Consumers' Association of Canada (Manitoba)

Responses to Information Requests on Evidence
2017 MPI GRA

October 5, 2016

Public Utilities Board

PUB (CAC) 1-1

Volume:	CAC A Note on an Interest Rate Forecast Risk Factor (IRFRF) and the RSR Target Established by the Dynamic Capital Asset Test (DCAT)	**Page No.:**	
Topic:	IRFRF		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

Question:

1) Would Dr. Simpson agree that it is preferable to improve the rigour of the interest rate forecast for rate setting purposes, rather than introduce the IRFRF?

2) Is Dr. Simpson of the view that the current so called "Standard Interest Rate Forecast" is a best estimate forecast?

3) If Dr. Simpson's response to 2) is "No", what would he recommend to improve the interest rate forecast towards making it at least a better estimate, if not a best estimate?

Rationale for Question:

To gain a better understanding of Dr. Simpson's views on the IRFRF.

RESPONSE:

1) If by "the rigour of the interest rate forecast for rate setting purposes" PUB means "the rigour of the assessment of the risk

associated with the interest rate forecast for rate setting purposes," then I agree.

2) Insofar as the SIRF is a consensus forecast of respected financial institutions with a large stake in accurate interest rate forecasting who have been conducting forecasts for a long time, I would not consider myself qualified to do better. I would also note that MPI has relied on these forecasts for some time, e.g. in their DCAT reports as the basis for the base forecast.

3) My response to question 2) is a nuanced yes.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-2

Volume:	CAC A Note on Ratemaking in Accordance with Accepted Actuarial Practice in Canada and Impact of Investment (Discount) Rates	**Page No.:**	4
Topic:	Ratemaking in Accordance with Accepted Actuarial Practice in Canada		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

In the ratemaking context, Ms. Sherry writes that "The interest rate that many actuaries choose is the discount rate used in the most recent Appointed Actuary's report".

Question:

1) In Ms. Sherry's experience, what is the usual basis for determination of the discount rate used for discounting the actuarial liabilities?

2) Please provide the rationale for Ms. Sherry's comment that "The Appointed Actuary makes this choice based on what they expect to earn as new investments are made throughout the time that the reserves are run off"? [emphasis added]. Is it not the case that consideration of new investments is only relevant for discounting actuarial liabilities to the extent that the investment portfolio as at the

valuation date is not sufficient and sufficiently well matched to those liabilities to meet those obligations?

3) For discounting in a pricing context, would Ms. Sherry agree that Section 2620.15 (as cited) directs that consideration only be given to new assets that will be acquired with new net cash flows resulting from revenue at the indicated rate?

Rationale for Question:

To gain a better understanding of Ms. Sherry's report.

RESPONSE:

1) I have seen the discount rate chosen for discounting the actuarial liabilities done in a few different ways. One is to choose the investment rate earned on the investment portfolio backing the policyholder liabilities if there are no expected material changes in the investment portfolio, and therefore the investment rate earned, going forward. Another is to use a cash flow analysis matching the income from investments to the payment of the liabilities.

2) This statement assumes that new investments will be made throughout the period that the liabilities are held. In terms of long tailed liabilities this is a valid assumption.

3) Quoting from PUB (MPI) 1-4, page 4 "the discount rate in accordance with accepted actuarial practice in Canada is a "new money" rate expected to be earned as new investments are made starting in the proposed rating year, whereas the current

analysis discount rate is substantially influenced by investments purchased in the past." I agree with this statement.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-3

Volume:	CAC Report on Use of the DCAT to set the RSR Target Range	**Page No.:**	3-4
Topic:	RSR		
Sub Topic:			
Issue:	DCAT		

Preamble to IR (If Any):

Question:

Please provide the rationale for Dr. Simpson and Ms. Sherry's proposal that there should be a range required around the lower bound of the Total Equity target range.

Rationale for Question:

To gain a better understanding of Dr. Simpson and Ms. Sherry's report.

RESPONSE:

AS: We are not suggesting that there be a range around the lower bound of the Total Equity target range. We are suggesting that there be a range for the RSR and that the suggested lower limit of that range should instead function as the point estimate around which the range should be.

WS: When a business shoots at a target, they aim for the middle, allowing for errors on both sides. The conversion of the RSR "target"

to a "target minimum" or a "lower bound" is a construct of MPI's application of the DCAT methodology to the determination of the RSR that we reject. The "target" should be roughly the midpoint of a range for the RSR established according to the DCAT methodology and specified risk tolerances. We have therefore suggested that the "target" RSR be bounded by either a risk tolerance range (minimum and maximum for the RSR) of (0.10, 0.005) or (0.05, 0.01) which reflect ranges of risk tolerance of (1-in-10, 1-in-200) and (1-in-20, 1-in-100), respectively, around a target risk tolerance of 0.025 or 1-in-40.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-4

Volume:	CAC MPI's Investment Portfolio: Risk, Return and Good Practice	**Page No.**	10-12
Topic:	Investment		
Sub Topic:			
Issue:			

Preamble to IR (If Any):

Question:

For each of the eighteen (18) recommendations made by Mr. Viola, please provide a high level outline, in practical terms, of what steps the Corporation and/or Aon would need to take to in order to implement each recommendation.

Rationale for Question:

To gain a better understanding of Mr. Viola's report.

RESPONSE:

For all questions that involve accounting, I want to make the following observations:

- Accounting practices vary both by jurisdiction (Canada vs US) and sector (insurance vs oil and gas) as well as over time;
- The profession has an excellent framework for developing GAAP, having established criteria focused on the users of the information and their needs to inform their decision-making

(e.g., relevance, reliability, etc.); I rely on those criteria in my daily work in assessing the quality of any information.

- All accounting-related matters should be discussed with qualified internal and external professional accountants.

Mr. Viola's Recommendations

1. Clarity of Accounting Choices

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 terms of gaining clarity regarding the choices MPI has made, some practical steps might include:

1. Identify accounting practices where MPI has any material discretion to choose among two or more alternatives, based on a review of applicable standards of practice that are relevant to MPI's asset and liabilities, including consultation with internal and externa auditor(s);
2. Define materiality and the basis for assessing it;
3. Establish the principles to be used for making choices among alternatives when such choices are available (e.g., decision-making usefulness, characteristics of information that make it more valuable, such as relevance, reliability, unbiasedness, etc.);

4. Take into account the turnover in the portfolio, by element (e.g., things with higher turnover, like money market, with short-maturities will have fewer differences between accounting valuations and others as gains/losses are realized more often/sooner);
5. Consider volatility;
6. Consider the costs associated with any changes from adopting different policies/practices; and
7. Determine what effect, if any, there would be on decisions or outcomes that are based on accounting values (e.g., reserve ratios) as a result of the adoption of different practices.

2. Adoption of More Comparable Accounting Principles

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").

1. MPI should consider the pros and costs of changes associated with the adoption of different policies/practices; and
2. MPI should determine what effect, if any, there would be on decisions or outcomes that are based on accounting values as a result of the adoption of different practices.

3. AFS and HTM Accounting

Unrealized gains and losses for AFS assets (~ 20% of assets), for example, are reported as "other comprehensive income (OCI)" and are excluded from net income until realized, making the net income recognition for unrealized gains on equities (~ 18% of assets) inconsistent with FVTPL assets. The treatment of HTM Bonds (25%), recorded at amortized cost, should also be re-considered. Market valuations are generally more comparable, relevant, transparent, understandable and subject to less potential bias than valuations in reports that are based on MPI's current accounting practices.

Please see responses above, since this is a specific application to AFS and HTM assets, noting that my evidence identified these as "known" differences in valuations relative to market valuations.

4. Pension Liability Accounting

Reconsideration should also include the remeasurement of employee benefits (~ 15% of liabilities and equities) which is considered OCI. The remeasurement of employee benefits is large (given the long duration of pension liabilities), but OCI arising from changing interest rates that impact the value of pension liabilities is not recognized through transfers to net income under current practices.

Please see responses above related to accounting generally.

Also, it is my understanding and assumption that remeasurement of employee benefits will never impact net income (only OCI) under the status quo, where that refers to no changes in any of:

- GAAP and/or MPI's ability to make selections;
- pension plan being "part" of the whole for assets and liabilities.

This is a recommendation related to the A-L Studies, where I generally recommend that "return" and "risk" be defined in market value terms (not net income/retained earnings).

There is risk, with any client/info provider relationship, of "opinion-shopping". I am not an expert in this area, but if there is potential disagreement between 2 opinions it might be appropriate and prudent to have a transparent process for surveying practices and providing transparency on where MPI is in the spectrum of choices available within and across factors that might be relevant (e.g., North American auto insurers).

5. Return/Risk Definitions for Asset Mix Decision

MPI should re-define return/risk used to inform its long-term asset mix decisions to be based on valuations that reflect market values, rather than accounting ones (which may be materially different).

At a minimum, net income should be replaced by comprehensive income in the numerator (return) and retained earnings should be

expanded to include accumulated other comprehensive income (AOCI) in the denominator (risk).

In the long term, market returns and market risks will determine average long-term premium rates, regardless of how assets and liabilities are accounted for under GAAP.

A literature and/or other search could be performed to compare MPI's approach in relation to others to see material differences.

6. De-Linking Discount Rates

For purposes of long-term asset allocation decision-making, MPI should consider "breaking the link" (recursive) between liability valuations and the yield on some of its assets. Economic theory suggests this approach is more appropriate.

The theoretical and practical considerations on this topic are available from a variety of sources, and relevant parties should reflect on both what theory suggests and what leading practitioners implement in practice.

In my evidence (footnote 30), I refer to a document that has 2 pages of references on this topic. This is a topic I have not explored from a research perspective because I fall into one "camp" and have not needed to defend my view. I believe that MPI was in general agreement with me that the "market value" of the liabilities does not depend on how liabilities might be accounted for under GAAP – i.e.,

the inherent risks are what they are, regardless of how we account for them. It is not clear to me what benefit arises from the recursive nature for the **purposes of long-term asset allocation decision-making.**

7. Min/Max Asset Class Constraints

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.

MPI should consider establishing, if they do not exist now, the explicit goals for setting the size and basis for any constraints and the principles to guide what those constraints should be. MPI should also consider explicitly calculating the cost of such constraints. In the first round of questions, I asked for such a quantification and the response from MPI was that the analysis was very costly. As a result, for future A-L studies, consideration should be given to enabling a more cost-effective way to perform such analysis.

A list (repeated below from previous questions) of items that might be used to justify having certain constraints includes:

- Legislation or regulation (e.g., maximum foreign property);

- Market risk management (e.g., avoid concentration by setting a maximum);
- Liquidity risk management (e.g., set a maximum for illiquid assets as a group and/or at the asset class level for real estate, infrastructure and private equity);
- Return expectations (e.g., maximum for low-yielding assets);
- Insufficient internal/external asset management capabilities; and
- Concerns about the accuracy of modelling methodologies and/or assumptions, and the (widely-known) sensitivity of optimization results to assumptions re: returns, risks, correlations, etc.

8. Evolved Risk Framework

An evolved risk framework should be considered to improve portfolio/risk measurement, management and/or governance.

The elements of the framework might answer key questions, starting with a "prioritization" of financial goals (short vs long term), and their inherent risks. A primary goal and risk should be clear and distinct from secondary ones, with appropriate integration of relevant risks. The least risky portfolio (Minimum Risk Portfolio) should also be defined.

The main concern I have noted is the reliance on accounting metrics to inform asset allocation. An undesirable feature of the status quo is that a change in accounting that causes "reported" net income to become more (or less) volatile might cause MPI to alter the portfolio design

(e.g., asset mix) because of the reportedly higher (lower) metrics in an A-L study even though nothing "real" has happened to underlying assets or liabilities. This potential cause-effect is undesirable, in my opinion.

9. Explicit Risk Management Goals

Among other things, the risk framework could include explicit goals related to market risk management (as well as goals related to other types of risk if those require enhancement). One goal might be to avoid "undue risk", which is risk that is taken:

- *unknowingly, not having been identified (unaware); or*
- *knowingly, but which:*
    - *cannot be managed prudently, given current capacities (ineffective);*
    - *exceeds risk tolerances (prohibited);*
    - *is higher than it needs to be (inefficient); or*
    - *is not understood (uninformed).*

Another goal might be to get paid better/well for those risks that are desired, with incentive systems that encourage desired behaviours that achieve desired outcomes and controls that monitor compliance with limits that discourage/prevent undesired behaviours and prevent undesired outcomes.

Any framework, as defined above, should consider the tradeoffs that arise from having more than one goal, and therefore more than one risk, and how conflicts are resolved.

10. Minimum Risk Portfolio

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.

Please see the PH&N article which is attached as an attachment to this information request. For further clarification of the definition of MRP please see PUB (CAC) 1-5.

11. Canadian Equities' 10% Minimum Allocation

The appropriateness and prudence of having a 10% <u>minimum</u> weight to Canadian Equities ("to retain a meaningful exposure to home markets") should be reconsidered, given the different interests of different stakeholders (e.g., employees through the pension plan), the concentrated nature of Canada's equity market, and other such relevant considerations.

This is a portfolio management recommendation for MPI and Finance to address, as the organizations that share responsibility for managing the MPI portfolio.

12. No International Equities

The appropriateness and prudence of having no exposure to International Equities should be reconsidered, given the large size of non-US foreign markets, the return opportunities that are potentially available from those missed opportunities and the effects of increased international diversification on long-term market risks.

This is a portfolio management recommendation for MPI and Finance to address, as the organizations that share responsibility for managing the MPI portfolio.

13. No Over-Reliance on Quantitative Modeling

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.

This is a portfolio management recommendation for MPI and Finance to address, as the organizations that share responsibility for managing the MPI portfolio. (same as above).

14. Exclusion of Real Return Bonds

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).

This is a portfolio management recommendation for MPI and Finance to address, as the organizations that share responsibility for managing the MPI portfolio (same as above).

Discussions about the attractiveness of RRBs in particular should take into account distinct differences between the average return on an asset and its ability to manage risk (better "insure" against changing underlying factors, such as inflation).

15. Effectiveness of Duration Policy

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.

This is a portfolio management recommendation for MPI and Finance to address, as the organizations that share responsibility for managing the MPI portfolio. (same as above).

Managers responsible for complying with the duration policy, and those who oversee its compliance, should assess the effectiveness of the

duration-matching strategy, on theoretical and practical grounds, taking into account relevant factors – i.e., the different "bases" of interest rate exposure, being differences related to real or nominal rates.

16. Integration of Real Estate/Infrastructure Liabilities in Duration Management

MPI should consider the liabilities arising from all sources (i.e., including real estate and infrastructure) in its interest rate risk management practices (duration), to be consistent with its management of risks arising from insurance, pension and other liabilities.

The financial leverage assumptions used in Asset-Liability Studies that support long-term asset mix decisions should be made consistent with the leverage actually used in the portfolio, removing the ~ 4% difference related to real estate debt.

This is a portfolio management issue to address (same as above).

- I believe MPI acknowledges the fact that there is a discrepancy, or if not, it should resolve any disagreement with the calculation made in evidence;
- Determine the materiality of the discrepancy, both as it exists at a point in time and over time, given the nature of the discrepancy;

- For greater clarity, the discrepancy relates to the fact that there is a difference (~ 4% using MPI's numbers, as calculated in earlier questions posed) in the exposure to real estate vs fixed income as implemented, compared to the assumptions used in the Asset-Liability Study, so materiality may take into account the fact that the return assumptions for real estate (unlevered) would not likely be expected to be the same as those for fixed income;
- Consider the need, given the materiality of the discrepancies above to reflect any need for adjustments in its management of fixed income and/or real estate, or other aspects of the portfolio (also, consider the implications of Belief #4 in prior evidence – i.e., the additional risk to the Total Portfolio is the relevant risk to consider);
- Consider the pros and cons of revising the investment policies to either note the discrepancy, and its acceptability if it does not conform with the policies, or take whatever action the committee deems appropriate in light of it;
- Make the implementation of the accepted outcomes of the A-L study consistent with the assumptions used – or if this is not practical, given the delegation of authority to real estate managers to borrow, otherwise have an ability to adjust other aspects of the total portfolio so that actual exposures are consistent with A-L studies.

17. Removal of 105% Rule in Investment Policies

MPI should remove from its Investment Policies the ability to request external managers to realize gains (losses) ("105% Rule"), which MPI says "is no longer relevant".

This would remove an ability by MPI to cause a manager to realize gains (losses) for the sole purpose of having an impact on net income, without yielding any economic value, reducing risk or otherwise conferring another benefit on MPI.

This is a straightforward recommendation to remove a feature that has undesirable characteristics.

18. Pension Fund

The interests of all relevant stakeholders should inform decisions regarding both the accounting for and management of the assets and liabilities related to the pension plan and other employee benefits. A desirable outcome is to have greater clarity around the appropriateness and prudence of maintaining different types of assets and liabilities commingled in one fund.

This is a portfolio management issue to address (same as above).

Steps to implement might include:

- Identify all relevant stakeholders;
- Identify all relevant constraints (e.g., laws related to pensions, etc.);

- Establish an agenda with clarity re: topic for discussion ("clarify the appropriateness and prudence of maintaining different types of assets and liabilities commingled in one fund"); and
- Provide a forum to make informed decisions.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-5

Volume:	CAC MPI's Investment Portfolio: Risk, Return and Good Practice	**Page No.**	11
Topic:	Investment		
Sub Topic:			
Issue:	Risk Portfolio		

Preamble to IR (If Any):

Mr. Viola writes: "A minimum risk portfolio (for market risk) should be clearly defined."

Question:

How should the minimum risk portfolio be defined in the context of the Corporation's current portfolio?

Rationale for Question:

To gain a better understanding of Mr. Viola's report.

RESPONSE:

The Minimum Risk Portfolio (MRP) depends on the inherent risks from MPI's **liabilities** – not MPI's **"current portfolio"**, to clarify an important point as stated in the PUB question.

As set out in the Attachment to PUB (CAC) 1-4, *How to Define the MRP – According to Phillips, Hager & North* ("PH&N"), published over a decade ago (2004), describes how to define the MRP:

- *"MRP can be considered as the portfolio of assets that best protects the plan against investment risk because it closely mimics the behaviour of the liabilities"*
- *"MRP can be calculated with reasonable accuracy"*

This 2004 PH&N article came after CPPIB documented its investment beliefs, which is the source for the definition of the MRP in the evidence that I provided. This is what CPPIB's 2003 Annual Report said about CPPIB's beliefs, which used the word MRP "the documentation of investment beliefs shared by our directors and management as the foundation for consistent and integrated decision making" and the first of five "other important accomplishment" during that year (above "diversification of … into private equities and the acquisition of our first private real estate investments").

Below are more extracts from the 2004 PH&N article.

> *… This … Brief addresses the next step of integrating risk management … Our paper and seminars stressed the importance of the … MRP*
>
> *… the MRP can be thought of in a number of … ways. First, … as a tool for measuring the changing cost of funding … liabilities against the changing value of … assets. … A healthy plan must maintain sufficient assets to pay … obligations … Alternatively, the MRP can be viewed in percentage terms, equating it to a plan's cost of capital and use it to compare with the return on … assets. Earning less than the required cost of capital for a sustained period of time clearly results in funding difficulties. Last year was a good year for most defined benefit pension*

plans. Both stock and bond markets rallied, but the real reason it was "good" was because … assets typically rose more than … liabilities ... the return was greater than the cost of capital. The median balanced fund return exceeded 14%, while we estimate that the MRP for most pension plans (had it been monitored) increased somewhere between 7% and 14%. The exact figure depended on the specifics of the plan.[1] … MRP can be considered as the portfolio of assets that best protects the plan against investment risk because it closely mimics the behaviour of the liabilities … MRP is used … to understand the sources of investment risk and return and is invaluable in quantifying and attributing success or failure to any deliberate mismatching of assets and liabilities.

…

Each interpretation highlights two additional points: first, that the MRP can be calculated with reasonable accuracy and, second, that this calculation is unique for every plan ...
… the MRP is a measurement and monitoring tool … to better understand the correlation between asset and liability price movement … not to be confused with a policy statement – we are not suggesting that the MRP is an appropriate investment strategy. On the contrary, deliberate risk-taking may be quite appropriate. The important benefit of monitoring the MRP is that it enables comparison of actual portfolio performance to what performance would have been had no risk been taken. … the MRP should be quantified and discussed as part of regular …

1 For example, the MRP for a Flat Dollar Benefit Plan typically increased by about 8.5%, compared to 13% for a Final Average Earnings Plan with full inflation indexation (without indexation it would have been approximately 10%).

reporting. In doing so, the chance of being caught off-guard by erosion in … financial strength is reduced significantly. … we are not recommending that … plans be more heavily invested in long bonds ... We are merely drawing attention to the fact that long bonds are more closely correlated with … obligations of a typical pension plan than are short bonds, stocks and many other assets. … long bonds are less risky and amount to a hedge against future deterioration in … financial health.

… Another reason for reluctance in moving toward long bonds is that the asset/liability comparison is a relatively new concept and difficult to explain to colleagues outside pension circles. There may be legitimate fear of being "absolutely" wrong (i.e., losing money), even though changing policy could prove "relatively" right (i.e., losing less money than the decline in liabilities). … the knowledgeable trustee knows that the latter is more important, but this does not make it any easier to explain to superiors or plan members who may be disgruntled with absolute returns.

A final benefit from monitoring the MRP is that it makes it less likely that trustees will spend perceived investment gains. If we have learned anything from the past decade, it is that investment gains are only real when they exceed the growth in funds required to pay … obligations.

The large equity and bond returns of the 1990s appeared to provide justification for benefit improvements when, in fact, these gains were necessary simply to keep up with the soaring

cost of plan benefits. Keeping a close eye on the MRP would have helped to mitigate the solvency problems confronting many plans today.

… taking the next step in strategic risk management requires … trustees to calculate and report the MRP, monitor it over time and evaluate which investment strategies are paying off and which are not. … this Brief helps reinforce the need for and the benefits of measuring asset performance against liability performance …"

In my evidence, I said that "I believe that MPI's minimum risk portfolio (MRP) should include at least some long-duration real return bonds (RRBs), given the nature of MPI's liabilities (long term, with some inflation exposure). Note, however, that Belief #2 simply supports the definition of the primary risk, but says nothing about whether to buy any assets that make up the MRP (e.g., RRBs). The belief says nothing about how much risk should be taken in relation to it. Appropriate and prudent answers to these follow-on questions requires additional beliefs …"

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-6

Volume:	CAC MPI's Investment Portfolio: Risk, Return and Good Practice	**Page No.**	13, 31
Topic:	Investment		
Sub Topic:			
Issue:	Valuation Basis		

Preamble to IR (If Any):

Mr. Viola writes, at p. 13: "I believe that long-term, asset mix decisions in particular requires the use of market valuations in calculations of returns and risks rather than ones that are based on accounting valuations."

And, at p. 31: "…market risks for a significant portion of the portfolio (~ ¼ of MPI's assets) are not captured in the risk definition used by MPI in long-term asset-liability studies (i.e., the risk definition is an accounting one, which "under-reports" the true market volatility for HTM assets..."

Question:

1) Could Mr. Viola please elaborate on how market valuations in calculation of returns and risks differ from accounting valuations?

2) Please explain how one would measure the HTM assets based on market value given the characteristics of the investments.

3) How would the current misalignment impact the Corporation's investment decisions?

Rationale for Question:

To understand the impact of different valuations on investments.

RESPONSE:

1. Market valuations depend on market prices, which may be volatile. If accounting values are not based on market values, then accounting valuations are likely to vary less significantly than their market value counterpart, so the volatility in net income (used as the definition of risk in A-L studies) will be lower or understate the "true" volatility, where "true" is my description of the best estimate assumptions of the market-price volatility. Accounting income will be closer to the changes in market value over time if the "turnover" of the assets is higher (since more gains and losses are "realized", and recognized as income – as they would be under the market value method). HTM (hold to maturity) has 1 turnover (maturity), so its differences can build up relative to market value.

2. It is my understanding that HTM assets include Manitoba bonds issued by Municipalities and/or Schools but that there are restrictions that prevent their sale, so they must be held to maturity. Bond pricing, using yields that reflect market yields for comparable bonds (adjusting yields to account liquidity difference effects), could be used to value those bonds. Depending on the purpose of the valuation (e.g., rebalancing vs long-term asset allocation decision-making), more or less precision would be appropriate. Judgement is required, making tradeoffs – particularly between relevance and reliability. As a general rule for portfolio decision-making I believe relevance trumps reliability and that all fixed income instruments should be valued using best estimate pricing sources, applied consistently over time, to get a more

consistent/comparable and relevant representation of the interest rates facing MPI.

3. I am not in a position to answer this question specifically, unfortunately, because I do not have information about how MPI's decisions would be impacted by changes in valuations. Having said that, human nature might suggest that if we "see" more variability in a metric, due simply to choosing a different way of measuring it ("underlying inherent risks" unchanged), we might choose to take less risk because we are generally risk averse. If that's generally true, then one might expect that a change that causes a "more volatile" reported figure might lead to less risk taking. The article referenced in my evidence (Footnote 30) suggests that the accounting rules that apply to US public sector plans provides more stability and that this is causing them to take more risks than they otherwise might (if a market-based metric were used).

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-7

Volume:	CAC MPI's Investment Portfolio: Risk, Return and Good Practice	**Page No.**	23
Topic:	Investment		
Sub Topic:			
Issue:	Discount Rates		

Preamble to IR (if any):

Mr. Viola writes: "For portfolio/risk management purposes, discount rates should reflect market opportunities, and these rates may differ significantly from both accounting and actuarial discount rates."

Question:

1) Please demonstrate how discount rates for portfolio/risk management purposes have differed from that calculated for both actuarial and accounting discount rates; and

2) Over the last five years, please provide illustrative examples.

Rationale for Question:

To understand how discount rates impact on the investment portfolio.

RESPONSE:

1) I am not an actuary, so I will focus on my response as a former accountant and my understanding of the accounting used. Generally speaking, the discount rates for portfolio/risk management purposes would be the most volatile, compared to any accounting discount rate.

The GOVERNMENT OF CANADA BENCHMARK BOND YIELDS - 10 YEAR, as published by the Bank of Canada, for example below, shows very volatile rates from year to year. Accounting discount rates are more stable ("sticky") so the effect on net income (as defined under GAAP) from changing interest rates can be expected to be smaller than the unrealized gain/loss effect from using (more volatile) market interest rates.

SELECTED GOVERNMENT OF CANADA BENCHMARK BOND YIELDS - 10 YEAR*

Year / année	Jan / jan
1982	
1983	11.58
1984	11.70
1985	11.17
1986	10.18
1987	8.26
1988	9.31
1989	10.01
1990	9.93
1991	10.05
1992	8.28
1993	7.98
1994	6.39
1995	9.34
1996	7.01
1997	6.65
1998	5.41
1999	4.89
2000	6.44
2001	5.39
2002	5.42
2003	5.02
2004	4.61
2005	4.21
2006	4.11
2007	4.17
2008	3.88
2009	2.97
2010	3.35
2011	3.31
2012	2.04
2013	1.99
2014	2.36
2015	1.35

* Source: *Bank of Canada, Data and Statistics Office.* The rates are based on actual mid-market closing yields of selected Canada bond issues that mature approximately in the indicated term areas. At times, some of the change in the yield occurring over a reporting period may reflect a switch to a more topical issue. http://www.bankofcanada.ca/rates/interest-rates/selected-historical-interest-rates/

For illustrative purposes, these yields show how much rates have changed.

2) Over the last five years, please provide illustrative examples.

Please see the time series for the 10 year rate, which has been quite volatile.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION:

PUB (CAC) 1-8

Volume:	CAC MPI's Investment Portfolio: Risk, Return and Good Practice	**Page No.**	47
Topic:	Investment		
Sub Topic:			
Issue:	Portfolio Design		

Preamble to IR (If Any):

Mr. Viola writes: "I believe strongly that the portfolio design of the whole portfolio (including the pension plan) should not be influenced by how the parts (insurance vs pension liabilities) are accounted for."

Question:

1) Should the investment assets supporting the pension obligations be separated from those supporting insurance liabilities?

2) If so, does that satisfy Mr. Viola's concern regarding portfolio design in this regard?

Rationale for Question:

To gain a better understanding of Mr. Viola's report.

RESPONSE:

1) and 2) Absent consultation with stakeholders including potential pension beneficiaries as well as consumers, I cannot provide a definitive answer. In my evidence, I noted that:

> *The interests of all relevant stakeholders should inform decisions regarding both the accounting for and management of the assets and liabilities related to the pension plan and other employee benefits. A desirable outcome is to have greater clarity around the appropriateness and prudence of maintaining different types of assets and liabilities commingled in one fund.*

As well, it is not clear what the PUB means by "separation". Many factors influence a decision. Unfortunately, I am in not in a position to describe how the impact on "accounting" for the effects of any separation would influence the decision.

RATIONALE FOR REFUSAL TO FULLY ANSWER THE QUESTION: