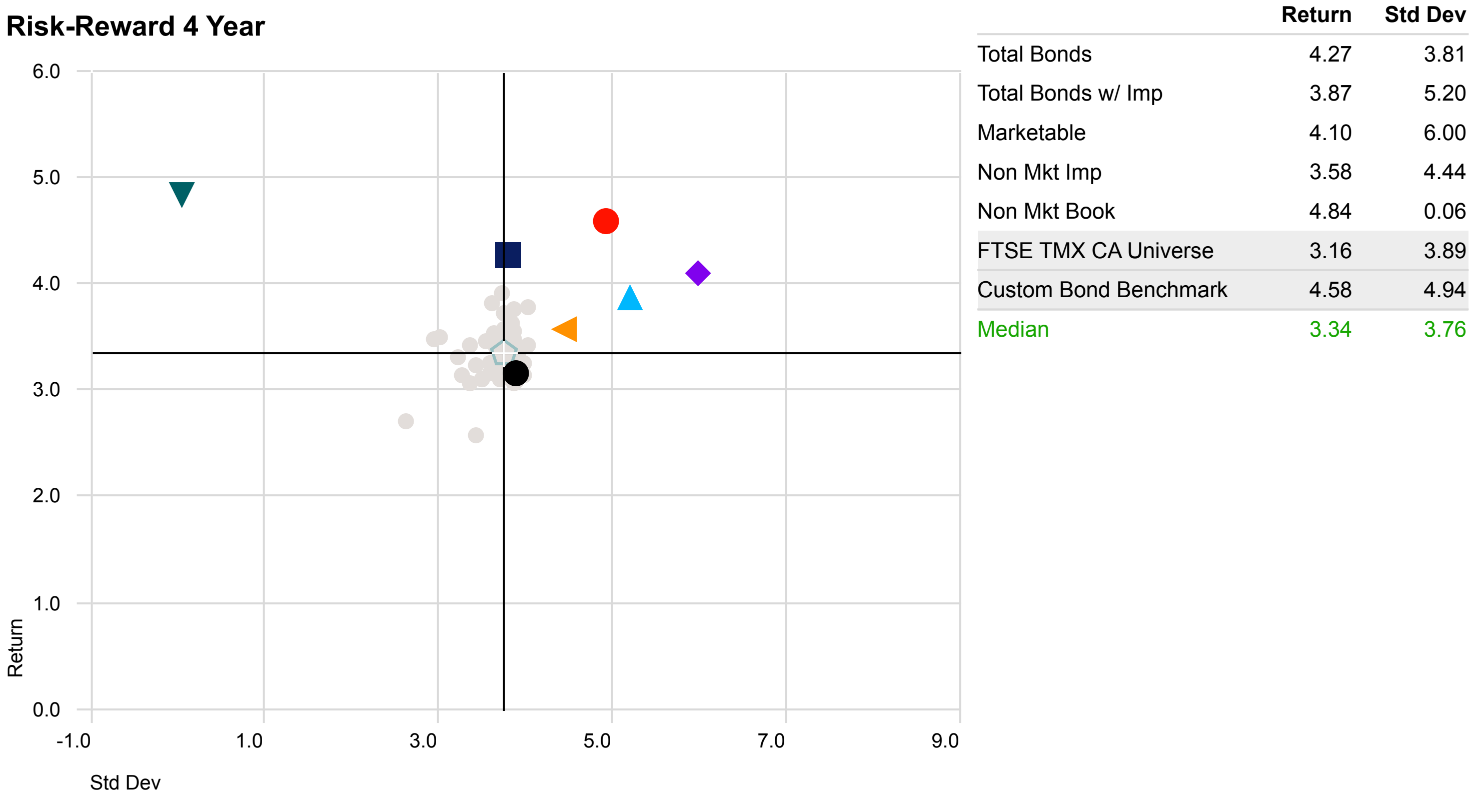
Total Bonds with Implied Market Valuations earned 2.5% in fiscal 2018 ranking in the 3rd percentile of the peer universe, yet still lagged the Custom Bond Benchmark by 1.4%. Over the 4-year trailing period the portfolio earned 3.9%, ranking in the top decile of the peer universe, but lagging behind the Custom Bond Benchmark by 0.6%.

Marketable Bonds and Non-Marketable Bonds with Implied Market Value ranked in the 1st and 81st percentile of the peer universe in fiscal 2018, returning 3.6% and 0.8%, respectively.

Bonds

Manitoba Public Insurance

As of 2/28/2018



	Return	Std Dev
Total Bonds	4.27	3.81
Total Bonds w/ Imp	3.87	5.20
Marketable	4.10	6.00
Non Mkt Imp	3.58	4.44
Non Mkt Book	4.84	0.06
FTSE TMX CA Universe	3.16	3.89
Custom Bond Benchmark	4.58	4.94
Median	3.34	3.76

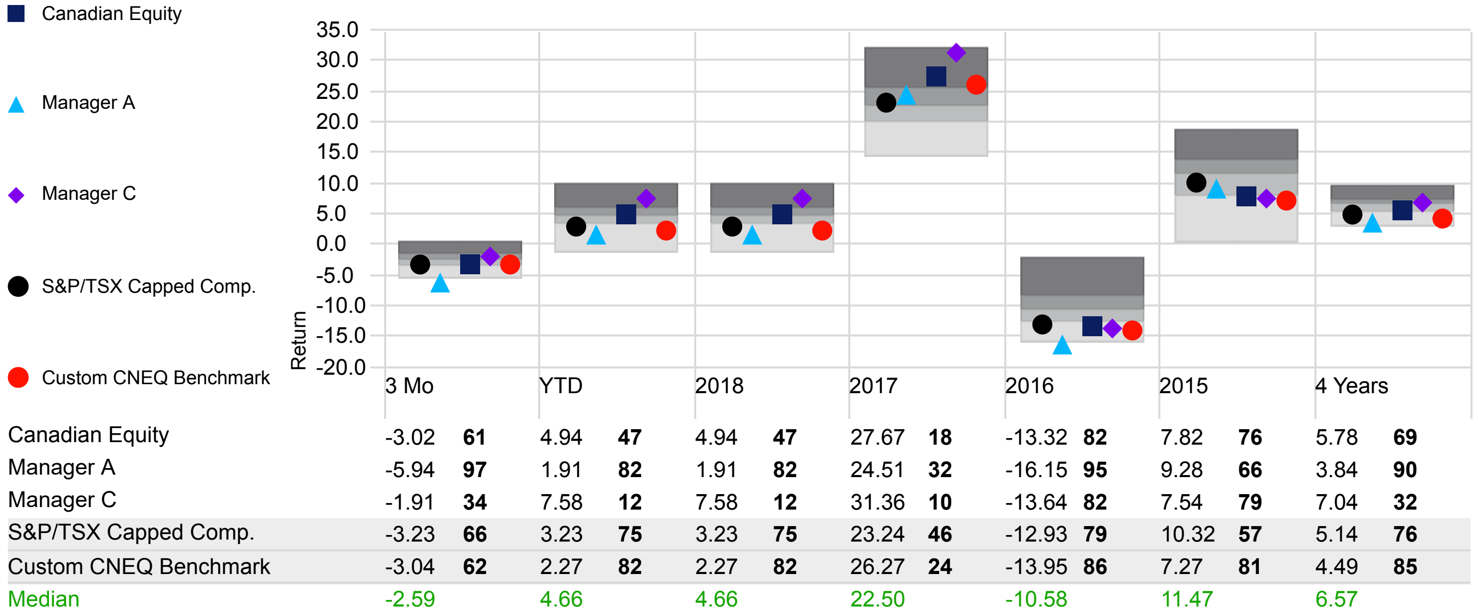
MPI Total Bonds with Implied Market Valuations generated lower returns compared to the Custom Bond Benchmark with a slightly higher volatility over the 4-year trailing period. The Fund managed to outperform the FTSE TMX CA Universe by 0.7%, but was more volatile.

Manitoba Public Insurance

Canadian Equity

Manitoba Public Insurance As of 2/28/2018

Trailing Performance

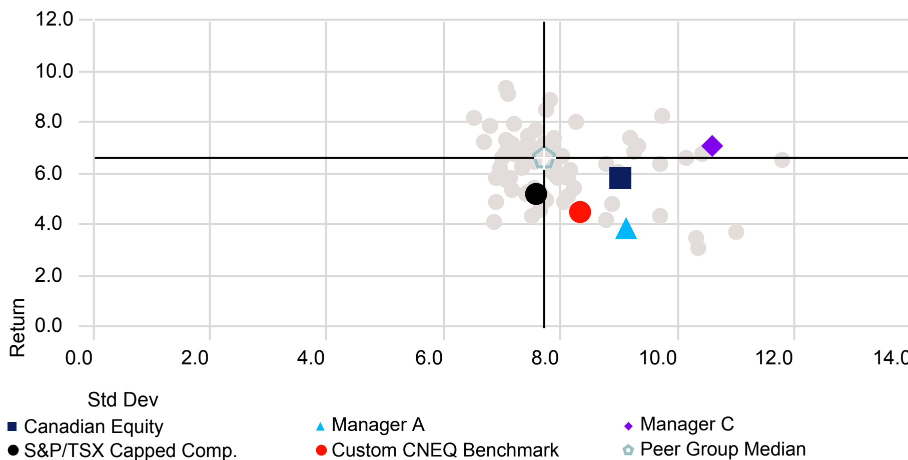


	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Canadian Equity	-3.02	**61**	4.94	**47**	4.94	**47**	27.67	**18**	-13.32	**82**	7.82	**76**	5.78	**69**
Manager A	-5.94	**97**	1.91	**82**	1.91	**82**	24.51	**32**	-16.15	**95**	9.28	**66**	3.84	**90**
Manager C	-1.91	**34**	7.58	**12**	7.58	**12**	31.36	**10**	-13.64	**82**	7.54	**79**	7.04	**32**
S&P/TSX Capped Comp.	-3.23	**66**	3.23	**75**	3.23	**75**	23.24	**46**	-12.93	**79**	10.32	**57**	5.14	**76**
Custom CNEQ Benchmark	-3.04	**62**	2.27	**82**	2.27	**82**	26.27	**24**	-13.95	**86**	7.27	**81**	4.49	**85**
Median	-2.59		4.66		4.66		22.50		-10.58		11.47		6.57	

MPI Canadian Equity returned 4.9% in fiscal 2018 outperforming the Custom Benchmark, the S&P/TSX Capped Composite and the peer universe median. Over the 4-year trailing period, Canadian Equity has outperformed the Custom Benchmark and the S&P/TSX Capped Composite by 1.3% and 0.6%, respectively; but has lagged the peer universe median by 0.8%

Large Cap Canadian Equity manager, Manager C had a strong fiscal 2018 ranking in the 1st quartile of the peer universe and outperforming the S&P/TSX Capped Composite by 4.4%. Manager A struggled yet again, ranking in the fourth quartile and failing to beat the benchmark for the third straight fiscal year, and now ranks in the bottom decile of the peer universe over the 4-year trailing period.

Risk-Reward 4 Year



	Return	Std Dev
Canadian Equity	5.78	9.03
Manager A	3.84	9.12
Manager C	7.04	10.60
S&P/TSX Capped Comp.	5.14	7.57
Custom CNEQ Benchmark	4.49	8.34
Median	6.57	7.70

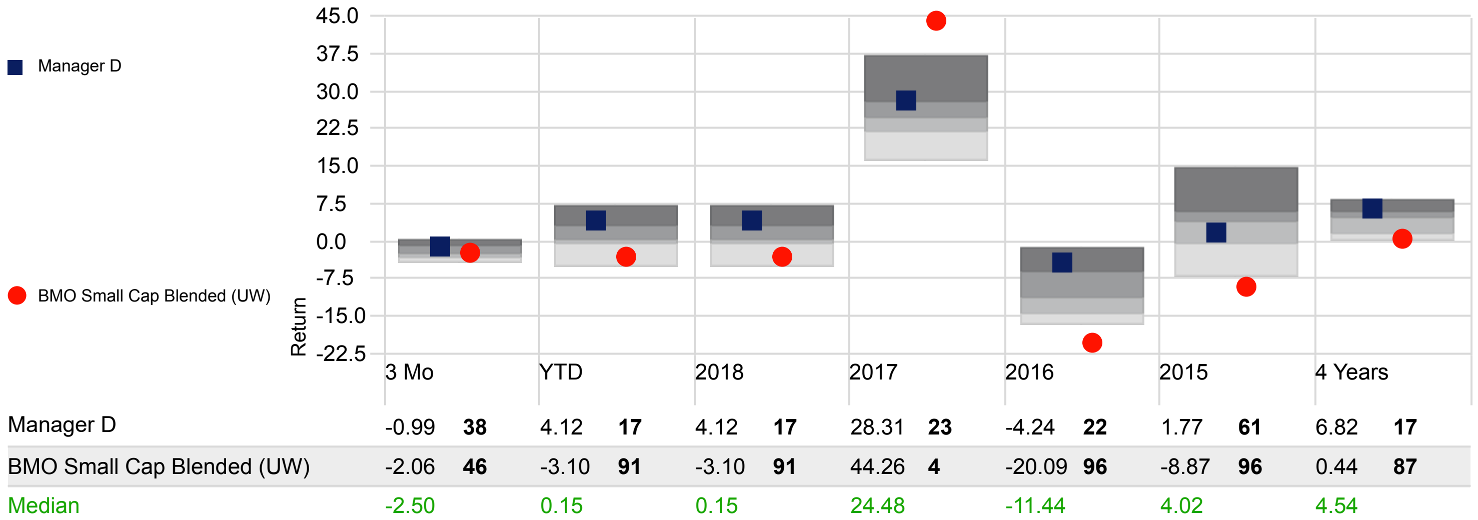
Manager A and Manager C have been more volatile than Custom Canadian Equity benchmark and the peer universe median over the 4-year trailing period. Manager C has outperformed the S&P/TSX Capped Composite, peer universe median, and the Custom Canadian Equity benchmark, but Manager A trails all three.

Canadian Small Cap Equity

Manitoba Public Insurance

As of 2/28/2018

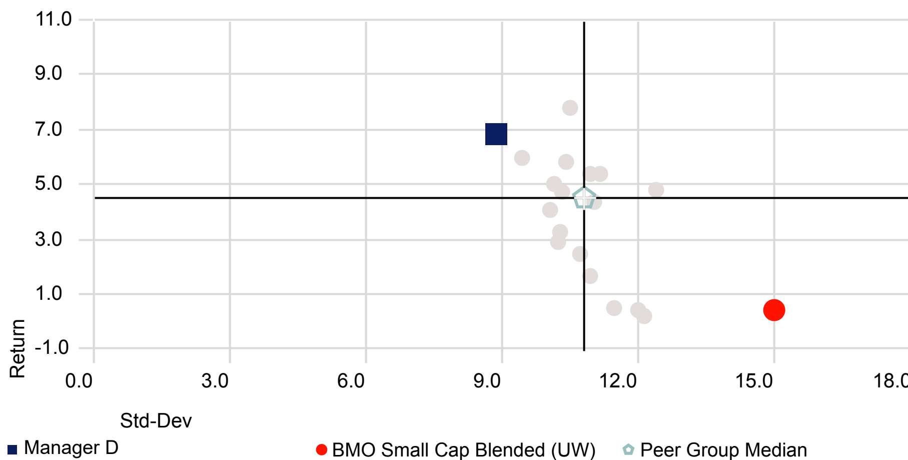
Trailing Performance



	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Manager D	-0.99	**38**	4.12	**17**	4.12	**17**	28.31	**23**	-4.24	**22**	1.77	**61**	6.82	**17**
BMO Small Cap Blended (UW)	-2.06	**46**	-3.10	**91**	-3.10	**91**	44.26	**4**	-20.09	**96**	-8.87	**96**	0.44	**87**
Median	-2.50		0.15		0.15		24.48		-11.44		4.02		4.54	

Small Cap Canadian Equity manager Manager D returned 4.1% in fiscal 2018, outperforming the benchmark by 7.2% and ranked in the 1st quartile of the peer universe. Over the 4-year trailing period, Manager D ranks in the 1st quartile of the peer universe and added value of 6.4% versus the benchmark.

Risk-Reward 4 Year



	Return	Std Dev
Manager D	6.82	8.86
BMO Small Cap Blended (UW)	0.44	14.96
Median	4.54	10.82

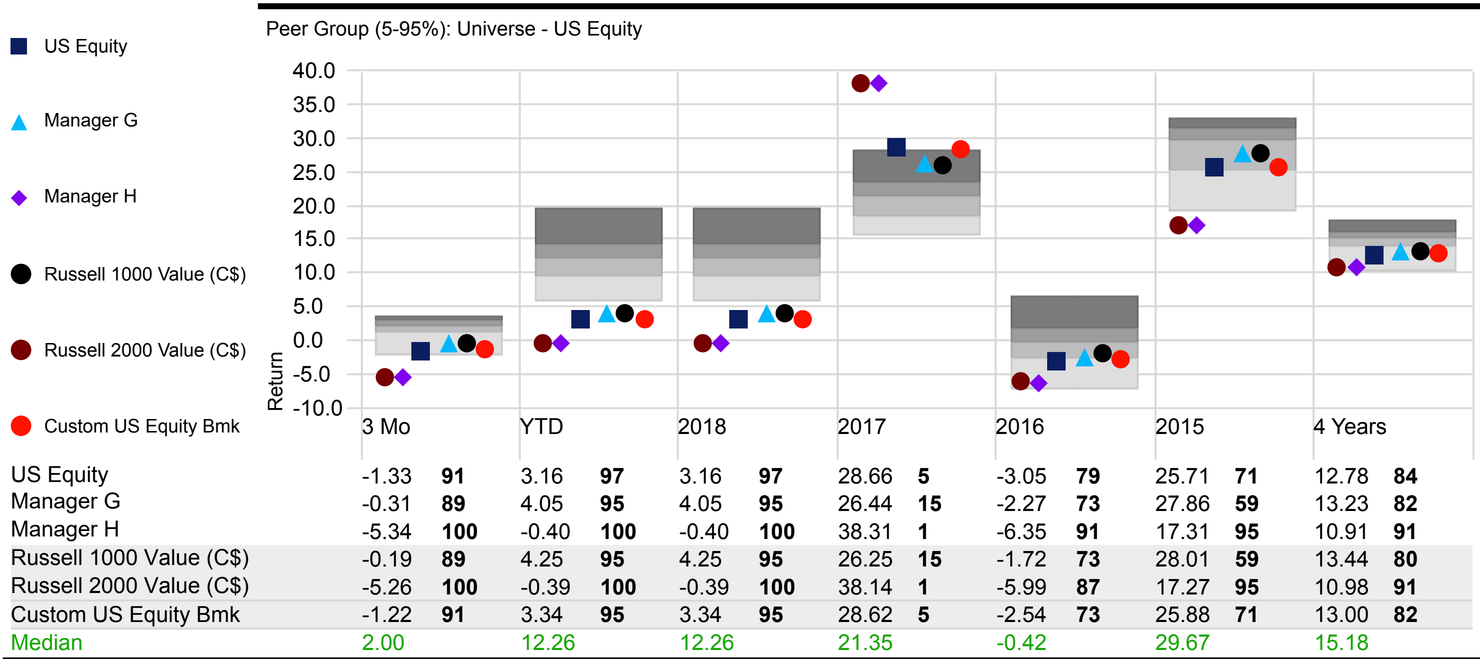
Manager D earned significantly higher returns than the benchmark and peer universe median over the 4-year trailing period whilst maintaining a lower degree of volatility.

US Equity

Manitoba Public Insurance

As of 2/28/2018

Trailing Performance

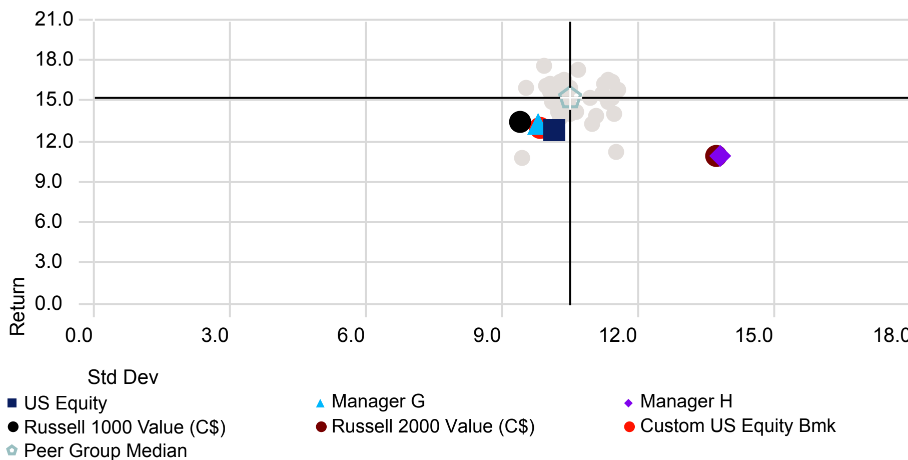


	3 Mo		YTD		2018		2017		2016		2015		4 Years	
US Equity	-1.33	**91**	3.16	**97**	3.16	**97**	28.66	**5**	-3.05	**79**	25.71	**71**	12.78	**84**
Manager G	-0.31	**89**	4.05	**95**	4.05	**95**	26.44	**15**	-2.27	**73**	27.86	**59**	13.23	**82**
Manager H	-5.34	**100**	-0.40	**100**	-0.40	**100**	38.31	**1**	-6.35	**91**	17.31	**95**	10.91	**91**
Russell 1000 Value (C$)	-0.19	**89**	4.25	**95**	4.25	**95**	26.25	**15**	-1.72	**73**	28.01	**59**	13.44	**80**
Russell 2000 Value (C$)	-5.26	**100**	-0.39	**100**	-0.39	**100**	38.14	**1**	-5.99	**87**	17.27	**95**	10.98	**91**
Custom US Equity Bmk	-1.22	**91**	3.34	**95**	3.34	**95**	28.62	**5**	-2.54	**73**	25.88	**71**	13.00	**82**
Median	2.00		12.26		12.26		21.35		-0.42		29.67		15.18	

US Equity returned 3.2% in fiscal 2018 ranking in the 4th quartile of the peer universe and slightly behind the US Equity Custom Benchmark. Growth outperformed value during fiscal 2018 leading to weaker returns for the asset class. The 4-year trailing return is 12.8% ranking in the bottom quartile of the peer universe.

Manager G returned 4.1% in fiscal 2018, while Manager H returned -0.4%, as large cap value outperformed mid cap value in the US Equity market over fiscal 2018.

Risk-Reward 4 Year



	Return	Std Dev
US Equity	12.78	10.14
Manager G	13.23	9.77
Manager H	10.91	13.80
Russell 1000 Value (C$)	13.44	9.39
Russell 2000 Value (C$)	10.98	13.70
Custom US Equity Bmk	13.00	9.84
Median	15.18	10.50

Over the 4-year trailing period, the US Equity portfolio returns have lagged the US Equity Custom Benchmark while volatility has been higher. The portfolio has lower volatility than the median.

Manitoba Public Insurance

Real Estate & Infrastructure

Manitoba Public Insurance

As of 2/28/2018

Trailing Performance

	3 Mo	YTD	2018	2017	2016	2015	4 Years
Real Estate	3.01	11.22	11.22	7.15	8.52	8.05	8.72
Direct Real Estate	2.02	6.87	6.87	5.97	16.83	14.21	10.87
Manager F	3.26	12.41	12.41	7.55	6.21	6.18	8.06
Infrastructure	8.37	9.79	9.79	3.92	7.15	7.44	7.06
IPD Property Index (lag)	2.30	7.08	7.08	6.41	7.67	7.56	7.18
CAN CPI + 5.00%	1.83	6.77	6.77	7.28	7.16	6.02	6.81

MPI Real Estate outperformed the IPD All Prop Index (lag) by 4.1% in fiscal 2018, led by Manager F who outperformed the benchmark by 5.3%. Infrastructure return in fiscal 2018 was 9.8% outperforming its benchmark of CAN CPI + 5%.

Both Real Estate & Infrastructure have performed well over the trailing 4-year period earning returns of 8.7% and 7.1%, respectfully.

To assist the reader of this report, a description of the background universe is being provided. Per instruction from MPI in August 2016, Ellement Consulting Group will no longer be providing Fiscal Year Ending Quarterly Reports. Ellement Consulting Group will now provide measurement of the MPI Fund at calendar year quarter end. Peer universes used to rank performance and compare funds are from Morningstar.

With the February 2007 fiscal quarter report, a custom universe has been added. This universe is comprised of pooled funds weighted to MPI's policy asset mix which provides a performance comparison that is independent of asset mix. Prior to that, the Total Fund had been compared only to a Balanced Universe. Beginning with the November 2015 fiscal report, the custom universe is being run out of Morningstar.

Ellement Consulting Group began measuring the MPI fund as of July 1, 2003. Fixed Income returns are supplied by MPI, while Equity returns are calculated independently by Ellement from custodial records. Some data is obtained directly from the investment managers for improved accuracy. Return data prior to 2003 is a combination of MPI records and prior measurement reports.

Disclaimer

1. The rates of return used in this Report are not necessarily a prediction of possible future experience.
2. The rates of return used in this Report are believed to be accurate, complete and timely. Rounding issues may arise.
3. Reliance for data has been made primarily on the custodial statements of the Plan, Morningstar Direct, eVestment, the Bank of Canada, Ellement Performance Measurement Proprietary System and the Canadian Institute of Actuaries publications on Economic Statistics in the preparation of this Report. Additional information provided from investment managers has been of assistance from time to time.
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Manitoba Public Insurance

Manitoba Public Insurance

Executive Summary

As of June 30, 2018

Submitted: July, 2018

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Manitoba Public Insurance

Based on the implied market valuation of the portfolio, the portfolio increased $27.7 million during Q2 2018. Net withdrawals were $12.8 million, and the market value stands at $2,849.1 million at the end of Q2 2018, with the largest shift in assets belonging to Canadian Bonds, whose asset allocation decreased by 1.9%. Currently, Infrastructure has the largest underweighting from the Policy mix at 1.4%, while Real Estate has the largest overweighting, at 1.8%.

The MPI Investment Portfolio with Implied Market Valuation returned 1.4% in Q2 2018, ranking in the 2nd quartile of the Custom Universe and underperforming the Custom Benchmark by 0.8%. Portfolio performance ranks ahead the Custom Universe median over the most recent 4-year trailing period, with a return of 4.8%; however, it lags the Custom Benchmark over the 4-year trailing period by 0.5%.

Total Bonds with Implied Market Valuations returned 0.6% in Q2 2018, ranking in the 2nd quartile of the peer universe but behind the Custom Bond Benchmark by 1.1%. Total Bonds with Implied Market Valuations are outperforming the peer universe median over the 4-year trailing period, ranking in the 3rd percentile but still trails the Custom Bond Benchmark which ranks in the 1st percentile of the peer universe.

After a poor Q1, Canadian Equities had a stronger quarter in Q2, returning 6.2%, which matched the return of Custom Canadian Equity Benchmark. Manager C has outperformed the benchmark by 2.0% and ranks slightly below the peer universe median over the 4-year trailing period. Manager A had a positive start to the quarter but was ultimately terminated during Q2 and replaced with Manager B. Manager D earned 6.9% in Q2 2018 outperforming its benchmark by 3.8%. Year-to-date, Manager D has outperformed its benchmark by 6.2%.

Mid-capitalization value US companies earned significantly higher returns during Q2 2018 than large-capitalization value US companies, as the Russell 2000 Value (C$) returned 10.5% versus a return of 3.2% for the Russell 1000 Value (C$). The S&P 500 (C$) returned 5.5%, outperforming the Russell 1000 Value (C$) by 2.3%.

Real Estate returned 2.3% in Q2 2018, while Infrastructure returned -0.5%. Both asset classes have earned strong returns over the 4-year trailing period.

Market Update

Manitoba Public Insurance

As of 6/30/2018

After raising rates by 0.25% in Q1, the Bank of Canada (BofC) left the overnight lending rate unchanged in Q2 2018 at 1.25%. The Canadian Equity market got off to a rough start to 2018, but rebounded sharply in Q2, earning 6.8%. Strong performance in Q2 was driven by a rebound in both Energy and Health Care sector stocks.

The S&P 500 returned 3.4% in US$ during Q2 2018 and 5.5% in C$, as the Canadian dollar depreciated during the quarter. Growth stocks slightly outperformed value stocks led by Energy, Consumer Discretionary, and Information Technology sectors. The MSCI EAFE (C$) and MSCI World (C$) indexes once again earned positive returns in Q2 2018, earning 1.1% and 4.0%, respectively.

Major Indices	Recent		Annualized					Annual				
Fixed Income												
	3 Mo	YTD	1 Yr	2 Yr	3 Yr	4 Yr	5 Yr	2018	2017	2016	2015	2014
FTSE TMX Canada Universe Bond	0.51	0.61	0.76	0.39	1.97	3.03	3.48	0.76	0.02	5.22	6.25	5.33
FTSE TMX Canada LT Bond	0.92	0.92	1.84	1.12	3.96	5.46	5.89	1.84	0.40	9.90	10.07	7.65
FTSE TMX Canada MT Bond	0.24	0.26	-0.11	-0.52	1.54	2.80	3.50	-0.11	-0.93	5.78	6.70	6.35
FTSE TMX Canada ST Bond	0.31	0.53	0.36	0.28	0.71	1.38	1.74	0.36	0.20	1.56	3.43	3.21
FTSE TMX Canada All Government Bond	0.55	0.59	0.60	-0.17	1.68	2.94	3.35	0.60	-0.94	5.50	6.79	5.00
FTSE TMX Canada All Corp Bond	0.42	0.70	1.21	1.90	2.75	3.30	3.86	1.21	2.59	4.49	4.96	6.12
Median	0.51	0.64	0.93	0.76	2.22	3.13	3.62	0.93	0.54	5.18	5.99	5.55
Canada												
S&P/TSX Composite	6.77	1.95	10.41	10.73	6.96	4.87	9.24	10.41	11.05	-0.20	-1.16	28.66
BMO Small Cap Blended (UW)	3.11	-5.28	3.60	6.35	5.33	-0.44	5.53	3.60	9.18	3.32	-15.93	33.23
Median	6.44	2.44	10.45	10.95	7.15	6.03	10.28	10.45	11.60	-0.18	1.15	29.57
US (C$)												
S&P 500 (C$)	5.54	7.77	15.85	16.87	13.90	16.79	18.54	15.85	17.90	8.18	25.91	25.81
Russell 1000 Value (C$)	3.23	3.21	8.15	11.78	10.16	13.02	15.32	8.15	15.53	7.00	22.05	25.01
Russell 2000 Value (C$)	10.50	10.70	14.56	19.60	13.17	14.39	16.20	14.56	24.86	1.34	18.12	23.73
Median	5.23	7.48	15.43	16.74	12.80	15.94	17.82	15.43	17.79	5.86	25.86	25.78
US (US$)												
S&P 500 (US$)	3.43	2.65	14.37	16.12	11.93	10.79	13.42	14.37	17.90	3.99	7.42	24.61
Russell 1000 Value (US$)	1.18	-1.69	6.77	11.06	8.26	7.21	10.34	6.77	15.53	2.86	4.13	23.81
Russell 2000 Value (US$)	8.30	5.44	13.10	18.83	11.22	8.51	11.18	13.10	24.86	-2.58	0.78	22.54
Median	3.14	2.38	13.96	16.00	10.85	9.98	12.73	13.96	17.79	1.77	7.38	24.58
International												
MSCI EAFE (C$)	1.05	2.50	8.76	14.63	7.26	8.61	11.76	8.76	20.83	-6.09	12.74	25.29
Median	0.75	2.06	9.12	14.65	7.33	8.69	11.56	9.12	20.44	-6.34	13.66	23.52
Global												
MSCI World (C$)	4.00	5.78	13.14	15.96	11.01	13.08	15.54	13.14	18.86	1.74	19.52	25.92
Median	2.57	3.89	12.08	15.52	10.34	12.44	14.66	12.08	18.67	0.98	18.93	24.22

Performance Summary

Manitoba Public Insurance

As of 6/30/2018

Performance Summary Asset Class and Manager	MV in Millions	MRQ	YTD	12 Month Results 2018	2017	2016	2015	4 Year
Total Fund	**$2,812.1**	1.7	1.8	4.8	4.8	5.9	9.1	5.1
Total Fund w/ Imp	**$2,849.1**	1.4	1.4	3.8	3.2	6.3	11.0	4.8
Custom Benchmark [1]		2.3	2.0	3.9	4.5	6.2	11.6	5.3
Custom Universe Median		1.4	1.6	3.4	3.4	5.1	9.7	4.5
Value Added (TF w/ IMP vs Benchmark)		**-0.8**	**-0.7**	**-0.1**	**-1.3**	**0.1**	**-0.6**	**-0.5**
Value Added (TF w/ IMP vs Median)		**0.0**	**-0.2**	**0.4**	**-0.2**	**1.2**	**1.2**	**0.3**

Note: Value Added vs Custom Benchmark

[1] Current Benchmark weight: 70% MPI Claim Liability, 8.5% S&P/TSX Capped Composite, 1.5% BMO Small Cap Blended Unweighted, 4% Russell 1000 Value (C$), 1% Russell 2000 Value (C$), 5% Can CPI + 5%, 10% IPD All Property Index (lagged by one quarter)

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Short Term	**$59.2**	0.3	0.6	1.1	0.6	0.5	0.9	0.8
Callable Short Term	**$50.8**	0.3	0.6	1.2	0.6	0.5	0.9	0.8
Manager C Short Term	**$5.0**	0.3	0.6	1.1	0.4	0.5	0.8	0.7
Manager D Short Term	**$3.4**	0.3	0.5	1.0	0.5	0.5	0.9	0.7
FTSE TMX CA 91 Tbill		0.3	0.6	1.0	0.4	0.5	0.9	0.7
Median		0.4	0.7	1.3	0.8	0.8	1.2	1.0

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Bonds	**$1,891.4**	0.9	1.0	2.6	1.7	6.4	10.6	4.2
MPI w/ Imp	**$1,928.4**	0.6	0.5	1.2	(0.4)	7.0	13.4	3.8
Marketable	**$1,280.0**	0.8	0.4	1.5	0.3	7.2	14.3	4.0
Non Mkt Imp	**$648.5**	0.1	0.6	0.6	(1.4)	6.6	12.2	3.5
Non Mkt Book	**$611.4**	1.1	2.2	4.6	4.7	4.9	5.0	4.8
Custom Bond Benchmark [2]		1.7	1.6	2.0	2.3	6.7	13.3	4.6
Median		0.5	0.6	1.0	0.8	5.2	10.0	3.2
Value Added (Bonds)		**-0.8**	**-0.6**	**0.5**	**-0.6**	**-0.3**	**-2.7**	**-0.5**
Value Added (MPI w/Imp)		**-1.1**	**-1.1**	**-0.8**	**-2.7**	**0.3**	**0.1**	**-0.9**
Value Added (Marketable)		**-0.9**	**-1.2**	**-0.6**	**-2.0**	**0.5**	**1.0**	**-0.7**
Value Added (Non Mkt Imp)		**-1.6**	**-1.0**	**-1.4**	**-3.7**	**-0.1**	**-1.2**	**-1.2**
Value Added (Non Mkt Book)		**-0.5**	**0.7**	**2.6**	**2.5**	**-1.8**	**-8.3**	**0.1**

Note: Value Added vs Custom Bond Benchmark

[2] Current Benchmark weight: 100% MPI Claim Liability

Asset Class and Manager	MV in Millions	MRQ	YTD	2018	2017	2016	2015	4 Year
Canadian Equity	**$269.2**	6.2	0.7	10.4	13.6	1.0	2.0	4.7
Custom CE Benchmark [3]		6.2	0.8	9.4	10.8	0.4	3.9	4.1
Median		5.9	2.3	10.4	11.7	1.7	7.8	6.0
Value Added (CNEQ vs Custom CE bmk)		**0.0**	**-0.1**	**1.0**	**2.8**	**0.5**	**-1.9**	**0.6**
Manager B	**$83.9**							
Manager C	**$127.9**	6.9	2.8	16.1	15.1	0.3	2.3	6.1
S&P/TSX Capped Comp.		6.8	1.9	10.4	11.0	(0.2)	6.9	4.9
Median		5.9	2.3	10.4	11.7	1.7	7.8	6.0
Value Added (Manager B vs S&P/TSX)								
Value Added (Manager C vs S&P/TSX)		**0.1**	**0.9**	**5.7**	**4.0**	**0.5**	**-4.6**	**1.2**
Manager D	**$57.4**	6.9	0.9	7.2	14.9	7.9	(2.3)	5.8
BMO Small Cap Blended (UW)		3.1	(5.3)	3.6	9.2	3.3	(11.9)	(0.4)
Median		4.8	(0.2)	6.3	8.4	3.0	0.2	2.8
Value Added (Manager D vs BMO SC Blended UW)		**3.8**	**6.1**	**3.6**	**5.8**	**4.6**	**9.6**	**6.3**

Note: Value Added vs Respective Benchmark

Note: Rounding issues may arise

[3] Current Benchmark weight: 85% S&P/TSX Capped Composite, 15% BMO Small Cap Blended (Unweighted)

Manitoba Public Insurance

Performance Summary

Manitoba Public Insurance

As of 6/30/2018

US Equity	**$151.2**	4.8	4.5	9.4	17.1	5.8	23.9	13.2
Manager G	**$119.4**	3.3	3.0	8.1	15.4	6.8	24.9	12.8
Manager H	**$31.8**	10.5	10.5	14.6	24.4	1.4	19.7	14.3
Russell 1000 Value (C$)		3.2	3.2	8.1	15.5	7.0	25.5	13.0
Russell 2000 Value (C$)		10.5	10.7	14.6	24.9	1.3	19.8	14.4
[4] Custom US Benchmark		4.7	4.7	9.5	17.4	5.9	24.4	13.4
Median		4.7	6.5	13.8	17.6	5.0	28.8	15.2
Value Added (USEQ vs Custom US bmk)		**0.1**	**-0.2**	**0.0**	**-0.3**	**-0.1**	**-0.6**	**-0.2**

Note: Value Added vs Custom US Benchmark

[4] Current Benchmark weight: 80% Russell 1000 Value (C$), 20% Russell 2000 Value (C$)

Real Estate	**$337.1**	2.3	4.5	10.2	9.0	7.7	7.6	8.6
Real Estate Direct	**$66.0**	1.7	3.9	7.3	6.3	13.2	13.7	10.1
Manager F	**$271.1**	2.5	4.7	11.0	9.8	6.2	5.8	8.2
IPD All Prop (Lag)		1.4	4.1	7.3	6.2	7.8	7.0	7.1
Median		2.6	4.2	7.7	5.4	6.2	5.3	6.1
Value Added (Real Estate)		**0.9**	**0.4**	**2.9**	**2.8**	**-0.1**	**0.6**	**1.6**
Value Added (Direct RE)		**0.3**	**-0.2**	**-0.1**	**0.1**	**5.4**	**6.7**	**3.1**
Value Added (Manager F)		**1.1**	**0.5**	**3.7**	**3.6**	**-1.6**	**-1.2**	**1.1**

Note: Value Added vs IPD All Property (lagged by one quarter) Index

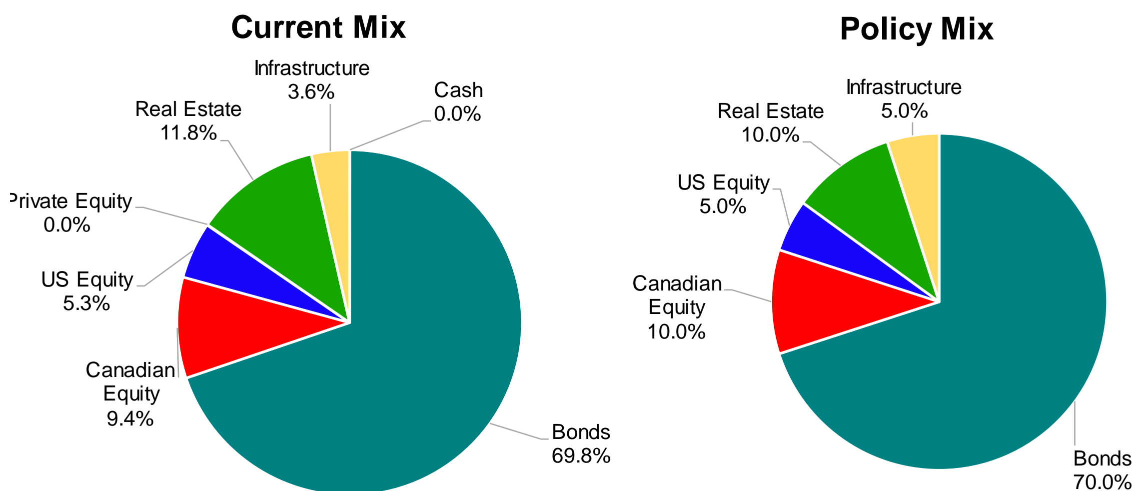
Infrastructure	**$101.7**	(0.5)	7.8	8.0	5.7	4.6	7.3	6.4
CPI + 5% (lag)		1.9	4.1	7.3	6.4	6.6	6.1	6.6
Value Added (Infra)		**-2.4**	**3.7**	**0.6**	**-0.8**	**-2.0**	**1.2**	**-0.1**

Note: Value Added vs CPI + 5% (lagged one month)

Note: Rounding issues may arise

Note: Market values may not add due to cash component

Current vs Policy Asset Mix



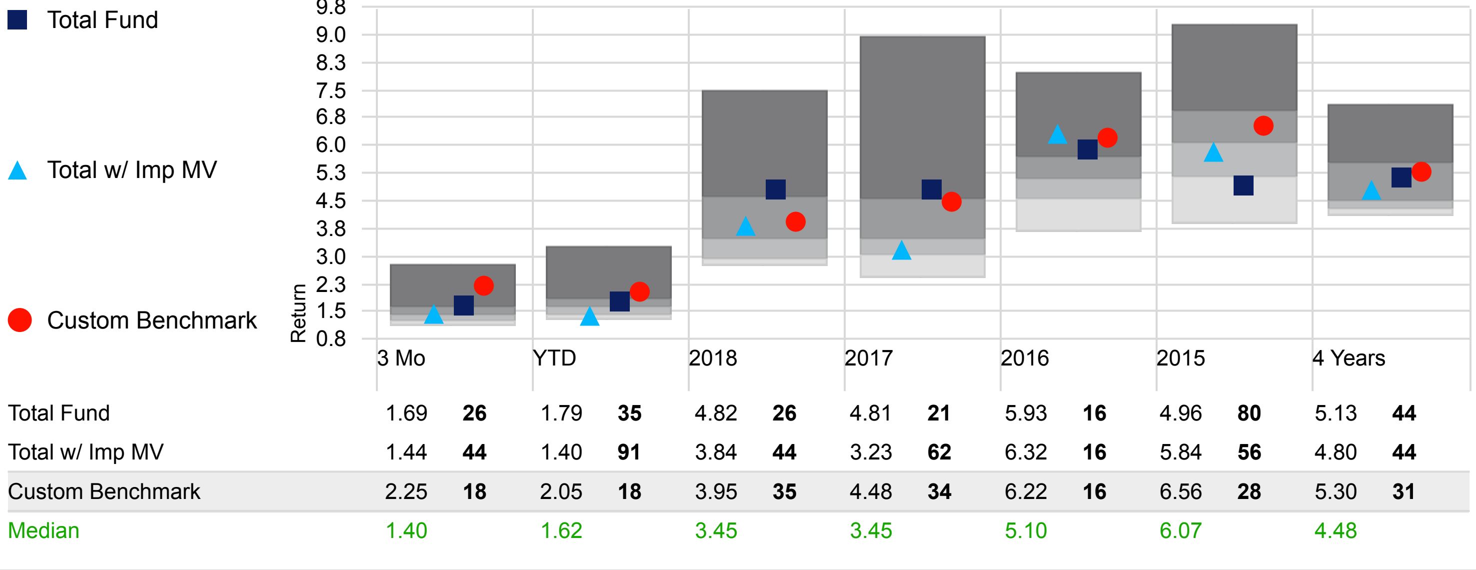
Note: Bonds include Short Term

Total Fund

Manitoba Public Insurance | As of 6/30/2018

Trailing Performance

Peer Group (5-95%): MPI Custom Universe

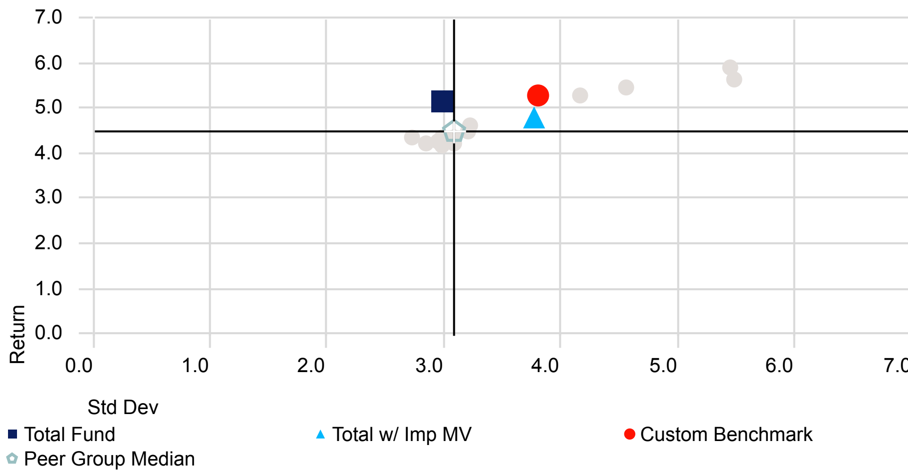


	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Total Fund	1.69	**26**	1.79	**35**	4.82	**26**	4.81	**21**	5.93	**16**	4.96	**80**	5.13	**44**
Total w/ Imp MV	1.44	**44**	1.40	**91**	3.84	**44**	3.23	**62**	6.32	**16**	5.84	**56**	4.80	**44**
Custom Benchmark	2.25	**18**	2.05	**18**	3.95	**35**	4.48	**34**	6.22	**16**	6.56	**28**	5.30	**31**
Median	1.40		1.62		3.45		3.45		5.10		6.07		4.48	

The MPI with Implied Market Value on Non Marketable Bonds has a 4-year trailing return of 4.8%, ranking in the 44th percentile of the Custom MPI Universe. This return exceeds the Custom Universe median by 0.3% but trails the Custom Benchmark by 0.5%. During Q2 2018, the portfolio ranked in the 2nd quartile of the Custom Universe and underperformed the Custom Benchmark by 0.8%.

MPI Total Fund returned 1.7% in Q2 2018. Over the 4-year trailing period, the Total Fund returned 5.1%, outperforming the Custom Universe median by 0.7% but underperformed the Custom Benchmark by 0.2%.

Risk-Reward 4 Year



	Return	Std Dev
Total Fund	5.13	2.98
Total w/ Imp MV	4.80	3.76
Custom Benchmark	5.30	3.80
Median	4.48	3.09

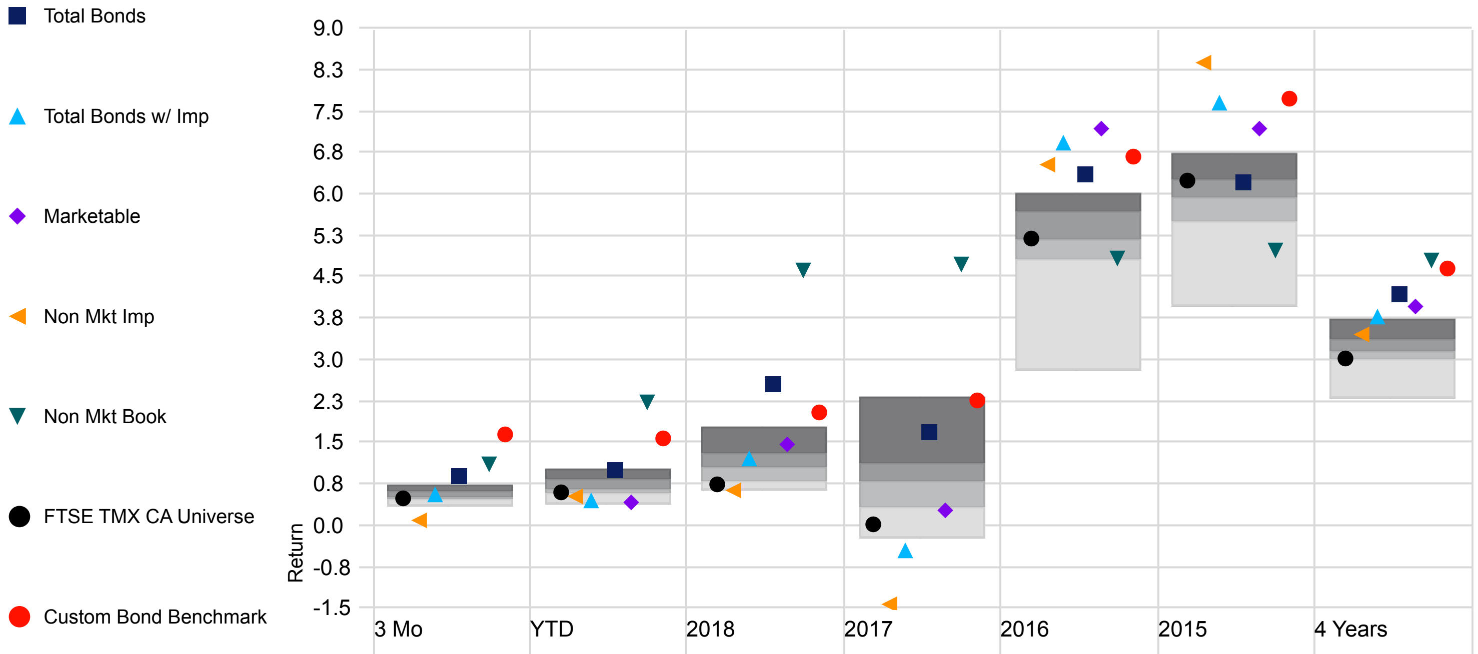
The volatility of the MPI with Implied Market Value on Non Marketable Bonds over the 4-year trailing period is below the Custom Benchmark but above the Custom Universe median. Total Fund volatility is lower than both the median and the Custom Benchmark.

Bonds

Manitoba Public Insurance

As of 6/30/2018

Trailing Performance



	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Total Bonds	0.91	**2**	1.02	**5**	2.56	**1**	1.70	**10**	6.37	**2**	6.24	**29**	4.19	**1**
Total Bonds w/ Imp	0.57	**34**	0.47	**91**	1.22	**33**	-0.43	**97**	6.95	**1**	7.66	**2**	3.79	**3**
Marketable	0.81	**2**	0.42	**92**	1.48	**9**	0.27	**79**	7.20	**1**	7.21	**2**	3.99	**1**
Non Mkt Imp	0.11	**98**	0.55	**79**	0.65	**94**	-1.41	**100**	6.56	**1**	8.37	**1**	3.46	**17**
Non Mkt Book	1.12	**1**	2.24	**1**	4.61	**1**	4.73	**2**	4.85	**73**	5.00	**89**	4.80	**1**
FTSE TMX CA Universe	0.51	**49**	0.61	**60**	0.76	**79**	0.02	**89**	5.22	**49**	6.25	**27**	3.03	**73**
Custom Bond Benchmark	1.66	**1**	1.58	**1**	2.04	**1**	2.27	**6**	6.69	**1**	7.72	**2**	4.65	**1**
Median	0.51		0.64		1.03		0.78		5.18		5.94		3.15	

Total Bonds with Implied Market Valuations earned 0.6% in Q2 2018, ranking in the 2nd quartile of the peer universe and trailing the Custom Benchmark. Over the 4-year trailing period the portfolio earned 3.8%, ranking in the 3rd percentile of its peer universe but lagging the Custom Bond Benchmark by 0.9%.

Marketable Bonds and Non Marketable Bonds with Implied Market Value both ranked in the 1st quartile of the peer universe in Q2 2018, returning 0.8% and 0.1%, respectively.

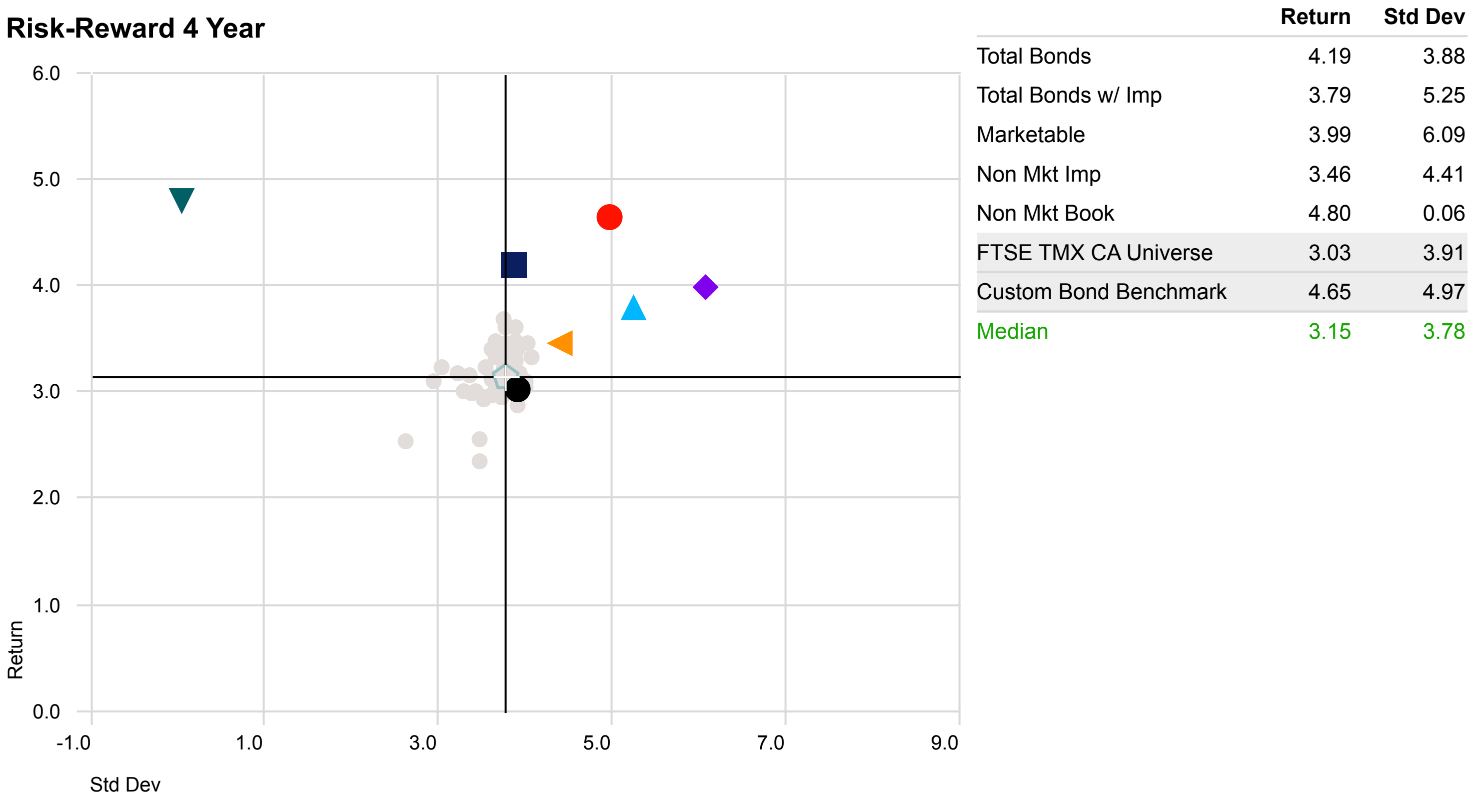
Bonds

Manitoba Public Insurance

As of 6/30/2018

- ■ Total Bonds
- ▲ Total Bonds w/ Imp
- ◆ Marketable
- ◀ Non Mkt Imp
- ▼ Non Mkt Book
- ● FTSE TMX CA Universe
- ● Custom Bond Benchmark

Risk-Reward 4 Year



	Return	Std Dev
Total Bonds	4.19	3.88
Total Bonds w/ Imp	3.79	5.25
Marketable	3.99	6.09
Non Mkt Imp	3.46	4.41
Non Mkt Book	4.80	0.06
FTSE TMX CA Universe	3.03	3.91
Custom Bond Benchmark	4.65	4.97
Median	3.15	3.78

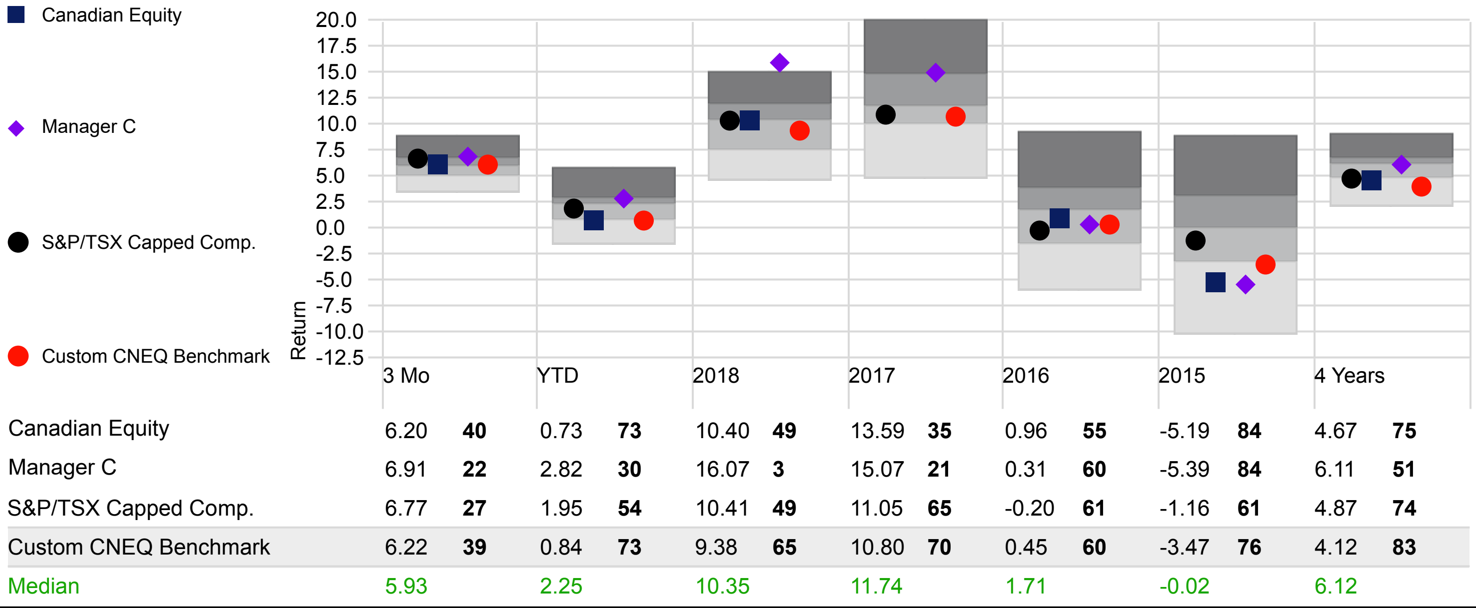
MPI Total Bonds with Implied Market Valuations generated lower returns compared to the Custom Bond Benchmark with a slightly higher volatility over the 4-year trailing period. The Fund outperformed the FTSE TMX CA Universe with similar level of volatility.

Canadian Equity

Manitoba Public Insurance As of 6/30/2018

Trailing Performance

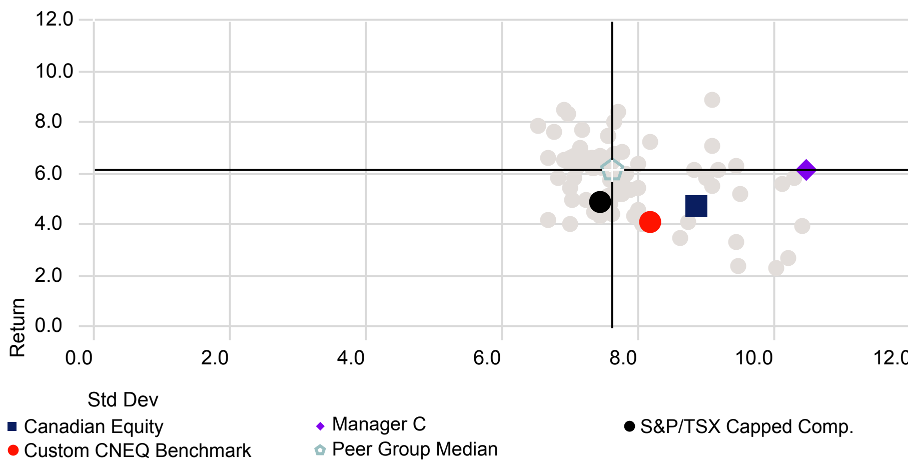
Peer Group (5-95%): Universe - Canadian Equity



	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Canadian Equity	6.20	**40**	0.73	**73**	10.40	**49**	13.59	**35**	0.96	**55**	-5.19	**84**	4.67	**75**
Manager C	6.91	**22**	2.82	**30**	16.07	**3**	15.07	**21**	0.31	**60**	-5.39	**84**	6.11	**51**
S&P/TSX Capped Comp.	6.77	**27**	1.95	**54**	10.41	**49**	11.05	**65**	-0.20	**61**	-1.16	**61**	4.87	**74**
Custom CNEQ Benchmark	6.22	**39**	0.84	**73**	9.38	**65**	10.80	**70**	0.45	**60**	-3.47	**76**	4.12	**83**
Median	5.93		2.25		10.35		11.74		1.71		-0.02		6.12	

MPI Canadian Equity returned 6.2% in Q2 2018 on par with the Custom Canadian Equity Benchmark, underperforming the S&P/TSX Capped Composite, and outperforming the peer universe median. Over the 4-year trailing period, Canadian Equity has outperformed the Custom Benchmark by 0.6%, but lags the S&P/TSX Capped Composite and peer universe median. Large Cap Canadian Equity Manager C outperformed in Q2 2018 and has added 2.0% versus the S&P/TSX Capped Composite over the 4-year trailing period, ranking just below the peer universe median. Manager A had a positive start to the quarter but was ultimately terminated during Q2 and replaced with Manager B.

Risk-Reward 4 Year



	Return	Std Dev
Canadian Equity	4.67	8.84
Manager C	6.11	10.47
S&P/TSX Capped Comp.	4.87	7.45
Custom CNEQ Benchmark	4.12	8.16
Median	6.12	7.60

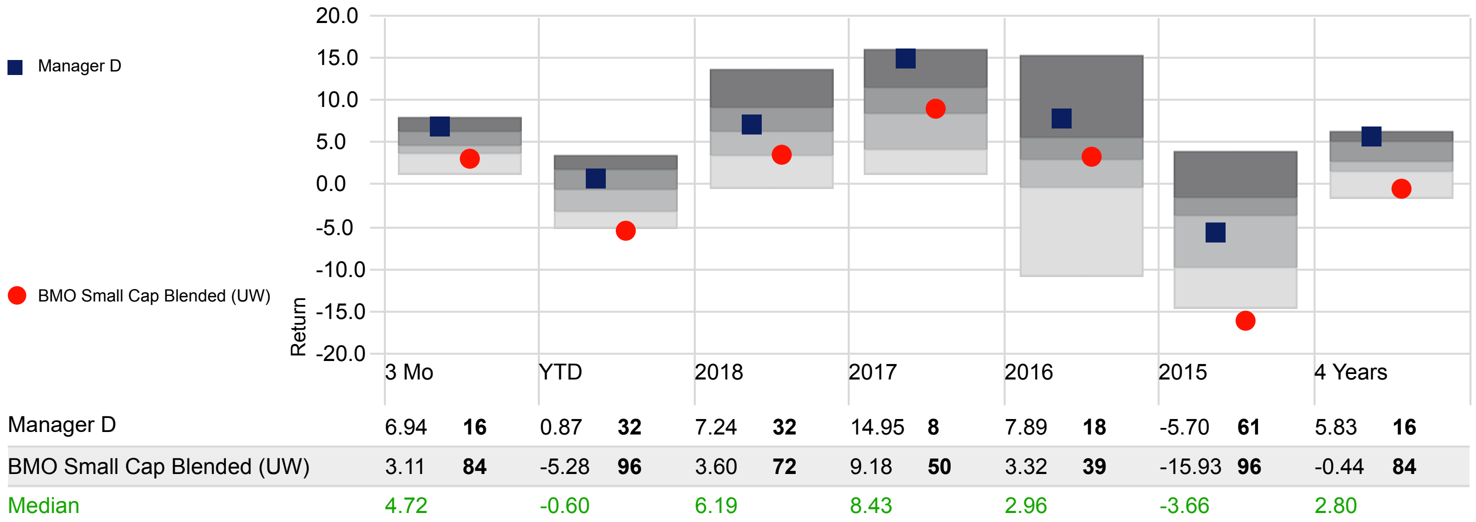
Manager C has been more volatile than the Custom Canadian Equity Benchmark and the peer universe median over the 4-year trailing period. Canadian Equity has outperformed the Custom Canadian Equity benchmark but trails the S&P/TSX Capped Composite and peer universe median.

Canadian Small Cap Equity

Manitoba Public Insurance

As of 6/30/2018

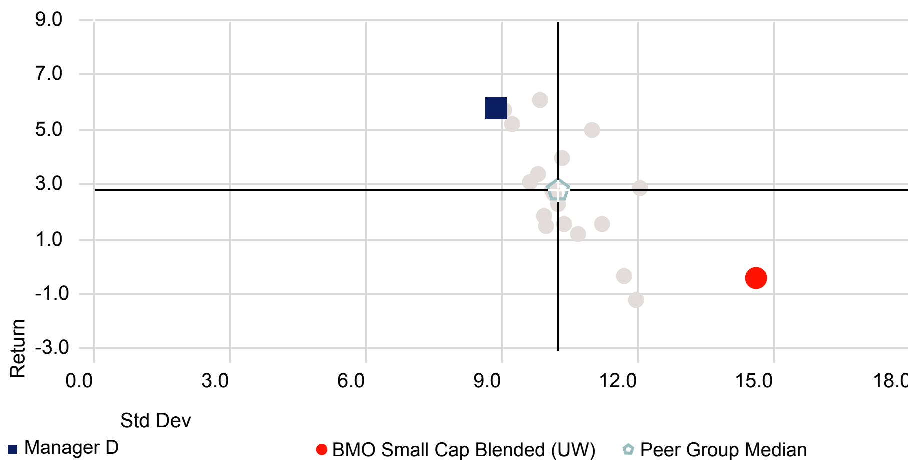
Trailing Performance



	3 Mo		YTD		2018		2017		2016		2015		4 Years	
Manager D	6.94	**16**	0.87	**32**	7.24	**32**	14.95	**8**	7.89	**18**	-5.70	**61**	5.83	**16**
BMO Small Cap Blended (UW)	3.11	**84**	-5.28	**96**	3.60	**72**	9.18	**50**	3.32	**39**	-15.93	**96**	-0.44	**84**
Median	4.72		-0.60		6.19		8.43		2.96		-3.66		2.80	

Small Cap Canadian Equity Manager D returned 6.9% in Q2 2018, outperforming the benchmark and peer group median by 3.8%, and 2.2%, respectively. Over the 4-year trailing period, Manager D ranks in the 16th percentile of the peer universe and has added value of 6.3% versus the benchmark.

Risk-Reward 4 Year



■ Manager D ● BMO Small Cap Blended (UW) ⬠ Peer Group Median

	Return	Std Dev
Manager D	5.83	8.88
BMO Small Cap Blended (UW)	-0.44	14.58
Median	2.80	10.24

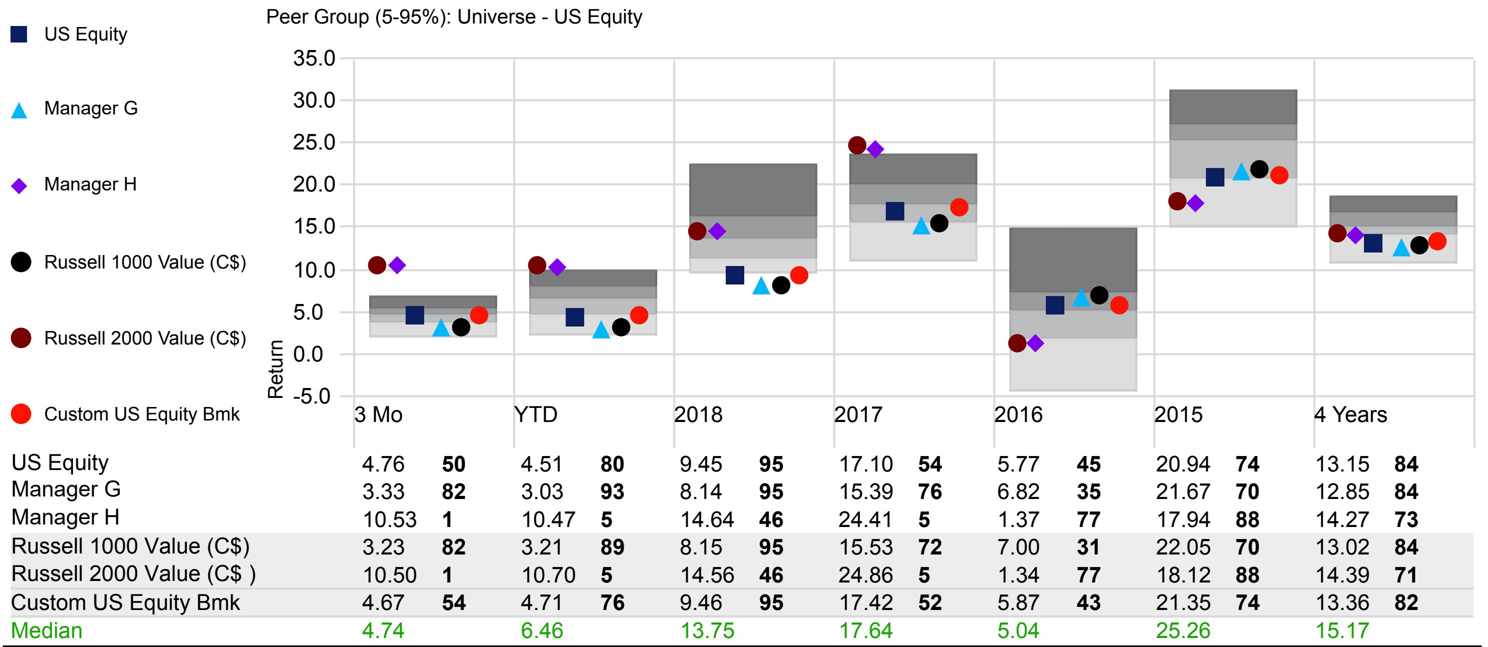
Manager D earned higher returns than the benchmark and peer universe median over the 4-year trailing period, whilst maintaining a lower degree of volatility.

US Equity

Manitoba Public Insurance

As of 6/30/2018

Trailing Performance

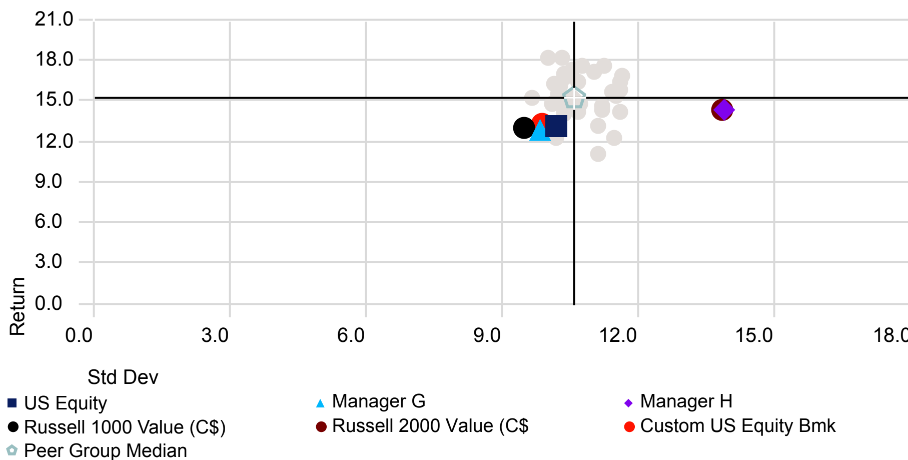


	3 Mo		YTD		2018		2017		2016		2015		4 Years	
US Equity	4.76	**50**	4.51	**80**	9.45	**95**	17.10	**54**	5.77	**45**	20.94	**74**	13.15	**84**
Manager G	3.33	**82**	3.03	**93**	8.14	**95**	15.39	**76**	6.82	**35**	21.67	**70**	12.85	**84**
Manager H	10.53	**1**	10.47	**5**	14.64	**46**	24.41	**5**	1.37	**77**	17.94	**88**	14.27	**73**
Russell 1000 Value (C$)	3.23	**82**	3.21	**89**	8.15	**95**	15.53	**72**	7.00	**31**	22.05	**70**	13.02	**84**
Russell 2000 Value (C$)	10.50	**1**	10.70	**5**	14.56	**46**	24.86	**5**	1.34	**77**	18.12	**88**	14.39	**71**
Custom US Equity Bmk	4.67	**54**	4.71	**76**	9.46	**95**	17.42	**52**	5.87	**43**	21.35	**74**	13.36	**82**
Median	4.74		6.46		13.75		17.64		5.04		25.26		15.17	

US Equities returned 4.8% in Q2 2018, on par with the median manager in the peer universe. Value securities underperformed growth securities during Q2 2018, and the mid cap value index outperformed the S&P 500 (C$). The 4-year trailing return is 13.2%, ranking in the 4th quartile of the peer universe.

Manager G returned 3.3% in Q2 2018, while Manager H returned 10.5%, as mid cap value significantly outperformed large cap value in the US Equity market during Q2 2018.

Risk-Reward 4 Year



	Return	Std Dev
US Equity	13.15	10.17
Manager G	12.85	9.82
Manager H	14.27	13.88
Russell 1000 Value (C$)	13.02	9.47
Russell 2000 Value (C$)	14.39	13.85
Custom US Equity Bmk	13.36	9.89
Median	15.17	10.57

Over the 4-year trailing period, the US Equity portfolio returns have lagged the US Equity Custom Benchmark while volatility has been higher. The portfolio has lower volatility than the median.

Real Estate & Infrastructure

Manitoba Public Insurance

As of 6/30/2018

Trailing Performance

	3 Mo	YTD	2018	2017	2016	2015	4 Years
Real Estate	2.31	4.51	10.24	9.04	7.68	7.58	8.63
Real Estate Direct	1.72	3.92	7.25	6.32	13.22	13.97	10.14
Manager F	2.45	4.65	11.03	9.83	6.19	5.68	8.16
Infrastructure	-0.49	7.78	7.97	5.65	4.61	7.50	6.42
IPD Property Index (lag)	1.38	4.12	7.35	6.21	7.82	6.83	7.05
CAN CPI + 5.00%	1.91	4.09	7.33	6.41	6.63	5.91	6.57

Real Estate portfolio earned 2.3% in Q2 2018, outperforming the IPD All Property Index (lag) by 0.9%. The IPD Index trailed all Canadian Real Estate managers in Q2. Infrastructure returned -0.5% in Q2, underperforming its benchmark of CAN CPI + 5%.

Both Real Estate & Infrastructure have performed well over the trailing 4-year period, earning returns of 8.6% and 6.4%, respectively.

To assist the reader of this report, a description of the background universe is being provided. Per instruction from MPI in August 2016, Ellement Consulting Group will no longer be providing Fiscal Year Ending Quarterly Reports. Ellement Consulting Group will now provide measurement of the MPI Fund at calendar year quarter end, along with one fiscal year report at year end. Peer universes used to rank performance and compare funds are from Morningstar.

With the February 2007 fiscal quarter report, a custom universe has been added. This universe is comprised of pooled funds weighted to MPI's policy asset mix which provides a performance comparison that is independent of asset mix. Prior to that, the Total Fund had been compared only to a Balanced Universe. Beginning with the November 2015 fiscal report, the custom universe is being run out of Morningstar.

Ellement Consulting Group began measuring the MPI fund as of July 1, 2003. Fixed Income returns are supplied by MPI, while Equity returns are calculated independently by Ellement from custodial records. Some data is obtained directly from the investment managers for improved accuracy. Return data prior to 2003 is a combination of MPI records and prior measurement reports.

Disclaimer

1. The rates of return used in this Report are not necessarily a prediction of possible future experience.
2. The rates of return used in this Report are believed to be accurate, complete and timely. Rounding issues may arise.
3. Reliance for data has been made primarily on the custodial statements of the Plan, Morningstar Direct, eVestment, the Bank of Canada, Ellement Performance Measurement Proprietary System and the Canadian Institute of Actuaries publications on Economic Statistics in the preparation of this Report. Additional information provided from investment managers has been of assistance from time to time.
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5. Careful deliberation, perhaps with supplementary information, may be required before investment managers are hired, continued or terminated, or before an asset class mix change is directed.

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CAC (MPI) 1-83

Part and Chapter:	PART VI INV.2.1.2	Page No.:	1,459 - 1,462; 1,469; 1,633
PUB Approved Issue No:	14. Risk Assessment and Risk Management 21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation #10. Minimum Risk Portfolio		

Preamble to IR (If Any):

On page 1,449, MPI states that its responses to CAC's 18 Recommendations have been "completed in full", but we raise some questions about some of the responses from MPI and Mercer, starting with #10 (Minimum Risk Portfolio).

Recommendation #10

> A minimum risk portfolio (for market risk) should be clearly defined. It should be aligned with the interests of relevant stakeholders, with clarity regarding the **short-term and long-term factors that impact rate sustainability** and other important outcomes.

Two Liability Benchmarks Considered

In the ALM Study and GRA, the Minimum Risk Portfolio is called the Liability Benchmark Portfolio ("Liability Benchmark"), and Mercer developed two such benchmarks – one defined in **real** terms, and the other in **nominal** terms. These two bases for proxying MPI's liabilities are very different, given the distinction between nominal interest rates on the one hand, and real interest rates and inflation on the other hand. For example, Mercer determined that real return bonds ("RRBs") represent 66% of the **Basic** Liability proxy and 81% for the **Pension** Liability proxy using the "real" basis, while RRBs represented 0% of the liability proxies for both liabilities under the "nominal" basis.

The significance of this difference is illustrated below for Basic and Pension liabilities.

	Basic			Pension		
	Nominal	**Real**	Diff	Nominal	**Real**	Diff
Treasury Bills		**26**	26	- 17	**- 11**	6
Short-Term Provincial Bonds	28	**8**	- 20			-
Mid-Term Provincial Bonds	18		- 18			-
Long-Term Provincial Bonds	54		- 54		**30**	30
Long-Term Corporate Bonds			-	117		- 117
Real Return Bonds		**66**	66		**81**	81
	100	**100**	-	100	**100**	-

MPI Relied on the Nominal (not Real) Liability Benchmark

MPI's asset allocation decisions appear to rely on modeling results that assume a **Nominal** Liability Benchmark, rather than a **real** one, despite the significant differences between the benchmarks noted above.

As noted in CAC Recommendation #13 (No Over-Reliance on Quantitative Modeling), optimal asset allocations are very sensitive to seemingly small changes in capital market assumptions (returns, volatilities and correlations). This sensitivity applies to the assumptions for volatilities and correlations related to the liabilities as well (not just the portfolio of assets). In other words, the selection of a nominal, rather than real, liability benchmark is a material decision that has a significant impact on the results of portfolio optimizations (i.e. efficient frontiers).

Ability to Forecast Long-Term Interest Rates

On page 1,469, Mr. Cheng (actuary) said "nobody can forecast interest rates (especially long term bonds) accurately and consistently".

The Purpose and Desirable Characteristics of Benchmarks

On page 1,633, Mercer described why benchmarks are established, along with their desirable characteristics (e.g. appropriateness and accountability). These are summarized below:

> An **effective** benchmark serves two ... purposes:
>
> 1. Provide ... an **appropriate** ... objective for managing the ... portfolio.
> 2. Acts as a **standard** against which ... performance ... can be measured.

... to effectively fulfill these two purposes, a benchmark should be:

a. **Specified in advance.** ... at the start of the ... evaluation period and is known to ... the investor.
b. **Appropriate.** ... consistent with the ... desired approach and style …
c. **Unambiguous.** ... composition (i.e. its constituents and their weights) is clearly defined.
d. **Measurable.** ... composition and return can be determined on a reasonably frequent basis.
e. **Accountable.** ... manager accepts the applicability of the benchmark and agrees to accept that differences in performance between the portfolio and the benchmark are caused only by their active management.
f. **Investable.** It is possible to forgo active management and instead passively replicate the benchmark.

Question:

a) **Materiality:** Would MPI and Mercer agree that optimal asset allocations ("efficient frontiers") are very sensitive to the composition of the Liability Benchmark (i.e., nominal vs. real)?
b) **Nominal vs. Real Liability Benchmark:** Why did MPI rely on the **nominal**, rather than **real**, Liability Benchmark?
c) Better Benchmark:
   i. Which liability benchmark (real or nominal) is better, given the purpose and desirable characteristics of benchmarks noted by Mercer, and also taking into account both the long-term nature of MPI's liabilities as well as the ability to forecast interest rates (especially long term bonds)?
   ii. Which liability benchmark (real or nominal) is:
      1) more effective?
      2) more appropriate?
      3) a better standard for measuring performance?
      4) a better standard for measuring risk?
      5) better from an accountability perspective?

Rationale for Question:

While MPI and/or Mercer have responded to CAC's 18 Recommendations, CAC respectfully disagrees that certain responses have been "completed in full", as suggested by MPI. Accordingly, CAC has clarifying/additional questions.

Model optimizations are very sensitive to the assumptions (established in 2017 GRA), including assumptions related to the Liability Benchmark used to measure a key metric (surplus risk).

RESPONSE:

a) Mercer responds: the Corporation and Mercer agree that optimal asset allocations depend on whether a nominal or real Liability Benchmark is used.

b) The Corporation has identified inflation as a risk and believes that the risk of sustained high inflation is low. The Corporation's outlook for inflation is discussed in *PUB (MPI) 1-80 (b)*.

c) A nominal benchmark is better (more appropriate and effective) given the Corporation's outlook for inflation. The Corporation's outlook for inflation is discussed in *PUB (MPI) 1-80 (b)*.

CAC (MPI) 1-84

Part and Chapter:	PART VI INV	Page No.:	1459-1462; 1654; 1755; 1749; 1765
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation #13. No Over-Reliance on Quantitative Modeling		

Preamble to IR (If Any):

Recommendation #13

MPI should be vigilant about its potential over-reliance on quantitative considerations, given the high sensitivity of optimal asset allocations to seemingly small changes in capital market assumptions (returns, volatilities and correlations) and the large number of inputs.

Mercer's response:

Mercer agrees that investors should not rely solely on quantitative modeling. The ALM process began with projections of the risk, return, and correlation of a variety of asset classes. **The ALM process concluded with a thorough discussion of practical considerations and observations regarding the current market environment.**

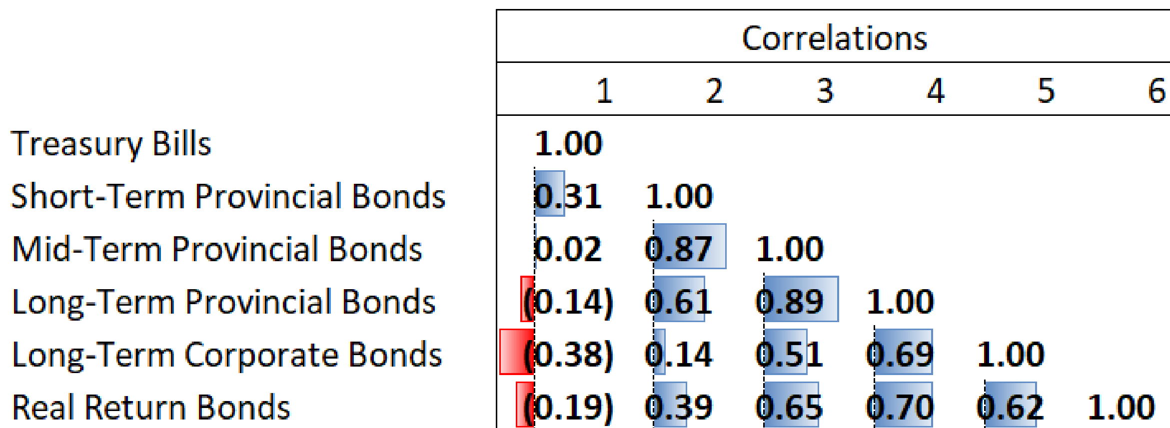
On page 1,654, Mercer said:

While quantitative models can be instructive and useful, we very much agree that investors should never rely solely on quantitative modeling …

Capital Market Assumptions for the Liability Benchmark

Page 1,765 (INV Appendix 17, Attachment A) shows the assumptions related to the components of the liability benchmark, which CAC summarized below (Basic and Pension only).

	Components of Liability Benchmarks	Return	SD
1	Treasury Bills	1.50%	1.50%
2	Short-Term Provincial Bonds	2.40%	3.50%
3	Mid-Term Provincial Bonds	3.00%	6.50%
4	Long-Term Provincial Bonds	3.30%	8.50%
5	Long-Term Corporate Bonds	4.20%	8.50%
6	Real Return Bonds	3.00%	7.50%



	Correlations					
	1	2	3	4	5	6
Treasury Bills	1.00					
Short-Term Provincial Bonds	0.31	1.00				
Mid-Term Provincial Bonds	0.02	0.87	1.00			
Long-Term Provincial Bonds	(0.14)	0.61	0.89	1.00		
Long-Term Corporate Bonds	(0.38)	0.14	0.51	0.69	1.00	
Real Return Bonds	(0.19)	0.39	0.65	0.70	0.62	1.00

The significant difference between the nominal and real bases are shown below for both Basic and Pension liabilities.

	Basic			Pension		
	Nominal	**Real**	Diff	Nominal	**Real**	Diff
Treasury Bills		**26**	26	- 17	- **11**	6
Short-Term Provincial Bonds	28	**8**	- 20			-
Mid-Term Provincial Bonds	18		- 18			-
Long-Term Provincial Bonds	54		- 54		**30**	30
Long-Term Corporate Bonds			-	117		- 117
Real Return Bonds		**66**	66		**81**	81
	100	**100**	-	100	**100**	-

The GRA included many efficient frontiers using the **Nominal** Liability Benchmark, showing for example, the effects of adding different asset classes one step at a time ("stepped approach") so the effects on return/risk could be seen. (Fewer such analyses were provided using the **Real** Liability Benchmark, and no "steps" were shown in the GRA on this basis.)

The table below shows how material the Liability Benchmark decision is on return/risk and asset allocation. (The supporting tables, A to C, are on the next two pages. They show the different implications reported by Mercer arising from the selection of a different Liability Benchmark – i.e., nominal vs. real).

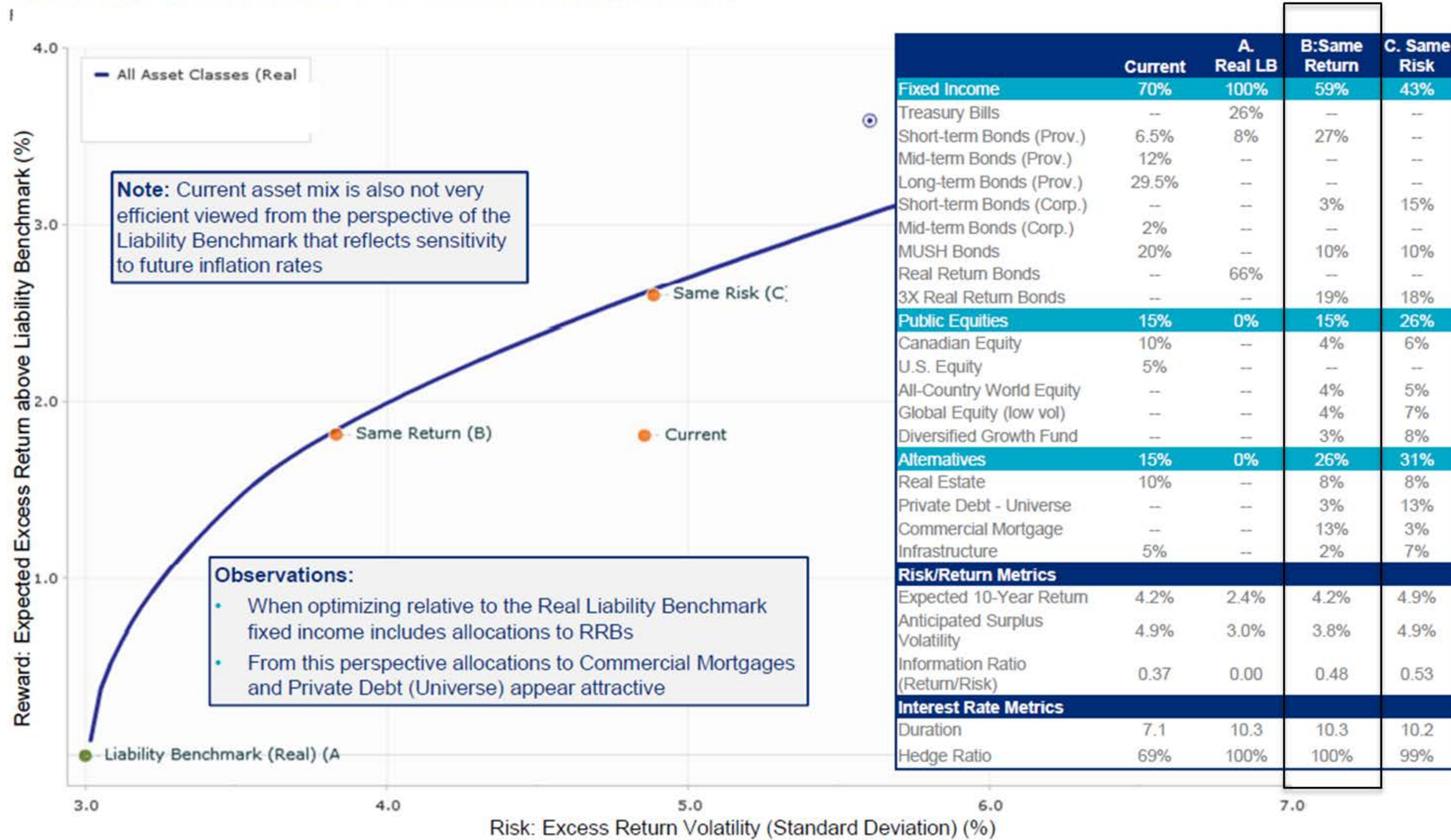
Table	Content	Materiality of Liability Benchmark Choice
A	**Table A shows return/risk metrics** for a portfolio that has the same expected return as the current portfolio (~ 4.2%), but is more efficient than the current portfolio (i.e. less risk); **The asset allocations** are also shown	The main difference between the optimizations relates to the inclusion of **RRBs in the portfolio under the real optimization**; The total fixed income allocation is the same (~ 75%) under both real and nominal optimizations
B	**Table B shows the current portfolio's return/risk metrics**	n/a
C	**Table C shows the improved efficiency** (less risk, same return) of the optimized portfolio, compared to the current portfolio (i.e. C = A minus B)	**Surplus volatility falls more when the real liability proxy is used (1.1% risk reduction, rather than 0.4%)**

B	**Current Portfolio**	Real	Nominal
	Expected 10-Year Return:		
	Portfolio	4.2	4.2
	Liability Benchmark Portfolio	2.4	2.8
	Excess Return	1.8	1.4
	Anticipated Surplus Volatility	4.9	5.0
	Excess Return/Anticipated Surplus Volatility	0.37	0.28
	Information Ratio (Return/Risk)	0.37	0.27
	Difference	- 0.00	0.01

C	**Improved Efficiency (Same Return)**	Real	Nominal	C = A - B
	Expected 10-Year Return:			
	Portfolio	-	- 0.1	No change in return (except rounding)
	Liability Benchmark Portfolio	-	-	
	Excess Return	-	- 0.1	
	Anticipated Surplus Volatility	**- 1.1**	**- 0.4**	More measured risk reduction with Real Liability
	Excess Return/Anticipated Surplus Volatility	0.11	0.00	
	Information Ratio (Return/Risk)	0.11	0.03	
	Difference	- 0.00	- 0.03	

The source for the above data is on the following two pages.

EFFICIENT FRONTIERS (MINIMALLY CONSTRAINED)
REAL LIABILITY BENCHMARK



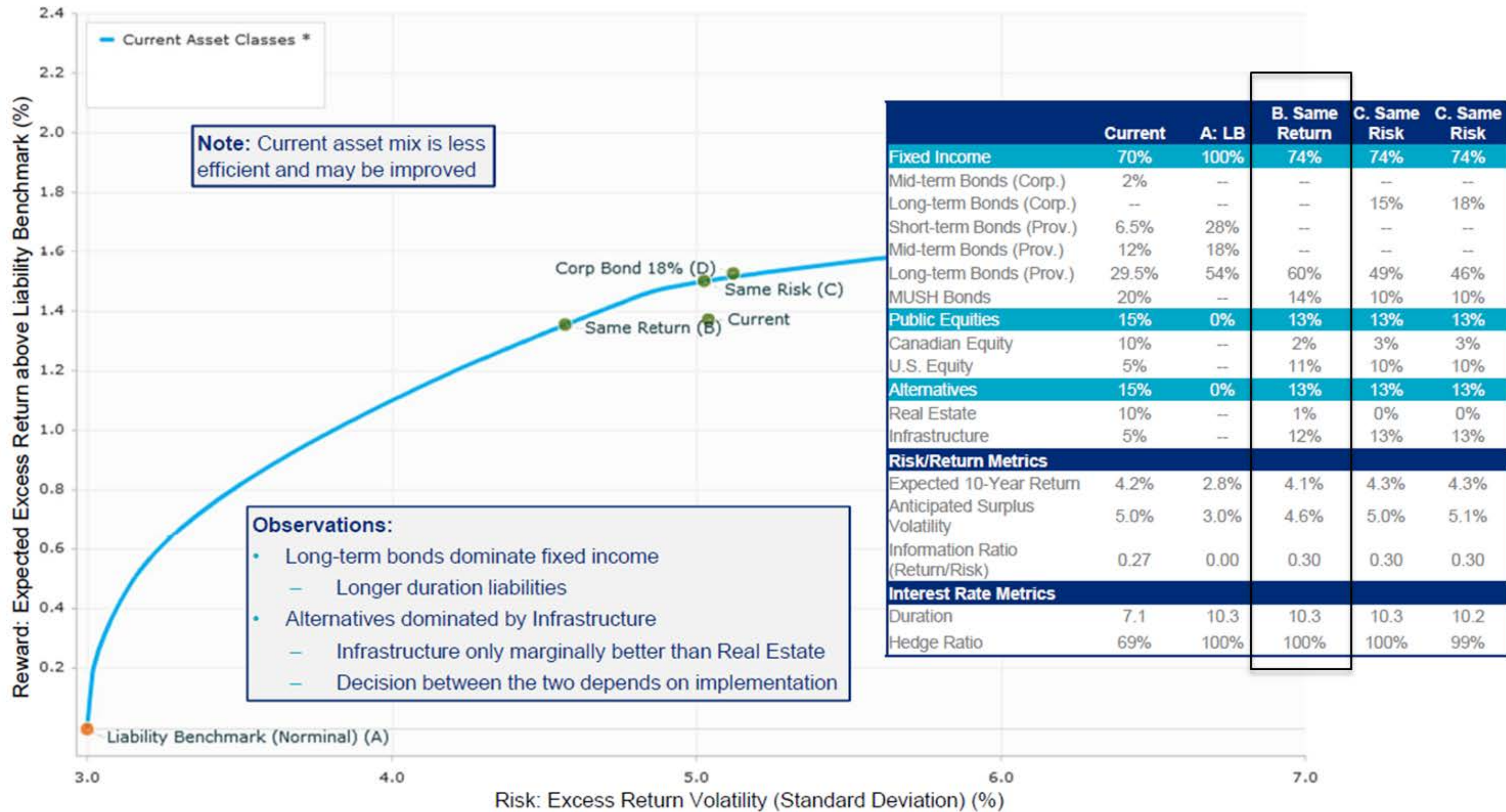
	Current	A. Real LB	B:Same Return	C. Same Risk
Fixed Income	70%	100%	59%	43%
Treasury Bills	--	26%	--	--
Short-term Bonds (Prov.)	6.5%	8%	27%	--
Mid-term Bonds (Prov.)	12%	--	--	--
Long-term Bonds (Prov.)	29.5%	--	--	--
Short-term Bonds (Corp.)	--	--	3%	15%
Mid-term Bonds (Corp.)	2%	--	--	--
MUSH Bonds	20%	--	10%	10%
Real Return Bonds	--	66%	--	--
3X Real Return Bonds	--	--	19%	18%
Public Equities	15%	0%	15%	26%
Canadian Equity	10%	--	4%	6%
U.S. Equity	5%	--	--	--
All-Country World Equity	--	--	4%	5%
Global Equity (low vol)	--	--	4%	7%
Diversified Growth Fund	--	--	3%	8%
Alternatives	15%	0%	26%	31%
Real Estate	10%	--	8%	8%
Private Debt - Universe	--	--	3%	13%
Commercial Mortgage	--	--	13%	3%
Infrastructure	5%	--	2%	7%
Risk/Return Metrics				
Expected 10-Year Return	4.2%	2.4%	4.2%	4.9%
Anticipated Surplus Volatility	4.9%	3.0%	3.8%	4.9%
Information Ratio (Return/Risk)	0.37	0.00	0.48	0.53
Interest Rate Metrics				
Duration	7.1	10.3	10.3	10.2
Hedge Ratio	69%	100%	100%	99%

"Real" Liability Benchmark (page 1,755)

June 15, 2018

2019 GENERAL RATE APPLICATION
INV Appendix 17
Attachment A

EFFICIENT FRONTIERS (MINIMALLY CONSTRAINED)
CURRENT ASSET CLASSES ONLY



	Current	A: LB	B. Same Return	C. Same Risk	C. Same Risk
Fixed Income	70%	100%	74%	74%	74%
Mid-term Bonds (Corp.)	2%	--	--	--	--
Long-term Bonds (Corp.)	--	--	--	15%	18%
Short-term Bonds (Prov.)	6.5%	28%	--	--	--
Mid-term Bonds (Prov.)	12%	18%	--	--	--
Long-term Bonds (Prov.)	29.5%	54%	60%	49%	46%
MUSH Bonds	20%	--	14%	10%	10%
Public Equities	15%	0%	13%	13%	13%
Canadian Equity	10%	--	2%	3%	3%
U.S. Equity	5%	--	11%	10%	10%
Alternatives	15%	0%	13%	13%	13%
Real Estate	10%	--	1%	0%	0%
Infrastructure	5%	--	12%	13%	13%
Risk/Return Metrics					
Expected 10-Year Return	4.2%	2.8%	4.1%	4.3%	4.3%
Anticipated Surplus Volatility	5.0%	3.0%	4.6%	5.0%	5.1%
Information Ratio (Return/Risk)	0.27	0.00	0.30	0.30	0.30
Interest Rate Metrics					
Duration	7.1	10.3	10.3	10.3	10.2
Hedge Ratio	69%	100%	100%	100%	99%

"Nominal" Liability Benchmark (page 1,749)

Questions:

a. **Quantitative vs. Qualitative:** To what extent were the results of the **quantitative** analyses relied upon to inform asset allocation decisions (as compared to **qualitative** considerations)?

b. **Practical Considerations:** What "practical considerations", if any, were used to justify the use of a Liability Benchmark based on **nominal** rather than real metrics?

c. **Time Horizon:** What time horizon did the "current market environment" refer to in the concluding phase of the ALM process?

   i. Next 5 years, or less?

   ii. Longer?

d. **Correlations:**

   i. Why do Treasury Bills have a negative correlation with both long-term bonds (Provincial and Corporate) and RRBs?

   ii. What is the significance of these negative correlations on optimal asset allocations, particularly as it relates to treasury bills, long-term fixed income (including RRBs), and the attractiveness of "leverage"?

e. **Basis Risk ("Tracking Error"):** Would MPI and Mercer agree that there is material tracking error* or basis risk between the Nominal Liability Benchmark and the Real Liability Benchmark for:

   i. Basic liabilities?

   ii. Pension liabilities?

   * **Tracking error** measures the standard deviation of the return difference between two groups of assets or liabilities (e.g. actual portfolio vs. benchmark). Basis risk refers to the risk that two portfolios (including liability benchmarks) will experience different performance/growth, arising from imperfect correlations (not = 1.0), for example.

f. **More Detailed Analysis for Real Scenarios:** Was the same "stepped" analysis that was performed using the **Nominal** Liability Benchmark (e.g. pages 1,749 to 1,753) also performed using the **Real** Liability Benchmark?

   i. If so, provide the analysis and commentary (at least for Basic and Pensions).

ii. If not, could a similar analysis and commentary be provided, showing the effect of including RRBs ("minimally" constrained)? (at least for Basic and Pensions)

Rationale for Question:

While MPI and/or Mercer have responded to CAC's 18 Recommendations, CAC respectfully disagrees that certain responses have been "completed in full", as suggested by MPI. Accordingly, CAC has clarifying/additional questions.

Model optimizations are very sensitive to the assumptions (established in 2017 GRA), including assumptions related to the Liability Benchmark used to measure a key metric (surplus risk).

RESPONSE:

Mercer provided the following responses:

a) MPI relied on both quantitative analyses and qualitative considerations to inform asset allocation decisions. From Mercer's perspective, MPI's reliance on both quantitative analyses and qualitative considerations was reasonable and prudent given the situation and consistent with other like investors.

b) During the early stages of the project, MPI advised that they were comfortable with a fixed 2% inflation assumption and that they were less concerned with inflation risk (in particular, the risk of long-term inflation materially exceeding 2%) than nominal interest rate risk (in particular, the risk of buying fixed income securities with duration much shorter than liabilities). Accordingly, it was agreed to model liabilities assuming 2% inflation and utilize a nominal liability benchmark.

c) When the "current market environment" was referred to, it was the next 5 years, or less.

d)

i. Our correlation assumptions are based on analyzing quarterly total returns during the last 2 decades for the respective FTSE TMX bond indices. Treasury Bills have exhibited a consistently negative correlation with both long-term bonds (Provincial and Corporate) and RRBs.

ii. The negative correlations of Treasury Bills with long-term bonds and RRBs were of very little significance, if any, to the recommended portfolios. MPI preferred to manage interest rate risk using physical securities (rather than leverage) for a variety of reasons and the early stages of the Asset Liability Study indicated this was possible.

e) There is tracking error or basis risk any time one uses a portfolio of marketable fixed income securities to proxy liabilities. Whether the tracking error/basis risk is 'material' depends on one's interpretation of what is 'material'. Given MPI's overall risk tolerance, return objectives, modelling budget, asset class constraints and the scope of the project, Mercer is supportive with MPI's decision to make its asset allocation decisions based off of the liability benchmarks analysis used.

f) Please see Rationale for Refusal.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

Mercer estimates that re-running the modelling of efficient frontiers will take approximately a week, and cost in excess of $20,000. The requested analysis is predicated on inflation forecast assumptions that Mercer and the Corporation rejected, in early stages of the ALM study, as not probable.

In an email exchange with counsel for the CAC, the Corporation suggested it would consider having Mercer conduct the requested analysis if the CAC could provide some evidence that Mercer's inflation forecast used in the ALM study was sufficiently inaccurate, or flawed in some way, so as to call into doubt the results of the ALM study.

As that evidence was not forthcoming from the CAC, the Corporation does not expect the requested analysis to add any meaningful evidence to the record, but will instead satisfy academic interest. When weighed against the costs of having Mercer conduct the analysis, the Corporation cannot establish that it is prudent to incur those costs.

CAC (MPI) 1-85

Part and Chapter:	PART VI INV	Page No.:	1459-1462; 1588; 1618; 1719; 1753
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation # 7. Min/Max Asset Class Constraints		

Preamble to IR (If Any):

Recommendation #7

The minimum/maximum and other constraints imposed on the portfolio (e.g., when asset-liability studies are conducted) should be reviewed and relaxed, to avoid costly constraints (lower risk-adjusted returns).

The rationale for imposing any such constraints should be made explicit.

Mercer's response (page 1,460):

The ALM study had minimally constrained and practical implementation constraints.

Leverage Constraint

The Liability Benchmarks developed by Mercer included negative (short) exposures related to TBills in both the nominal and real representations of the Pension Liability (17% and 11% short respectively), as summarized by CAC on the right.

	Pension Liability		
	Nominal	Real	Diff
Treasury Bills	- 17	- 11	6
Short-Term Provincial Bonds			-
Mid-Term Provincial Bonds			-
Long-Term Provincial Bonds		30	30
Long-Term Corporate Bonds	117		- 117
Real Return Bonds		81	81
	100	100	-

Benefits of Leverage

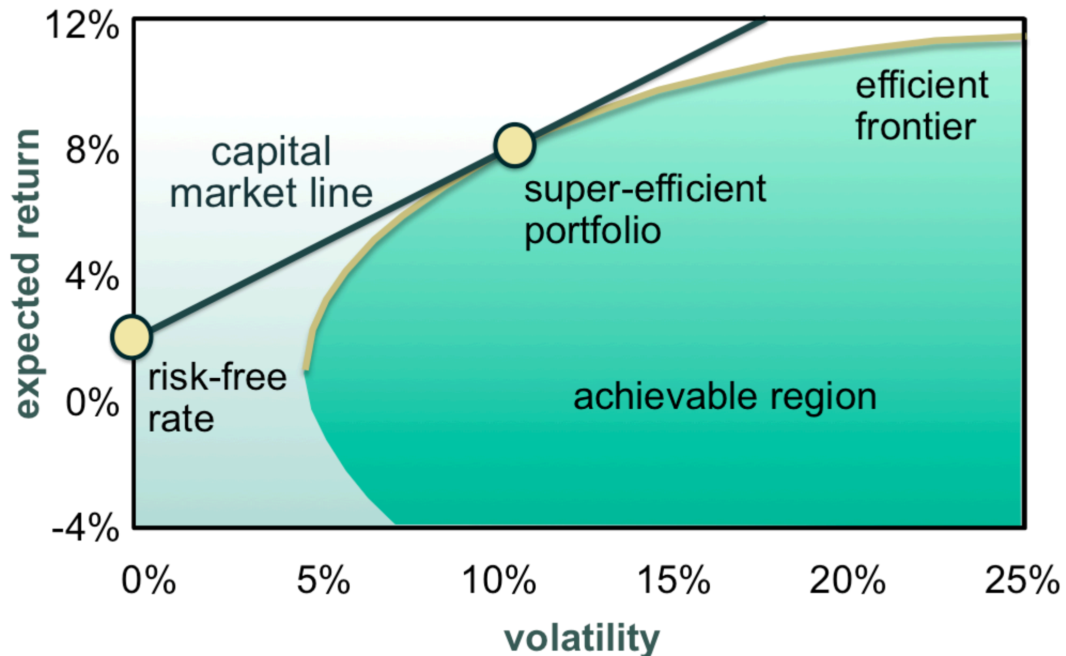
On page 1,753, Mercer said "adding leverage (Bond Overlay) provides an opportunity for improvement across risk spectrum".

On page 1,588, Mercer said this about overlay bonds:

> By synthetically increasing exposure to bonds, investors can track liabilities in a capital efficient manner as market interest rates change.
> Since funding costs are currently lower than the yield-to-maturity on the underlying bonds, a long bond overlay strategy comes with a positive expected return. In addition, an RRB overlay strategy normally includes a return enhancer equal to the long term spread between federal and provincial bonds. When all other assets are kept unchanged, adding a bond overlay strategy will typically increase the Plan's expected return.

Capital Market Line Theory

In an asset-only context (i.e. ignoring liabilities), the Capital Market Line illustrated below shows how the introduction of a risk-free asset (e.g. Government of Canada TBills in an asset-only context) expands the efficient frontier.



While many assumptions underlie the Capital Market Line in the broader CAPM[1] theory, two implications for "asset-only" investors are:

- All investors (regardless of risk tolerance) hold the "market portfolio"; and
- The proportion of an investor's portfolio held in the risk-free asset reflects their risk tolerance, with the balance invested in the market portfolio.

Exclusion of Leverage

On page 1,618, the rationale for excluding "Levered Bonds" was provided:

> Levered bonds allow investors to increase their exposure to longer duration securities via derivative contracts. Typically, investors pledge capital and pay a borrowing cost (typically short-term rates) and receive returns from a longer-term fixed income index (such as Long-Term Provincial Bonds or RRBs). … Levered bonds can provide capital efficient matching of desired duration or inflation exposures and are well suited for investors who are looking to match interest rate risk while maintaining healthy allocations to a growth portfolio. **Given MPI's preference to avoid equity exposure or additional types of risk within the Basic Portfolio, Levered Bonds are not included in the Policy recommendation. For the other Components, the desire is not to use leverage in the Portfolio.**

On page 1,719, Mercer's report said RRBs and leveraged bond funds (RRBs & Provincial bonds) were rejected from consideration because they were "either deemed too risky or the expected returns were too low".

[1] CAPM: Capital Asset Pricing Model

Question:

a) Were there any "practical considerations" or "observations" used to justify removing RRBs from consideration as a component of the **Liability Benchmark** (as distinct from the removal of RRBs as an asset class in which MPI might invest)? If so, what were they?

b) Were there any "practical considerations" or "observations" used to justify the removal of RRBs from consideration as an asset class in which MPI might invest? If so, what were they?

c) Can Mercer/MPI confirm that the asset allocation recommendations were based on a non-negative constraint for fixed income assets (i.e. 0% minimum), and if so, why?

d) Why does MPI have a "preference" or "desire" to not use leverage in the non-Basic components of the portfolio (e.g. pension), given the "improvement across the risk spectrum" of allowing leverage noted by Mercer?

e) What proportion (roughly) of Mercer's pension clients use leverage (e.g. have short or negative exposures to very short-term fixed income/cash), and are there any relevant and common characteristic that define which clients use leverage, and which clients don't?

f) When RRBs and leveraged bond funds (RRBs & Provincial bonds) were rejected from consideration because they were "either deemed too risky or the expected returns were too low", were these return/risk assessments done on a total portfolio basis (i.e. all assets in relation to liabilities, taking into account the effects of correlations for example), or for the asset class in question viewed in isolation?

g) Can Mercer show efficient frontiers, similar to the Capital Market Line shown above, except that risk is to be defined to take into account liabilities (surplus, not assets only), and the "risk-free" asset is the Minimum Risk Portfolio (**Real** Liability Benchmark, **not Nominal** Liability Benchmark, and not TBills)?

   i. The analysis should show the effects of allowable leverage **for fixed income assets only** (e.g. bond overlays, including RRBs). Other constraints can be added in a "stepped approach", starting from the "minimally constrained" scenario, in the same way such "steps" were shown on pages 1,749 to 1,753 of the GRA to illustrate the effects of adding new asset classes.

ii. The steps should include, at a minimum, the imposition of various constraints that were actually imposed, directly or indirectly, or which would illustrate the return/risk tradeoffs arising from various "steps" taken (or decisions made) as listed below:
   1) Set 0% maximum in RRBs
   2) Restrict the weight to the "final MPI recommended" weight, rather than the global market cap, in three (3) **individual steps** for:
      (1) Canadian Equity
      (2) Emerging Markets Equity
      (3) Other Equity

iii. The analysis should clearly show a portfolio ("Privates + ACWI") that consists of 0% fixed income, with a private/public split below:
   1) **Real estate, infrastructure, and private equity** using MPI's recommended weights
   2) **Public equity** in Canada, US, Emerging Markets, and other regions at their global market cap weights (e.g., All Country World Index Equities (ACWI))

iv. Mercer's "Observations" would facilitate the interpretation of results, as would Mercer's "Asset Mix Options" and "Expected Surplus Growth", similar to the observations and other reporting Mercer provided on pages 1,749 to 1,753 and 1,790 to 1,793 respectively of the GRA.

v. The scope of the above analysis could be limited to Basic and Pension.

Rationale for Question:

While MPI and/or Mercer have responded to CAC's 18 Recommendations, CAC respectfully disagrees that certain responses have been "completed in full", as suggested by MPI. Accordingly, CAC has clarifying/additional questions.

Model optimizations are very sensitive to constraints (established in 2017 GRA).

RESPONSE:

Mercer provided the following responses:

a) During the early stages of the project, MPI advised that they were comfortable with a fixed 2% inflation assumption and that they were less concerned with inflation risk (in particular, the risk of long-term inflation materially exceeding 2%) than nominal interest rate risk (in particular, the risk of buying fixed income securities with duration much shorter than liabilities). Accordingly, it was agreed to model liabilities assuming 2% inflation in all scenarios. RRB's were not specifically 'removed' from consideration for the Liability Benchmark, but given the absence of assumed inflation volatility, other fixed income benchmarks better matched the requirements for MPI's Liability Benchmark.

b) During the early stages of the project, MPI advised that they were comfortable with a fixed 2% inflation assumption and that they were less concerned with inflation risk (in particular, the risk of long-term inflation materially exceeding 2%) than nominal interest rate risk (in particular, the risk of buying fixed income securities with duration much shorter than liabilities). RRB's were not specifically 'removed' from consideration as an asset class in which MPI might invest, but given the characteristics of MPI's Liability Benchmark, other fixed income securities better fulfilled MPI's risk and return objectives.

c) A 0% minimum on fixed income assets applied throughout the project. Modelling an asset allocation with a 'net-negative' exposure to fixed income (i.e. borrowing heavily to derive exposure to risky growth assets) was not aligned with MPI's return objectives and risk tolerance.

d) The analysis indicated that MPI would be able to achieve its risk and return objectives utilizing a diversified portfolio of physical bonds and not require synthetic bonds.

e) Roughly 10% of Mercer's defined benefit pension clients use leverage. Clients more likely to use leverage are typically represented by many of the following characteristics:

i. Larger funds;
ii. Subject to solvency funding and sensitive to solvency volatility;
iii. Are risk averse with respect to interest rate risk (the risk of yields falling) along with a strong view that interest rates will continue to fall, **or** looking to enhance returns by profiting from positive carry (less prevalent in 2018's interest rate environment);
iv. A governance structure and staff that are more willing to embrace financial innovation and operational complexity.

f) Return/risk assessments were done on both a total portfolio basis (i.e. in relation to liabilities) as well as on an asset only basis. MPI was otherwise able to identify a diversified physical portfolio that met its risk and return requirements without requiring the complexity of leverage or an allocation to RRBs.

g) Please see Rational For Refusal

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

Mercer estimates that re-running the modelling of efficient frontiers will take approximately half a week, and cost in excess of $10,000. The requested analysis is predicated on inflation forecast assumptions that Mercer and the Corporation rejected, in early stages of the ALM study, as not probable.

In an email exchange with counsel for the CAC, the Corporation suggested it would consider having Mercer conduct the requested analysis if the CAC could provide some evidence that Mercer's inflation forecast used in the ALM study was sufficiently inaccurate, or flawed in some way, so as to call into doubt the results of the ALM study.

As that evidence was not forthcoming from the CAC, the Corporation does not expect the requested analysis to add any meaningful evidence to the record, but will instead satisfy academic interest. When weighed against the costs of having Mercer conduct the analysis, the Corporation cannot establish that it is prudent to incur those costs.

CAC (MPI) 1-86

Part and Chapter:	PART VI INV	Page No.:	1459-1462; 1481; 1520; 1532; 1614
PUB Approved Issue No:	14. Risk Assessment and Risk Management 21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation #15. Effectiveness of Duration Policy		

Preamble to IR (If Any):

Recommendation #15

> The effectiveness of the duration policy should be reviewed, given the inherent risks of changing real interest rates and unexpected inflation arising from MPI's liabilities, and exposure to changes in nominal interest rates in the MPI portfolio (i.e., nominal bonds without inflation protection). More specifically, MPI should re-assess the effectiveness of its duration-matching strategy since inflation (actual and/or expected) may differ from current expectations.

MPI's response to this recommendation in the GRA focuses mainly on duration **matching**, and the **efficiency** and cost of duration matching compared to other methods, such as cash flow matching. CAC is not questioning the efficiency of the duration policy, only its **effectiveness**, given the chosen basis for hedging (i.e. hedging **nominal**, rather than **real** interest rate risk).

On page 1,614, Mercer said:

> Most Basic liabilities are subject to inflation risk. After considering the cost of hedging inflation risks and the likelihood of future increases in inflation, MPI decided to hedge the nominal interest rate risk of Basic liabilities assuming that inflation linked obligations increase at 2% per annum. By matching the duration of assets to the duration of liabilities, MPI will be able to efficiently construct portfolios that allow for return enhancement. A fully cash flow matched asset portfolio would mitigate both duration and convexity risk, but

would require MPI to sacrifice opportunities to diversify its fixed income portfolio and enhance yields. We are supportive of MPI's strategy decision in the regard.

Change in Duration Policy

On page 1,481, MPI said that it had changed its duration matching policy "to exclude MUSH bonds due to a change in the calculation methodology for the claims discount rate, which is now based upon the dollar weighted yield of the fixed income portfolio rather than the duration weighted yield of the fixed income portfolio".

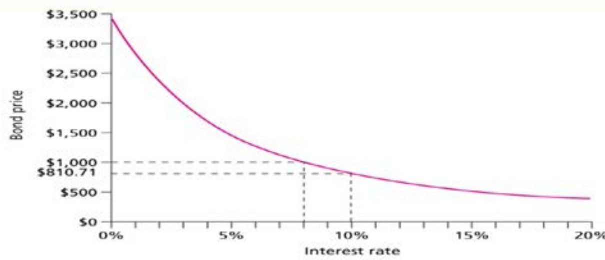
> 8.4 Interest rate risk is managed by matching the duration of the fixed income portfolio, which includes marketable bonds~~,~~ and floating rate notes~~, and non-marketable bonds~~ to the actuarially determined duration of the Corporation's claims liabilities. If an allocation to floating rate notes is designated by the Working Group to fund other asset classes, then the designated amount can be excluded from the duration calculation.

On page 1,520 (INV.16.1), MPI said:

> ... the duration of the **marketable bond portfolio (i.e. excluding MUSH bonds)** will be matched to the duration of the claims liabilities. This change is due to the change in the calculation methodology for the claims discount rate, which is now based upon the dollar weighted yield of the fixed income portfolio rather than the duration weighted yield of the fixed income portfolio. **The net result is that the duration of the marketable bond portfolio will decrease by approximately 2 years.**

Yield/Duration Relationships

The present value of a bond is inversely related to its yield, and its duration (price sensitivity) is higher when interest rates are lower (i.e. the price/yield relationship "steepens"). The same is true for a claim/pension liability, and these relationships are illustrated on the right.



MPI's Investment Beliefs

The first three investment beliefs in MPI's Investment Policy Statement (IPS) say:

a. Asset allocation is the most important factor in determining the performance of the Fund.
b. Market timing at the strategic asset allocation level is generally not an effective strategy for consistently increasing returns.
c. Identifying, measuring and monitoring risks within the portfolio are important.

Question:

a. How can MPI reconcile its decision to measure risk relative to a **Nominal** Liability Benchmark (which does not measure the **inflation and real interest rate** components of interest rate risk) with its third investment belief, which is that "identifying, measuring and monitoring risks within the portfolio are important"?
b. To what extent does MPI believe:
   i. Asset allocation is a very important factor in determining the **risk** of the Fund? (i.e. comparable to MPI's first belief regarding **performance/return**)?

   ii. Market timing at the strategic asset allocation level is generally **not** an effective strategy for **managing risks**? (i.e. comparable to MPI's second belief regarding consistently increasing **returns**)

c. Why was the calculation policy for the claims discount rate changed to a dollar weighted yield of the fixed income portfolio rather than duration weighted?
d. Why was the duration policy changed to exclude MUSH bonds?
e. Was the decision to exclude MUSH bonds related to the change in the discount rate methodology, and if so, why?
f. To what extent was the reduction in duration of the marketable bond portfolio (~ 2 years) an intended result, or simply a byproduct of the changes made?
g. How much of the ~ 2 year reduction in duration was due to:
   i. change in the method for discounting ("weighting" effect)?
   ii. change in the composition ("security selection" effect)?
   iii. combination of the above?
h. When Mercer said it was supportive of MPI's strategy decision "in the regard", to what extent does Mercer's support relate to:
   i. The decision by MPI to duration match, rather than cash flow match?
   ii. The decision by MPI to hedge the nominal interest rate risk of Basic liabilities, rather than real interest rate risk and inflation risk?
   iii. The assumption that inflation linked obligations increase at 2% per annum?

Rationale for Question:

While MPI and/or Mercer have responded to CAC's 18 Recommendations, CAC respectfully disagrees that certain responses have been "completed in full", as suggested by MPI. Accordingly, CAC has clarifying/additional questions.

The long-term effectiveness of the duration policy, in managing interest rate risk, depends on the basis selected for measuring duration (i.e. real vs. nominal), as well as the methods/calculations and assumptions used. Long-term inflation (actual and/or expected) may differ from current expectations.

RESPONSE:

a) The Corporation has identified inflation as a risk but believes there to be a low risk of sustained high inflation. See the Corporation's response to *PUB(MPI) 1-80 (b)* for its view on inflation.

b)

i) The Corporation believes that asset allocation is an important determinant of the risk of an investment portfolio.

ii) The Corporation believes that market timing at the strategic asset allocation level is generally not an effective strategy for managing risks.

c) The Corporation's ALM program has evolved over time. As background, the Corporation implemented the duration-weighted claims discount rate methodology when cash was used as part of the duration matching fixed income portfolio. Cash has a duration of between 0 and 0.25 years. Dollar weighting the yield of cash in the claims discount rate calculation causes significant variance to net income as cash flowed in/out of the portfolio, which decreases/increases the discount rate for liabilities. However, by duration weighting the claims discount rate, cash is effectively given no weight in the yield calculation. As a result, cash can flow in and out of the portfolio without affecting the claims discount rate.

Up until April 10, 2015, Section 8.4 of IPS included cash in the duration matching fixed income portfolio:

> *"Interest rate risk is managed by maintaining the combined Macaulay duration of the floating rate note, **cash**, marketable and non-marketable bond components with ± 1.0 year of the actuarially determined duration of the Corporation's claims liabilities. If an allocation to cash and floating rate notes is designated by the Working Group to fund other asset classes, then the designated amount can be excluded from the duration calculation."*

On April 10, 2015, the Section 8.4 of the IPS was changed to say the following (which excluded cash from the duration matching fixed income portfolio):

> *"Interest rate risk is managed by matching the combined duration of the, marketable bonds, which includes floating rate notes, and non-marketable bonds with the actuarially determined duration of the Corporation's claims liabilities. If an allocation to floating rate notes is designated by the Working Group to fund other asset classes, then the designated amount can be excluded from the duration calculation.*

The above change occurred because the Corporation created the Operational Asset Liability Management Policy, which first became effective in 2015. The non-use of cash in the duration matching fixed income portfolio, eliminated the purpose for using the duration-weighted claims discount rate.

Over time, there were discrepancies in net interest rate impacts caused by the duration-weighted claims discount rate. Capital gains/losses for marketable bonds are based on changes in the market weighted yield of the portfolio, whereas claims liabilities were being valued based on the duration weighted yield of the fixed income portfolio, which created basis risk (ie: valuation on two different bases). The dollar-weighted (i.e. market-value weighted) claims discount rate methodology was found to provide tighter tracking (less basis risk) and was easier to explain compared to the duration weighted claims discount rate. Page 7 of the Actuarial Report as of October 31, 2017, states:

> *"We switched from duration adjusted yield to market value weighted yield in selecting the discount rate. The Corporation's asset liability management policy strives to minimize the impact to its income statement due to a change in market interest rates."*

Changing the methodology had a one-time positive impact to net income. As stated in Part VIII, AR Appendix 1, page 35, the change in the basis for determining the discount rate increased the claims discount rate by 15 basis points from 3.32% (duration weighted) to 3.47% (market value weighted) as of the February 28, 2018 valuation. The change in the basis for determining the discount

rate decreased the discounted net claim liabilities by $25.8 million, and the Internal Loss Adjustment Expense provision by $2.7 million.

d) Please see *PUB(MPI) 1-29 (a)*.

e) Please see *PUB(MPI) 1-29 (a)*.

f) The reduction in the duration of the marketable bond portfolio was a byproduct of the changes made, not an intended result.

g) Purchasing lower yielding government bonds created the approximate 2-year reduction in duration.. The Corporation does not have the analytical software required to perform fixed income performance attribution, which would quantify the weighting effect and the security selection effect.

h) See parts i) through iii) below for Mercer's response

   i) Duration matching is a cost effective and efficient method for identifying and hedging interest rate risks. For larger investors and/or investors who are more risk averse, cash flow matching provides the opportunity to identify more robust matching portfolios. However, cash flow matching portfolios require more costly internal systems and more costly asset liability studies and ongoing analysis, particularly if inflation risks are to be hedged. Given our understanding of MPI's risk and return objectives along with its desire to mitigate system and modelling costs, we support their decision to duration match.

   ii) Given the current environment, we support decisions by institutional investors such as MPI to hedge nominal interest rate risk before hedging real interest rate risk. We share MPI's view that over the long-term it is unlikely that inflation will persistently exceed 2% per annum. Fully hedging both nominal and real interest rate risk would materially reduce return expectations and significantly limit MPI's investment opportunity set.

iii) The decision to assume that inflation linked obligations increase at 2% per annum contributed significantly to our support of MPI's strategy.

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Part and Chapter:	PART VI INV	Page No.:	1553
PUB Approved Issue No:	14. Risk Assessment and Risk Management 21. Asset Liability Management Study		
Topic:	Operational Asset Liability Management Policy		
Sub Topic:	Designated Amount of Floating Rate Notes		

Preamble to IR (If Any):

On page 1,553, the Operational Asset Liability Management Policy says "if an allocation to floating rate notes is designated by the Working Group to fund other asset classes, then the designated amount can be excluded from the duration calculation".

Question:

a) Please describe the process followed by the Working Group to designate (to fund other asset classes) the amount of floating rate notes to be excluded from duration calculations. For example, what requirements need to be satisfied (e.g. approved resolution), and when does the designation become effective in relation to when it is designated/approved?

b) What designations have been made after September 2017:
   i. Related to the ALM Study?
   ii. Related to other considerations?

c) For the purpose of accounting and performance measurement, when do the effects of the designation get recorded between asset classes that have different benchmarks?
   i. When the designation is effective?
   ii. When the funding occurs?

d) How predictable are the amounts to be designated? i.e. Are the funding needs very predictable in terms of their amount and timing?

e) Is there a "reciprocal" designation that has an impact on duration calculations related to injections (rather than withdrawals) of cash (e.g. arising from the planned sale of real estate, rather than acquisitions)?

Rationale for Question:

The designated amount of floating rate notes has an impact on duration calculations, which is used to measure and manage interest rate risk. The process followed by the Working Group to designate the amount of floating rate notes to exclude from the duration calculations is not clear.

RESPONSE:

a) The Working Group's designation of the amount of floating rate notes to be excluded from duration calculations (to fund other asset classes) only occurred when the Corporation was set to fund new investments in real estate and infrastructure from October 2010 to August 2012. The Investment Department recommends to the Working Group an amount to fund a new asset class, the Working Group then discusses that recommendation and makes a decision by consensus. Designations are effective immediately following the conclusion of the relevant Working Group meeting.

b) The Working Group made no designations after September 2017.

c) There is no effect on the performance calculation following the designation of floating rate notes investments to fund other asset classes. The only calculation affected by the designation is the duration calculation. Whenever there is a transfer of funds from one asset class to another, the performance calculation for each asset class accurately accounts for the transfer and reflects the change in the market value of each asset class on the date of the transfer.

d) The amounts designated are predictable since the Corporation determines how much it will commit to new funds. Timing of designations generally depend upon drawdown notices issued the by external investment managers.

e) There is no “reciprocal” designation that impact duration calculations related to injections (rather than withdrawals) of cash.

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Part and Chapter:	PART VI INV	Page No.:	1459-1462; 1586; 1603; 1618; 1626; 1639; 1677; 1726; 1756; 1773
PUB Approved Issue No:	14. Risk Assessment and Risk Management 21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation #14. Exclusion of Real Return Bonds		

Preamble to IR (If Any):

Recommendation #14

> The role that RRBs can play in effectively managing relevant risks should be discussed, with consensus achieved regarding the effectiveness of RRBs from a risk management perspective (i.e., independent of the cost of any "insurance" as measured by RRB yields and their expected returns).

Mercer and MPI's response (page 1,461):

> Given low current inflation expectations Mercer and MPI agreed to hedge nominal, not real interest rate risk. Prior discussions with intervenors identified high inflation scenarios as a relatively low risk.

On page 1,586, Mercer listed some of the asset classes to consider, noting that the products listed in their table (reproduced below) "have a valuable role to play as part of MPI's allocation and are worth modelling as part of the Asset Liability Study". Mercer provided general guidance on the relative ability of each asset class to fulfil various objectives, and these are shown in the table below.

While CAC agrees with some of Mercer's assessments, CAC provided additional commentary to further clarify the distinguishing characteristics about regular bonds (exposed to inflation risk) and RRBs (not exposed). CAC's comments appear **shaded**.

Asset Class	View	Ability to Match Duration	Ability to Enhance Investment Returns	Ability to Protect Principal
Federal/ Provincial Bonds	Mercer	Very strong. Diverse set of duration and terms to choose from.	Weak. Modest real return expectations at best.	Excellent, particularly for shorter-duration federal bonds.
	CAC	Very strong ability to match **nominal** duration. Weaker ability to match **real** duration. Ability of nominal bonds to match real duration risks in the liabilities depends on the correlation between real and nominal yields (which in turn depends on the volatility of inflation expectations and inflation realizations).	Weak. Modest **nominal** return expectations at best.	Weak for MPI's long-duration, inflation linked liabilities. Principal may erode as nominal interest rates rise (e.g. inflation expectations change, realized inflation is above expectations).
Real Return Bonds	Mercer	Strong for MPI's inflation linked liabilities.	Weak. Will only perform well if Canadian inflation is high.	Principal may erode as interest rates rise and/or inflation expectations change.
	CAC	Same as Mercer above.	Weak. Will perform better if Canadian inflation is i) higher than the BEIR[1] or ii) if **real** yields fall.	Real value of principal will be protected, adjusted upwards (downwards) by inflation (deflation) to maintain purchasing power. Real value of principal may erode if **real** interest rates rise, but if RRB asset duration is matched to the real liability duration, surplus is hedged.

1 BEIR: Break Even Inflation Rate, as defined by Mercer on page 1,756 of the GRA

Mercer's Analysis, Implementation Considerations, and Recommendations

On page 1,603, Mercer said:

> RRBs are the most direct hedge to inflation, but provide no opportunity for additional real returns. Investors looking to balance return enhancement with inflation hedging often look to obtain an implicit or indirect inflation hedge using real assets, which are expected to deliver inflation sensitive returns (e.g., physical real estate, physical infrastructure).
>
> The Canadian RRB market is fairly large and liquid. There are currently 15 outstanding issuances, among which eight were issued by the Government of Canada and 7 are provincial issuances. RRBs issued by the Government of Canada are the most liquid and currently have a total market value of about $72 Billion.
>
> … Due to the limited number of RRB issues and their specific maturity dates, developing a portfolio to match the inflation risk in the MPI components can be challenging. The challenge arises from trying to achieve a closely matching inflation-sensitive cash flow between assets and the respective component's projected claims or pension payments.
>
> We agree that RRBs can provide an effective hedge against CPI linked obligations **MPI has approved the inclusion of RRBs in the 2017 Asset Liability Study**.

On page 1,626, Mercer added "much of MPI's obligations are linked to future levels of inflation. Real return bonds are the best hedge for future inflation".

Exclusion of RRBs

On page 1,677, MPI said:

> MPI has a long-term inflation forecast of 2.0%, which is based upon historical inflation and the Bank of Canada's inflation target. Real Return Bonds (RRBs)

> were not considered for this reason and also because the real yields on RRB's are currently very low.

On page 1,618, Mercer explained why RRBs were excluded from the recommendation:

> While basic claim liabilities and pension liabilities are indexed to inflation; a number of factors contributed to the exclusion of RRBs from the Policy recommendation, including:
>
> 1. **RRB real yields are relatively low**, averaging ~0.6% through November 2017.
> 2. **MPI's Basic liabilities assume a 2% inflation rate.** If future inflation is near this rate, these obligations can be most efficiently hedged with traditional bonds. RRBs will only be worth their cost if inflation is well in excess of 2%, but will cause MPI to incur losses if inflation is flat.
> 3. **Duration and dollar matching liabilities is challenging with RRBs.** The Canadian RRB market consists of 15 issues of which only 7 are liquid and all are government issued.
> 4. RRBs are traditionally indexed to the Canadian Consumer Price Index, while Basic Liabilities are indexed to other drivers.

Convexity

On page 1,639, Mercer defined convexity risk as the risk of non-parallel shifts in the yield curve, noting that convexity risk "is most pronounced when unusual changes in yields happen", and that "gains/losses resulting from non-parallel shifts often works themselves out over modest periods of time".

On page 1,677, MPI said:

> MPI has a long-term inflation forecast of 2.0%, which is based upon historical inflation and the Bank of Canada's inflation target. Real Return Bonds (RRBs) were not considered for this reason and also because the real yields on RRB's are currently very low. In addition, the Dynamic Capital Adequacy Test (DCAT) report does not include a high inflation scenario as a significant risk.

Return Expectations

On page 1,756, Mercer said:

Currently, RRBs offer relatively attractive inflation protection.

This is best understood by calculating the total expected yield of an RRB and then comparing it to a conventional bond with the same quality and maturity. Below we consider 30-year Government of Canada

RRB Real Yield	0.6%
30-year BEIR[1]	1.6%
Total Yield	2.2%
30-year conventional bond yield	2.3%

- … it is worth noticing that despite RRBs offering attractive inflation protections, the expected return on RRBs is below its long-term historical levels with a current real yield of 0.60%.

Footnote 1: BEIR is the Break Even Inflation Rate which is calculated as the difference between a conventional bond and an RRB. The BEIR can be interpreted as the capital markets expectation on future inflation.

Key Learnings and Conclusions

On page 1,773, Mercer's summary of key learnings and conclusions included:

Inflation linkage of liabilities: "Much of MPI's obligations are linked to future levels of inflation. Real return bonds are the best hedge for future inflation." However, MPI concluded that "given low inflation expectations, hedge nominal, but not real, interest rate risk".

Interest Rate Risk Management Strategy: "Focus on duration matching for 100% of Basic liabilities."

Economic Assumptions: "Mercer's long-term assumptions assume a gradual rise in interest rates to a long-term equilibrium state. Alternatively, we are comfortable assuming shifts in future yields implied by current forward rates." MPI concluded that "projections and analysis will be based on implied forward rates".

Interest Rate Forecasts

Mercer's Interest Rate Forecasts are summarized below (page 1,726).

Figure 2: Mercer Interest Rate Forecast – Standard

Line No.	Year	Federal T-Bills	Short Term	Mid Term	Long Term	Overall RRB
1	0	0.76%	1.42%	1.87%	2.25%	0.60%
2	1	1.80%	1.58%	2.04%	2.34%	0.65%
3	2	1.08%	1.59%	2.11%	2.36%	0.66%
4	3	1.24%	1.79%	2.24%	2.40%	0.68%
5	4	1.41%	1.96%	2.42%	2.59%	0.79%
6	5	1.58%	2.13%	2.60%	2.78%	0.90%
7	6	1.75%	2.30%	2.78%	2.97%	1.01%
8	7	1.91%	2.47%	2.96%	3.16%	1.11%
9	8	2.08%	2.64%	3.14%	3.35%	1.22%
10	9	2.25%	2.81%	3.32%	3.54%	1.33%
11	10	2.41%	2.98%	3.50%	3.73%	1.44%

Figure 3: Mercer Interest Rate Forecast – Forward Curve

Line No.	Year	Federal T-Bills	Short Term	Mid Term	Long Term	Overall RRB
1	0	0.76%	1.42%	1.87%	2.25%	0.60%
2	1	0.99%	1.56%	1.96%	2.29%	0.60%
3	2	1.18%	1.67%	2.04%	2.32%	0.59%
4	3	1.34%	1.77%	2.11%	2.35%	0.59%
5	4	1.47%	1.86%	2.17%	2.38%	0.59%
6	5	1.56%	1.93%	2.23%	2.41%	0.58%
7	6	1.63%	1.99%	2.28%	2.43%	0.58%
8	7	1.68%	2.03%	2.32%	2.46%	0.58%
9	8	1.72%	2.07%	2.36%	2.48%	0.58%
10	9	1.75%	2.11%	2.40%	2.50%	0.57%
11	10	1.77%	2.13%	2.43%	2.52%	0.57%

Question:

a) Do MPI and/or Mercer agree with CAC's comments related to various characteristics about Federal/Provincial Bonds and RRBs, as **shaded** in the table?

b) Does MPI continue to believe that inflation risk remains a relatively low risk since the ALM Study was completed, taking into account the recent imposition of U.S. trade tariffs and continued uncertainty around NAFTA negotiations?

c) Can Mercer clarify its statements, below, regarding efficiency, cost, and losses if inflation is flat?

> "MPI's Basic liabilities assume a 2% inflation rate. If future inflation is near this rate, these obligations can be most **efficiently** hedged with traditional bonds. RRBs will only be worth their **cost** if inflation is well in excess of 2%, but will cause MPI to incur **losses** if inflation is flat."

i. **Efficiency:** Are the obligations more efficiently hedged with traditional bonds (rather than RRBs) due to better duration "matching" (e.g. because nominal bonds are in larger supply than RRBs), or are there other reasons?

ii. **Cost:** Could/should the Break Even Inflation Rate ("BEIR") defined by Mercer be interpreted as the inflation rate that will make the cost of hedging inflation and real rate risk (by buying RRBs) "break even"? (i.e. compared to buying nominal bonds instead)

iii. **"Flat Inflation":**

i. Does flat inflation mean:

- 0% **volatility** in inflation (e.g., constant **level** of 2%)? or
- 0% **average** inflation rate (perhaps with some volatility around a 0% mean)?

ii. How and why would MPI incur losses if inflation is "flat"?

d) Under the "Forward Curve" method for forecasting interest rates that was recommended by MPI and "deemed acceptable" by Mercer, wouldn't RRBs perform reasonably well compared to long-term bonds over the next decade if the forecasted **3 bps drop in real yields for RRBs** is realized, along with the forecasted **27 bps rise in long-term nominal yield (and curve steeping at shorter horizons)**? (The table below show the interest rate forecast from Figure 3 on page 1,726 of the GRA.)

		Forecast (1 Decade Later)		Change in Decade	
	Current	Standard	Forward Curve	Standard	Forward Curve
Federal T-Bills	0.76%	2.41%	1.77%	1.65%	1.01%
Short Term	1.42%	2.98%	2.13%	1.56%	0.71%
Mid Term	1.87%	3.50%	2.43%	1.63%	0.56%
Long Term	2.25%	3.73%	2.52%	1.48%	0.27%
Overall RRB	0.60%	1.44%	0.57%	0.84%	-0.03%

e) Does the 1.6% 30-year BEIR look attractive, and if not, what BEIR might be attractive, considering:
    i. **MPI's** inflation forecast of 2% (i.e. 0.4% higher than "break even") in the near term?
    ii. **Past**, long-term experience (i.e. decades, not the past few years)?
    iii. **Longer**-term future expectations (i.e. decades)?

f) How well does the BEIR formula measure the cost of RRBs?

g) Isn't the best measure of the cost of RRBs (or any asset class) done at the total portfolio level (not asset class levels), given the importance of correlation effects, by quantifying the impact on net returns for the same level of risk "with" and "without" the asset class (or with marginal changes to asset class exposures)?

Rationale for Question:

While MPI and/or Mercer have responded to CAC's 18 Recommendations, CAC respectfully disagrees that certain responses have been "completed in full", as suggested by MPI. Accordingly, CAC has clarifying/additional questions.

The decision to exclude RRBs does not appear to be consistent with **qualitative** considerations related to the risk, cost, and return expectations for this asset class, viewed on a total portfolio basis. On a **quantitative** basis, MPI's decision to define the Liability Benchmark Portfolio in nominal, rather than real, terms i) understates the true surplus risk in the fund and ii) does not accurately measure the contribution that RRBs could make in increasing risk-adjusted returns over both the long term and short term.

RESPONSE:

a) Mercer responds:

    In general, Mercer agrees with CAC's shaded comments. However, we'd offer the following comments/clarifications IN CAPS.

Asset Class	View	Ability to Match Duration	Ability to Enhance Investment Returns	Ability to Protect Principal
Federal/ Provincial Bonds	Mercer	Very strong. Diverse set of duration and terms to choose from.	Weak. Modest real return expectations at best.	Excellent, particularly for shorter-duration federal bonds.
	CAC	Very strong ability to match nominal duration. Weaker ability to match real duration. Ability of nominal bonds to match real duration risks in the liabilities depends on the correlation between real and nominal yields (which in turn depends on the volatility of inflation expectations and inflation realizations).	Weak. Modest **nominal** return expectations at best. FEDERAL/ PROVINCIALS HAVE MODEST RETURN EXPECTATIONS (AT BEST) ON BOTH REAL AND A NOMINAL BASIS.	Weak for MPI's long-duration, inflation linked liabilities. DON'T SEE THE CONNECTION BETWEEN 'ABILITY TO PROTECT PRINCIPAL' AND MPI'S LIABILITIES. 'ABILITY TO PROTECT PRINCIPAL' IS INDEPENDENT OF LIABILITIES. Principal may erode as nominal interest rates rise (e.g. inflation expectations change, realized inflation is above expectations).
Real Return Bonds	Mercer	Strong for MPI's inflation linked liabilities.	Weak. Will only perform well if Canadian inflation is high.	Principal may erode as interest rates rise and/or inflation expectations change.
	CAC	Same as Mercer above.	Weak. Will perform better if Canadian inflation is i) higher than the BEIR2 or ii) if real yields fall.	Real value of principal will be protected, adjusted upwards (downwards) by inflation (deflation) to maintain purchasing power. Real value of principal may erode if real interest rates rise, but if RRB asset duration is matched to the real liability duration, surplus is hedged.

2 BEIR: Break Even Inflation Rate, as defined by Mercer on page 1,756 of the GRA

b) Yes, MPI believes that long-term inflation risk remains a relatively low risk. See *PUB(MPI) 1-80 (b)* for further discussion on the Corporation's view on long-term inflation.

c) Mercer provided the following response:

   a. If inflation is near 2% over the long term (and in particular, there is little volatility), we expect that other asset classes will deliver excess returns relative to RRBs. Investors in RRBs pay a premium that is driven in part by a conservative view on volatility of future inflation. There is also a wider investment opportunity set of nominal securities that allow MPI to pursue diversified excess returns from credit, liquidity, and other risks.

   b. The BEIR is defined relative to federal bonds. It may be interpreted as the inflation rate that will make the cost of hedging inflation and real rate risk (by buying RRBs) "break even" (i.e. compared to buying nominal **federal** bonds).

   c. Within this context, 'flat inflation' meant 0% **average** inflation rate (perhaps with some volatility around a 0% mean). Had MPI made a significant allocation to RRBs AND future inflation was 'flat', RRBs would likely underperform, and perhaps decline in value if investors perceived future risks to be low and sold RRBs for a loss.

d) Mercer responds:

   Yes RRBs will be expected to perform better than long-term nominal federal bonds in this case. As indicated in on page 59 of Appendix_17_Attachment_B_-ALM_Phase_2_Summary_Report, the median 10-year annualized return on federal long-term bonds was assumed to be 2.0% (roughly estimated as the average yield of 2.4% less a capital loss of 0.4%) and the median 10-year annualized return on RRBs was assumed to be 2.7% (roughly estimated as the average yield of 0.6% plus inflation of 2.0% and a capital gain of 0.1%). However, RRBs were expected to underperform provincial and corporate long-term nominal bonds.

e) Mercer responds:

Attractiveness of BEIR is a subjective matter. On first glance, for someone who is expecting inflation to be 2% (that is higher than 1.6%) 1.6% should look attractive. However, there are numerous factors that might impact negatively on this view, for example:

i. Doubts about whether RRBs are rationally priced;
ii. Lower depths of the RRB market as compared to the nominal bonds market;
iii. Availability of nominal bonds other than those issued by the federal government.

f) Mercer responds:

The BEIR formula provides an indication of the expected inflation that would make an investor indifferent between buying an RRB and a federal bond of the same term to maturity. However, it is an imperfect measure, because it may ignore investors' preferences to their actual and perceived needs of buying the inflation protection.

g) Mercer responds:

We agree that considerations and decisions on any asset class should be done at the total portfolio level.

CAC (MPI) 1-89

Part and Chapter:	PART VI INV	Page No.:	1524; 1544
PUB Approved Issue No:	14. Risk Assessment and Risk Management 21. Asset Liability Management Study		
Topic:			
Sub Topic:	Fixed Income: Increased Risk Concentration		

Preamble to IR (If Any):

MPI's proposed changes in the asset mix will create more concentration of risks within fixed income, rather than equities and other assets, as summarized below:

- **More credit risk** (corporate + provincial, rather than Government of Canada);
- **Transferred liquidity risk** (private debt, from real estate/infrastructure); and
- **More inflation risk** (less real assets, like real estate/infrastructure, no RRBs).

For example, the minimum credit rating was changed from "A (low)" to "BBB" in the Investment Policy Statement (Section 8.6). The rationale provided by MPI was "to conform to the standard definition of Investment Grade securities".

The table below summarizes the recommended changes within fixed income.

	Basic	EXT	SRE	RSR	EFB	Total	Current Policy	**Change**
Corporate Bonds	20.0%	20.0%	20.0%	20.0%	50.0%	22.2%	7.1%	**15.1%**
Provincial Bonds	60.0%	40.0%	40.0%	40.0%	0.0%	53.8%	64.3%	**-10.5%**
MUSH Bonds	20.0%	10.0%	10.0%	10.0%	0.0%	17.7%	28.6%	**-10.9%**
Private Debt	0.0%	30.0%	30.0%	30.0%	50.0%	6.2%	0.0%	**6.2%**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	**0.0%**

Question:

a) Does MPI have a preference or desire to concentrate more of the total portfolio risk within fixed income, rather than within equity or other asset classes, and if so what is the rationale?

b) **Risk Tolerance/Preferences:** Does MPI have a different tolerance for:
   i. credit risk compared to equity risk, other things equal?
   ii. inflation risk compared to equity risk, other things equal?

c) To what extent were the changes in the composition of fixed income integrated with the decisions to:
   i. change the claims discount rate (to dollar weighted from duration weighted)?
   ii. change the duration policy to exclude MUSH bonds?

d) Are there any changes in financial accounting requirements (or elections that MPI could elect to make, rather than be required to make to comply with accounting standards) that impacted the recommendation regarding the allocation **within** fixed income, or the allocation **to** fixed income, for each of the five portfolios?

Rationale for Question:

Risk appears to be increasingly concentrated within fixed income, rather than being more balanced to include risks (and earn risk premia) from other asset classes, such as equities, real estate, and infrastructure.

RESPONSE:

a) It is the Corporation's position that it is no longer beneficial to discuss total portfolio risk on the consolidated portfolio as it will be developing five unique investment portfolios to back the liabilities of 1) Basic Claims 2) Extension 3) SRE 4) RSR and 5) Employee Future Benefits, each with their own unique allocations of assets.

Basic Claims has a 100% allocation to fixed income, which de-risks the basic claims liability portfolio by reducing interest rate risk and eliminating exposure to growth assets and the associated risks. Additionally, the Corporation expects RSR to have a 50% target allocation to growth assets and Employee Future Benefits a 60% target allocation. In these two cases, the Corporation will concentrate more of the total risk within the growth assets rather than fixed income.

b) Similar to the discussion in part a), the position of the Corporation is that comparisons of different risk tolerances must take place within the context of the five unique investment portfolios. Compared to equity risk, the Corporation has a different risk tolerance for credit risk or inflation risk depending on the portfolio considered.

c) The Corporation considered changes to the composition of the fixed income portfolio when it chose long-term asset mixes for the five unique investment portfolios during the ALM study.

The impact of higher yielding bonds on the claims discount rate is a one-time impact that the Corporation forecasted when planning for implementation of the ALM study.

The change in duration policy to exclude MUSH bonds was independent of the outcome of the ALM study.

d) To date, no noted "financial accounting requirements" have affected the recommendations regarding the allocation within fixed income or the allocation to fixed income, for each of the 5 portfolios.

CAC (MPI) 1-90

Part and Chapter:	PART VI INV	Page No.:	1617; 1670; 1704
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:			
Sub Topic:	Emerging Markets Equity		

Preamble to IR (If Any):

On page 1,617, Mercer notes that the standard All Country World Index Equities (ACWI) benchmark is composed of approximately 52% US, 32% EAFE, and 12% Emerging Markets Equities.

On page 1,670 (INV Appendix 16), MPI said that Mercer recommended a Global Equity strategy that **includes emerging markets**, but then added:

> MPI management recommends a global equity strategy that excludes exposure to emerging markets. Historical returns for the MSCI All Country World Index (MSCI ACWI) (which includes exposure to emerging markets) and MSCI Global indices showed that adding exposure to emerging markets does not improve risk adjusted returns. Further, **there are potential concerns about investing in the emerging market countries**.

On page 1,704 (INV Appendix 16), MPI provided the rationale for excluding emerging markets, referencing the Sharpe Ratio as a consideration, as shown below.

II. Rationale to Exclude Emerging Markets

Historical return, risk and Sharpe ratios for the MSCI ACWI (which includes emerging markets) and MSCI World (excludes emerging markets) indices are shown in Figure 1.

Figure 1: Impact of Emerging Markets

Index	Annualized Returns (%)			Annualized Std Dev (%)		Sharpe Ratio		
	5 yr	10 Yr	Since Dec 31, 1987	5 yr	10 Yr	5 yr	10 Yr	Since Dec 31, 1987
MSCI ACWI	9.8%	6.2%	7.9%	10.4%	16.7%	0.91	0.41	0.36
MSCI World	10.3%	6.5%	7.9%	10.2%	16.3%	0.97	0.43	0.36

Source: MSCI ACWI Index Factsheet March 2018

MSCI World had better returns over 5 and 10 years with lower risk and a higher sharp ratio compared to MSCI ACWI. Since December 31, 1987, the return and Sharpe ratio was the same, with slightly lower risk.

Question:

a) What are MPI's "potential concerns" about investing in the emerging market countries?
b) How relevant is the Sharpe Ratio for assessing the attractiveness of any asset class (including Emerging Market Equities), given MPI's definition for its Minimum Risk Portfolio/Liability Benchmark, which has a longer duration than TBills (the definition of risk used in a Sharpe Ratio)?

Rationale for Question:

Model optimizations are very sensitive to constraints (established in 2017 GRA).

RESPONSE:

a) The Corporation's concerns with investing in emerging market equities relate to the potential legal, regulatory and political risks associated with these markets. As the data provided in the preamble above shows, increasing exposure to emerging market equities increases risk and actually *reduces* rates of return.

b) Mercer responds: The point being made in the rationale to exclude Emerging Markets Equity is that the Sharpe Ratio for MSCI World is consistently larger than

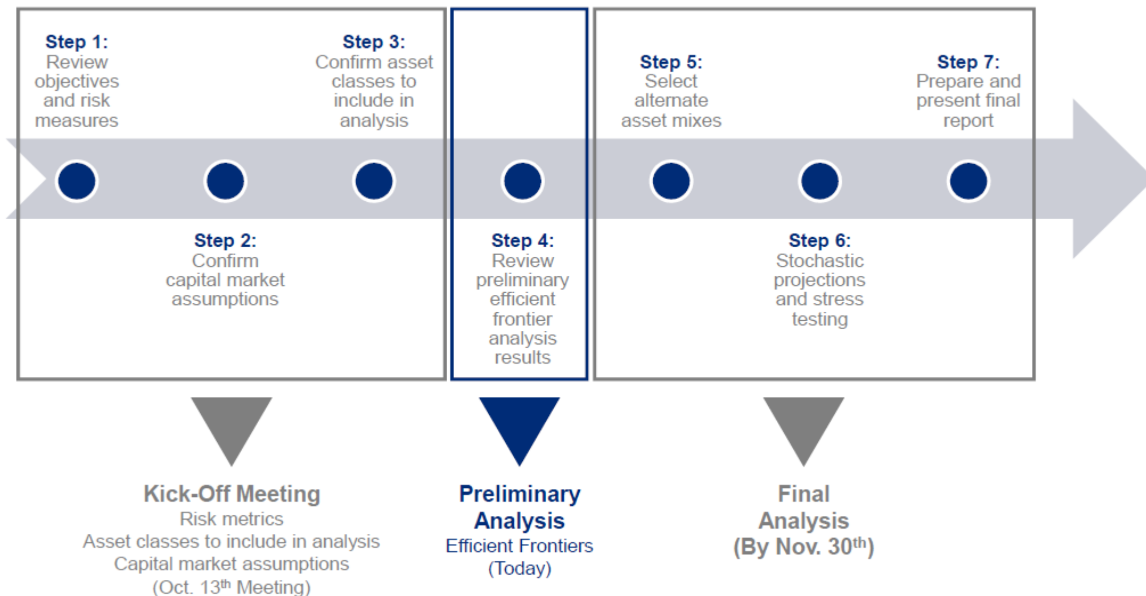
that of the MSCI ACWI. Changing the risk free rate from T-Bills to long bonds will not change the relative positions. That is, you will still have a better Sharpe Ratio under the MSCI World, which excludes Emerging Markets Equity.

CAC (MPI) 1-91

Part and Chapter:	PART VI INV	Page No.:	1738
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:			
Sub Topic:	ALM Study Process		

Preamble to IR (If Any):

On page 1,738 (INV Appendix 17, Attachment A), Mercer illustrated a 7-step process for the ALM Study (below).



Question:

a) Were the efficient frontiers presented by Mercer all the result of "single period" modeling (i.e. not "stochastic")?

b) How sensitive were the broad outcomes/conclusions (e.g., return/risk, asset allocations) to the different models/approaches used in the ALM Study (e.g., single period, vs. multi-period), and why? (Define the different modeling/assumptions used clearly, noting key differences between them.)
c) Which modeling approach, defined above, is more reliable, and why?
d) To what extent were MPI's final asset allocation decisions based on one model's outputs over another (e.g. single period efficient frontier analyses vs. multi-period stochastic simulations)?

Rationale for Question:

How much reliance was placed on different models (single period vs. multi-period) to support long-term asset allocation decisions is unclear.

RESPONSE:

Mercer provided the following responses:

a) The efficient frontier models are single period models.

b) The broad outcomes/conclusions were not very sensitive to the different quantitative approaches used in the ALM Study. While the single period approach (efficient frontier) analyzed what might happen during any year of the next 10 years, the multi-period (5-year projection) analyzed potential outcomes at the end of the next 5 years. The efficient frontier generated the optimal portfolios by maximizing the expected return for each level of surplus risk, so the key measures were the expected return and the surplus volatility. The projection focused on the dollar amount of surplus in 5 years, so the key outcomes were the median surplus in 5 years and the potential downside (measured as the largest deficit at 2.5% probability).

c) Both modeling approaches are driven by the same inputs and are therefore equally reliable. The efficient frontier tool is more flexible and reflects 1-year projections of annualized risk and returns. The advantage of the projection modeling is that it

more effectively illustrates the potential financial implications of various portfolios over longer time horizons.

d) MPI's final asset allocation decisions considered both qualitative and quantitative considerations. With respect to the modeling, in general the single period efficient frontier analyses was used as a preliminary screen, while the multi period stochastic model was used to verify results and understand financial implications.

CAC (MPI) 1-92

Part and Chapter:	PART VI INV	Page No.:	1783
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:			
Sub Topic:	Decision-Making Framework		

Preamble to IR (If Any):

On page 1,783, Mercer described why investors make investment decisions (below).

June 15, 2018

2019 GENERAL RATE APPLICATION
INV Appendix 17
Attachment B

WHY DO WE MAKE INVESTMENT DECISIONS?

We make investment decisions to deliver better outcomes

One's perception of a 'Better Outcome' can vary significantly

Identifying, and articulating, desired outcomes is a crucial fiduciary responsibility

Question:

a) **Better Outcomes:** Which basis of analysis is better suited to support MPI's decisions? **Nominal** Liability Benchmark, or **Real** Liability Benchmark?

b) **Perceptions:** In relation to Asset/Liability Studies:

   i. How and why can perceptions differ about what constitutes a "better outcome"?

   ii. Where do the two or three biggest differences in perception arise related to "better outcomes", and which parties are involved? (e.g. consultant vs. client?)

   iii. Are these differences in perception symptoms of an underlying problem, and if so, what is the problem, and are there any effective remedies?

Rationale for Question:

It is important to understand the rationale for key decisions that are made (including long-term asset allocation). Any differences in perceptions about what constitutes "better outcomes" should be made transparent.

RESPONSE:

a) As stated in *CAC (MPI) 1-83 (c)* and *CAC (MPI) 1-86 (a)*, the selection of a nominal vs. real liability benchmark depends upon inflation expectations.

b) Competing interests can alter the perception of what constitutes a "better outcome". For example, the Corporation understands that predictable and stable rates have the greatest influence on ratepayers' perception of value, and so has established that as a key objective. An alternative view of a "better outcome" might involve emphasizing rate minimization over rate stability.

CAC (MPI) 1-93

Part and Chapter:	**CAC (MPI) 1-85 from 2018 GRA** **Part VIII, AR, Appendix 1**	**Page No.:**	**2,158**
PUB Approved Issue No:	**7. DCAT** **8. Performance of investment portfolio** **21. Asset Liability Management Study**		
Topic:	**Changes in IFRS Accounting Policy**		
Sub Topic:	**Accounting Policy Changes: IFRS 4 (Insurance Contracts), 7 (Financial Instruments: Disclosures), 9 (Financial Instruments), and 17 (Insurance Contracts)**		

Preamble to IR (If Any):

Last year, CAC asked a series of questions related to i) the status of MPI's evaluation of the impacts that the proposed IFRS accounting policy changes will have on the financial statements and ii) how the proposed changes would impact MPI's financial statements and other relevant items. (See CAC (MPI) 1-85 from the 2018 GRA.)

In its response last year, MPI indicated that:

> MPI's evaluation of the proposed changes to IFRS 17, 7 and 9 is still in progress, and the status report provided in the Annual Financial Statements (quoted in the preamble to this IR) remains unchanged. MPI is still collecting information on this topic with the current intention of receiving an external opinion on the expected impact of IFRS 17. Please see also PUB (MPI) 1-78, and CAC (MPI) 1-8.

In this year's GRA, the notes to the Financial Statements describe the future changes in accounting policy and disclosure, starting on page 2,158 of the GRA. These changes are copied below.

IFRS 4 – Insurance Contracts

In September 2016, IFRS 4 Insurance Contracts was amended to address concerns regarding the different effective dates of IFRS 9 Financial Instruments and the new insurance contracts standard IFRS 17 Insurance Contracts. The amendment provides a temporary exemption from applying IFRS 9 for entities whose predominant activity is issuing insurance contracts within the scope of IFRS 4. Alternatively, the amendment provides an option to permit entities that issue insurance contracts to reclassify, from profit or loss to OCI, the volatility arising from financial assets reclassified as FVTPL under IFRS 9 that were not FVTPL under IAS 39 Financial Instruments: Recognition and Measurement.

This amendment is effective for annual periods beginning on or after January 1, 2018. Based on the amendments to IFRS 4, the Corporation meets the criteria to defer IFRS 9 and is currently evaluating the impact that this standard will have on its financial statements.

IFRS 7 – Financial Instruments: Disclosures

In December 2011, IFRS 7 Financial Instruments: Disclosures was amended to require additional financial instrument disclosures upon transition from IAS 39 Financial Instruments: Recognition and Measurement to IFRS 9 Financial Instruments. The amendments are effective upon adoption of IFRS 9, which is effective for annual periods beginning on or after January 1, 2018. However, in September 2016, IFRS 4 Insurance Contracts was amended to provide an option of a temporary exemption from applying IFRS 9 for entities whose predominant activity is issuing insurance contracts within the scope of IFRS 4. Therefore, qualifying entities will have the option to adopt IFRS 9 upon the adoption of IFRS 17 Insurance Contracts. The Corporation will qualify for a temporary exemption; thus, the amended IFRS 7 is effective for annual periods beginning on or after January 1, 2021. The Corporation is currently evaluating the impact that this standard will have on its financial statements.

IFRS 9 – Financial Instruments

IFRS 9 Financial Instruments was issued in July 2014 and is intended to replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 is a three part standard aimed at reducing complexity in reporting financial instruments. The project has been divided into three phases: Phase 1 Classification and measurement, Phase 2 Impairment and Phase 3 Hedge accounting. Phase 1 was issued in November 2009 and amended in October 2010. It requires financial assets to be recorded at amortized cost or fair value depending on the entity's business model for managing the assets and their associated cash flow characteristics. All financial assets are to be measured at fair value on the balance sheet if they are not measured at amortized cost. At initial recognition, an entity may irrevocably designate a financial asset as measured at FVTPL if doing so eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognizing the gains and losses on them on different bases.

Phase 2 was completed in July 2014 and introduced a new expected loss impairment methodology that will result in more timely recognition of impairment losses. Phase 3 was completed in November 2013. This phase replaces the rule-based hedge accounting requirements in IAS 39 to more closely align the accounting with risk management activities.

The standard is effective for annual periods beginning on or after January 1, 2018. However, in September 2016, IFRS 4 Insurance Contracts was amended to provide an option of a temporary exemption from applying IFRS 9 for entities whose predominant activity is issuing insurance contracts within the scope of IFRS 4. Therefore, qualifying entities will have the option to adopt IFRS 9 upon the adoption of IFRS 17 Insurance Contracts. The Corporation will qualify for a temporary exemption; thus, IFRS 9 is effective for annual periods beginning on or after January 1, 2021. The Corporation is currently evaluating the impact that this standard will have on its financial statements.

Note disclosures that both explain how an entity qualified for the temporary exemption and allow for comparison with other entities applying IFRS 9 will be required during

the deferral period. The Corporation is evaluating the impact this will have on the financial statements.

IFRS 17 – Insurance Contracts

IFRS 17 Insurance Contracts was issued in May 2017 and will replace IFRS 4 Insurance Contracts. The intent of the standard is to establish consistent recognition, measurement, presentation and disclosure principles to provide relevant and comparable reporting of insurance contracts across jurisdictions.

The standard requires entities to measure insurance contract liabilities as the risk-adjusted present value of the cash flows plus the contractual service margin, which represents the unearned profit the entity will recognize as future service is provided. This is referred to as the general model. Expedients are specified, provided the insurance contracts meet certain conditions. If, at initial recognition or subsequently, the contractual service margin becomes negative, the contract is considered onerous and the excess is recognized immediately in the statement of operations. The standard also includes significant changes to the presentation and disclosure of insurance contracts within entities' financial statements.

IFRS 17 is effective for annual reporting periods beginning on or after January 1, 2021. The standard is to be applied retrospectively unless impracticable, in which case a modified retrospective approach or fair value approach is to be used for transition. Early application is permitted where entities have also adopted IFRS 15 Revenue from Contracts with Customers and IFRS 9 Financial Instruments. The Corporation is currently evaluating the impact that this standard will have on its financial statements.

Question:

The following questions are the same as last year's questions.

a) What is the status of MPI's evaluation of the impacts that the proposed changes will have on the financial statements?
   i. IFRS 17 – Insurance Contracts
   ii. IFRS 7 – Financial Instruments: Disclosures

iii. IFRS 9 – Financial Instruments

iv. any other material changes, but not listed above

b) How would the proposed changes impact MPI's financial statements and other relevant items (including those listed below)? Please use the table below to describe the directional impact and materiality (10 being extremely material and 0 being immaterial). Please also note which practices are expected to be mandatory for MPI to remain IFRS compliant, and which ones may provide MPI with "elections". Where elections are available, please describe the impact of the different elections, which would ones would likely be chosen and why.

Metric	**Increase (Decrease)**	**Materiality (0 – 10)**
Net Income		
OCIO		
Comprehensive Income*		
DCAT*		
RSR*		
Rate Stability		
Rate Predictability		

* These requests were added this year (2019 GRA). Requests without an asterisk were made last year (2018 GRA).

The following question is **new**.

c) Please discuss the implications, if any, of the potential accounting changes upon the DCAT and the RSR.

Rationale for Question:

The proposed IFRS accounting policy changes may have a material impact on key metrics, and key decisions. It is important to understand the nature, materiality, and timing of both the accounting changes and their implications on key metrics and key decisions.

RESPONSE:

a) and b)

The Corporation's response from the prior year remains valid. The Corporation continues to evaluate the proposed changes to IFRS 17, 7, and 9, and the status report provided in the Annual Financial Statements (quoted in the preamble to this IR) remains current. The Corporation continues to collect information on this topic and intends to receive an external opinion on the expected impact of IFRS 17.

At this time, the Corporation cannot commit to having an external impact analysis of IFRS 17 during the 2019 GRA proceeding.

Please note that the Corporation will have to apply IFRS for reporting periods starting on or after January 1, 2021. The Corporation will apply IFRS 17 for the fiscal year beginning March 1, 2021.

c) See *CAC (MPI) 1-25 (a)*.

CAC (MPI) 1-94

Part and Chapter:	CAC (MPI) 1-85 c-f in 2018 GRA Part VIII, AR, Appendix 1	Page No.:	2158
PUB Approved Issue No:	8. Performance of investment portfolio 21. Asset Liability Management Study		
Topic:			
Sub Topic:	OSFI Guidance on Changes in Accounting Policy and Disclosure		

Preamble to IR (If Any):

In last year's GRA, MPI responded to CAC's questions related to future changes in IFRS accounting policy and disclosures. CAC's questions and MPI's responses to CAC (MPI) 1-85 (c to f) are noted below.

CAC Question	MPI Response
c) Why has MPI decided to "generally follow OSFI's guidance on such matters"?	Although the Corporation is not regulated by Office of the Superintendent of Financial Institutions (OSFI), the Corporation considers the guidance provided to the P&C Industry by OSFI.
d) Has MPI ever chosen not to follow OSFI's guidance in the past, and if so: i. What was the source and nature of the accounting issue, where the source refers to the IFRS or other reference # and the nature refers to the accounting treatment (e.g., asset and or liability valuation, income recognition, disclosure, etc.) ii. What was the rationale for the decision to not follow OSFI's guidance (e.g., what principle was applied by MPI, such as a desire for greater rate stability, rate predictability, both, or some other factor(s) to be listed)?	Upon review of the past 5 years, MPI has not chosen to "not follow" OSFI guidance relating to accounting standard changes.

e) Under what circumstances would MPI choose not to follow OSFI's guidance in the future?	MPI cannot speculate on circumstances that have not occurred, and for which the detail and context of the matter would be critical to informing any decision.
f) In addition to OSFI, are there other sources or perspectives that MPI is considering to inform its evaluations?	MPI also considers the practices of peers, and common industry best practices.

Question:

a) What guidance is OSFI providing to the P&C Industry related to IFRS changes that are relevant to MPI?
b) Is there any reason to believe that MPI will "not follow" OSFI guidance relating to accounting standard changes, and if so, why?
c) Can MPI describe the practices that have been, or plan to be, implemented by peers?

Rationale for Question:

The proposed IFRS accounting policy changes may have a material impact on key metrics, and key decisions, and it is important to understand the considerations that are being taken into account when selecting the policies to change, and when they become effective.

RESPONSE:

a) In May 2018, the Office of the Superintendent of Financial Institutions (OSFI) published an advisory pertaining to IFRS 17. OSFI issued the advisory in response to the issuance of the final version of IFRS 17 *Insurance Contracts* by the International Accounting Standard Board. In its advisory, OSFI states:

> *"The* Insurance Companies Act *stipulates in the case of federally regulated insurers (FRIs) that "financial statements shall, except as otherwise specified by the Superintendent, be prepared in accordance*

with generally accepted accounting principles, the primary source of which is the Handbook of the Canadian Institute of Chartered Accountants." Generally Accepted Accounting Principles for FRIs is effectively International Financial Reporting Standards as issued by the IASB."

OSFI goes on to outline its expectations respecting adoptions of the standard, stating:

"After reviewing several factors (e.g. consistency across insurers, operational capacity, etc.), OSFI determined that FRIs should not adopt IFRS 17 before its effective date of January 1, 2021."

b) No, the Corporation will follow IFRS 17 and plans to adopt it for the year beginning March 1, 2021.

c) Most P&C insurers in Canada (including all FRIs) report under IFRS and will be implementing IFRS 17 for annual periods beginning after January 1, 2021. In conjunction with IFRS 17, the Corporation understands that most insurers will implement IFRS 9 Financial Instruments in conjunction with IFRS 17. IFRS 9 became effective January 1, 2018, however, in September 2016, IFRS 4 (the previous insurance standard) was amended to provide an option of a temporary exemption from applying IFRS 9 for entities whose predominant activity is issuing insurance contracts within the scope of IFRS 4. Therefore, qualifying entities have the option of adopting IFRS 9 upon the adoption of IFRS 17.

   Based on information publically available in annual reports, the Corporation understands that other government auto insurers in Canada are exercising this option to defer IFRS 9 as well, and will be fully implementing IFRS 9 & 17 in the fiscal years beginning after January 1, 2021.

CAC (MPI) 1-95

Part and Chapter:	Part VI INV, Appendix 15	Page No.:	1647
PUB Approved Issue No:	8. Performance of investment portfolio 21. Asset Liability Management Study		
Topic:	CAC's 18 Recommendations		
Sub Topic:	Recommendation #1. Clarity of Accounting Choices and Recommendation # 2. Adoption of More Comparable Accounting Principles		

Preamble to IR (If Any):

Recommendation #1

MPI should clarify what flexibility it has regarding the accounting for assets and liabilities, while remaining GAAP-compliant, and the factors it takes into account in electing to use one method/assumption over others.

Recommendation #2

In measuring its investment portfolio and liabilities, MPI should consider adopting accounting principles, where GAAP allows MPI to make such elections, that reduce the discrepancy between net income and comprehensive income (as these terms are currently defined by MPI), to improve comparability across all assets as well as liabilities.

Comparability would be improved, for example, by accounting for more assets in a way that is consistent with the treatment of financial assets and liabilities at fair value through profit or loss ("FVTPL").MPI should clarify what flexibility it has regarding the accounting for assets and liabilities, while remaining GAAP-compliant, and the factors it takes into account in electing to use one method/assumption over others.

In MPI's rebuttal to CAC's evidence in the 2017 GRA, MPI said:

> When accounting policies are reviewed, all relevant factors are taken into account. The key considerations are – (i) what is IFRS compliant, and (ii) how do the choices impact the key corporate strategic direction of rate stability and predictability. Options that would cause more volatility in net income, and as a result more volatility in the premium rates required to breakeven, would undermine rate stability and predictability.
>
> MPI disagrees with Mr. Viola's view that accounting policies should be chosen to reduce the discrepancy between net income and comprehensive income to improve comparability. Rather, accounting principles and policies should be chosen that align with the nature of the assets and liabilities.

Question:

a) What elections, where such discretion exists, does MPI plan to make related to the upcoming IFRS accounting policy changes (i.e. IFRS 4, 7, 9, and 17)?
b) Where such discretion exists, explain how each election aligns with the nature of the assets and/or nature of the liabilities.

Rationale for Question:

The proposed IFRS accounting policy changes may have a material impact on key metrics, and key decisions, and it is important to understand the considerations that are being taken into account when selecting the policies to change, and when they become effective.

RESPONSE:

To all questions posed:

The Corporation's evaluation of the proposed changes to IFRS 7, 9, and 17 remains in progress. As a result, the Corporation is not able to discuss, at this time, potential proposed elections relating to the new standards.

CAC (MPI) 1-96

Part and Chapter:	Part VI INV, Appendix 13	Page No.:	1614, 1723, 1788
PUB Approved Issue No:	21. Asset Liability Management Study		
Topic:	Risk Management		
Sub Topic:	Risk Tolerance in Basic and Pension		

Preamble to IR (If Any):

On page 1,614, one of the Mercer reports from the ALM Study said MPI has a **"very low risk tolerance"** for Basic, but that it **"could grow in future"**. The risk tolerance for the other four components, which includes Pension, are "moderate". (See table below.)

OVERVIEW OF MPI'S OBLIGATIONS

For the purpose of the Study, obligations of MPI were segmented amongst the following 5 components ("Components"):

	BASIC	EXT	SRE	RSR	PENSION
What's included	Compulsory: auto insurance claims	Optional: auto insurance claims	Competitive: fleet insurance claims & Provincial Facilities	Retained earnings from Basic	Employee Benefits
Size[1]	$1,790M	$106M	$147M	$97M	$405M
Purpose	Pay claims as they come due			Stabilize rates	Fund pension benefits
Return Expectation/ Risk Tolerance	Very low risk tolerance. Could grow in future.	Moderate	Moderate	Moderate	Moderate
Interest Rate Sensitivity (Duration)	High (10.5)	Low (1.1)	Low (2.7)	Not applicable	Very high (15.6)

On page 1,723, MPI said:

> It was determined that the risk tolerance of MPI's Board of Directors for the assets backing the Basic claims liabilities was very low and that **mitigating risk was more important that maximizing returns**. The focus was on further reducing interest rate risk, with a willingness to take on modest credit risk (as long as it is diversified and cost effective).
>
> Based on this risk tolerance, it was determined that the best way to mitigate the interest rate risk associated with the Basic claims liability was to develop an investment portfolio with 100% fixed income assets (i.e. no growth assets) and dollar and duration matching those assets to the claims liabilities.
>
> Several portfolio options were presented, including the minimum risk portfolio (MRP), a portfolio with mostly Provincial bonds, a portfolio adding corporate bonds and a portfolio adding private debt. See Attachment B: ALM Phase 2 Summary Report, pg. 20. Ultimately, management recommended the portfolio with Provincial, corporate & MUSH bonds.

On page 1,788, one of the Mercer reports from the ALM Study said "if RSR grows in future, risk tolerance could increase" for Basic.

Question:

a) What are the biggest factors contributing to the "very low" risk tolerance for **Basic** today? Please differentiate between any factors that are controllable by MPI and those that are not (e.g. controlled by PUB, driven by accounting or actuarial standards, capital market volatility/uncertainty, etc.).
b) How would the factors noted above for Basic have to change for MPI's risk tolerance to "grow in the future" for **Basic**?
c) What is the expected cost of the decision to mitigate risk for Basic, because it was more important than maximizing returns, over:
   i. the next 5 years?
   ii. longer time horizon?

d) To what extent do the tolerances for risk reflect different capital outlooks over different time horizons? For example, to what extent are risk tolerances today lower than they would be otherwise given today's interest rates and any outlook for interest rates over the next 5 years vs. an outlook over a longer time horizon?
e) What are the biggest factors contributing to the "moderate" risk tolerance for **Pension** today? Please differentiate between any factors that are controllable by MPI, and those that are not.
f) How would the factors noted above for Pension have to change for MPI's risk tolerance to increase in the future for **Pension**?

Rationale for Question:

Risk tolerances have a material impact on the return/risk profile of the portfolio, and the costs and risks related to rates.

RESPONSE:

a) The Corporation's risk tolerance for a particular fund depends on the fund's purpose.

   The purpose of the portfolio supporting Basic Claims Liabilities is to ensure funds are available as liabilities come due. Basic claims liabilities are both long and short-term (i.e. long-term liabilities relating to bodily injury and short-term liabilities relating to physical damage). Claims liability estimates have risk related to mortality, asset liability mismatch, investment returns, technological improvements, and societal/legal factors. These liabilities are long-term in nature and are subject to significant interest rate risk. They also require a high level of liquidity to pay claims. The Corporation has varying levels of control over these factors.

   The purpose of the portfolio supporting the Rate Stabilization Reserve (RSR) is to, at a minimum, ensure sufficient levels of capital are available to achieve actuarially determined satisfactory financial condition, and maintain adequate capital in the

face of plausible adverse events. Upon achieving satisfactory financial condition, the purpose of RSR is to protect policyholders from the need to pay fees to rebuild the RSR following the occurrence of adverse events, consistent with the oft-cited purpose of the RSR is:

> *"To protect motorists from rate increases that would otherwise have been necessary due to unexpected variances from forecasted results and due to events and losses arising from non-recurring events or factors"*

The purpose of the portfolio supporting the Employee Future Benefits (EFB) fund is to pay pension and other EFB liabilities, as they come due.

The current regulatory landscape has directly influenced the Corporation's risk appetite for Basic. Capital levels (as measured by MCT) and capital targets remain the lowest in Canada (among crown and OSFI regulated insurers). The PUB-approved capital target methodology has varied unpredictably, and its most recently approved target methodology relies on assumptions that are not 'best estimates', which yields a lower RSR target that is below the amount required for satisfactory financial condition of Basic. Rates have been set using aggressive interest rate forecasts, which has created significant and unnecessary pricing risks over several years, resulting in large premium deficiencies. The Corporation has transferred significant capital from its other lines of business in order to maintain the satisfactory financial condition of Basic.

Finally, as explained in Overview of the 2018 GRA, prudent fiscal management requires the Corporation to avoid causing a negative impact on the Consolidated Financial Statements of the Province of Manitoba.

b) It is unlikely that the Corporation's risk tolerance for the portfolio supporting Basic Claims Liabilities will change significantly, given the purpose of the fund. However, the Corporation may re-evaluate its tolerance for risk with improvements in the regulatory environment. Such improvements could include:

- the removal of key uncertainties around Basic's capital framework;
- the adoption of reasonably prudent capital targets, sufficient to the risk profile of the Basic line of business;
- a move toward a formula based method for pricing and capital targets;
- the adoption of industry best practices, including the use of best estimates; and
- the adoption of mechanisms to protect and maintain capital, ensuring Basic is self-sustaining.

c) The move from the current portfolio to the new fixed-income only portfolio reduced the expected return on the Basic claims portfolio by 1.17%, but the risk of the portfolio (as measured by surplus volatility) fell by 2.74% (see *INV Appendix 17 – Attachment B – ALM Phase 2 Summary Report*, page 21/22). The Corporation considered this trade-off appropriate in light of its risk tolerance described in the response to question (a) above.

d) The binding constraint on the Corporation's risk tolerance is not related to an outlook for the capital markets or interest rates. As explained in the response to question (a) above, risk tolerance is driven by the regulatory environment, the purpose of each of the funds and the requirement to avoid negatively affecting the Province's consolidated financial statements.

e) The biggest factors contributing to the "moderate" risk tolerance for EFBs (primarily pension liabilities) are:

   i. that the pension is fully funded;

   ii. that the ratio of active to retired members is stable;

   iii. that the plan is open and has a long time horizon;

iv. that the Corporation's business is relatively stable; and

v. the Corporation's desire to offer competitive pension benefits at a reasonable cost.

The Corporation has some control over the funded status of the plan, the stability of its business and whether the plan is open or closed, while other factors are not within its control.

f) The Corporation's risk tolerance for its EFBs portfolio could increase with an increase in the number of active members relative to retired members. Changes in the other factors would likely lead to a decrease in risk tolerance.