PUB (MPI) Pre-Ask 2

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Preamble:

Question:

a) Please provide from the AON witness a response to each of the 18 recommendations made by Mr. Viola.

b) Please provide a directional indication of how AON's analysis may change if Mr. Viola's recommendations were implemented for ALM purposes.

RESPONSE:

a) Please see attached.

b) Please see attached.

Manitoba Public Insurance Corporation
Public Utilities Board (PUB) Pre-Ask Question #2

October 2016

Prepared by Aon Hewitt

Empower Results®

Introduction

The following provides information in response to the Public Utilities Board (PUB) Pre-Ask Question #2:

a) Please provide from the Aon witness a response to each of the 18 recommendations made by Mr. Viola.

b) Please provide a directional indication of how Aon's analysis may change if Mr. Viola's recommendations were implemented for ALM purposes.

Mr. V. Viola's Recommendations #1-4

Mr. V. Viola's Recommendations

1. *Clarity of Accounting Choices*
2. *Adoption of More Comparable Accounting Principles*
3. *AFS and HTM Accounting*
4. *Pension Liability Accounting*

Aon Response to PUB Pre-Ask Question #2

a) Aon is not a professional accounting firm and does not have sufficient expertise to comment on these recommendations.

b) The impact of these recommendations, if any, on the ALM analysis is unknown.

Mr. V. Viola's Recommendation #5

Mr. V. Viola's Recommendation

5. Return/Risk Definitions for Asset Classes

Aon Response to PUB Pre-Ask Question #2

a) Return and risk definitions are used to help an organization compare the relative risk-reward trade-offs of the optimal portfolios. It is important for each organization to determine risk and reward metrics that are meaningful to them. There are no standard risk and reward metrics and each organization determines metrics that most clearly align with their goals and objectives. First, the organization identifies what issue(s) are of primary concern. Then, risk and reward metrics that directly impact the primary issue(s) are chosen.

   MPI identified the level and volatility of premium rates as the primary risk. The risk and reward metrics were discussed with MPI and chosen because they directly impact premium rates under current practice.

b) The efficient frontier represents the most efficient portfolios for the chosen risk and reward variables. If another set of variables is chosen for an additional optimization, the results will be the same or suboptimal with respect to the variables MPI chose for the initial optimization.

Mr. V. Viola's Recommendation #6

Mr. V. Viola's Recommendation

6. De-Linking Discount Rates

Aon Response to PUB Pre-Ask Question #2

a) Theoretically we agree with this recommendation, but it is not permitted by actuarial standards.

b) It is expected that this recommendation would improve the effectiveness and ease of implementation of the hedging strategy. However, any analysis would be strictly theoretical if implementation is not possible.

Mr. V. Viola's Recommendation #7

Mr. V. Viola's Recommendation

7. Min/Max Asset Class Constraints

Aon Response to PUB Pre-Ask Question #2

a) Asset class constraints are important to avoid over-reliance on quantitative modeling and ensure optimal portfolios are practical for implementation. The efficient frontier of optimal portfolios represents the best risk-adjusted returns, given the constraints.

b) Relaxing constraints may or may not have an impact on the optimal portfolios. It will only have an impact if the constraints excluded a portfolio with a better risk-adjusted return that would be implemented by MPI.

Mr. V. Viola's Recommendations #8 & 9

Mr. V. Viola's Recommendations

8. *Evolved Risk Management Framework*
9. *Explicit Risk Management Goals*

Aon Response to PUB Pre-Ask Question #2

a) We generally support periodic review of risk management and governance framework(s) to confirm the framework(s) are appropriate for the organization and identify any opportunities for improvement. It is important to ensure that the framework(s) specifically help the organization more effectively execute its responsibilities and achieve its goals. As such, the practical implications of the frameworks must be considered. It is not clear what specific actions are being proposed in these recommendations and how they would align with MPI's key objectives.

   Defining risk management goals is important in determining the key risk(s) of MPI and is a critical input into the ALM.

b) More specific recommendations would be required to determine relevance to the ALM.

Mr. V. Viola's Recommendation #10

Mr. V. Viola's Recommendation

10. Minimum Risk Portfolio

Aon Response to PUB Pre-Ask Question #2

a) Although a Minimum Risk Portfolio (MRP) was not specifically defined in the ALM, risk-reward results are illustrated over a large spectrum, allowing MPI to judge the incremental impact on reward of taking additional risk.

b) Given the above, we do not expect modeling a MRP would significantly impact decision making.

Mr. V. Viola's Recommendations #11 & 12

Mr. V. Viola's Recommendations

11. Canadian Equities 10% Minimum Allocation

12. No International Equities

Aon Response to PUB Pre-Ask Question #2

a) All asset classes and constraints are reviewed each time an ALM is completed to ensure they align with the organization's objectives. When choosing asset classes for the ALM, the organization needs to ensure it is comfortable with the asset class modeled and can effectively implement it. It is generally recommended that a minimum of 5% be allocated to an asset class in order to achieve a meaningful impact on risk and reward and manage costs.

   International equities were modeled as part of the ALM but only showed up in riskier optimal portfolios. It is important to note that Canadian and U.S. equities were modeled with allocations to small capitalization equities which reflected MPI's plans for implementation. This improved the risk-reward profile of these asset classes.

b) Aon's response to Question CAC 82B provides analysis on the impact of moving 1%, 5% and 10% from Canadian equities to international equities. This analysis indicates that reducing Canadian equities and increasing international equities increases risk and does not improve reward.

Mr. V. Viola's Recommendation #13

Mr. V. Viola's Recommendation

13. No Over-Reliance on Quantitative Modeling

Aon Response to PUB Pre-Ask Question #2

a) We agree with this recommendation. Constraints play an important role in ensuring that the results of the modeling are practical. Qualitative analysis ensures that recommendations align with the organization's objectives and are implementable.

b) This recommendation is already considered in the ALM process.

Mr. V. Viola's Recommendation #14

Mr. V. Viola's Recommendation

14. Exclusion of Real Return Bonds

Aon Response to PUB Pre-Ask Question #2

a) It is important to ensure that the risk management perspective specifically helps the organization more effectively achieve its goals. MPI has identified the level and volatility of premium rates as its key risk. As such, the year-to-year price volatility and cost of Real Return Bonds needs to be considered as this directly impacts the level and volatility of premium rates.

b) It is unclear that Real Return Bonds would reduce risk, as currently defined by MPI. Given that the majority of MPI's fixed income portfolio is in non-Federal bonds (which have a credit spread), we would expect that reward would be reduced if Provincial, Municipal or Corporate bonds were replaced by Real Return Bonds.

Mr. V. Viola's Recommendation #15

Mr. V. Viola's Recommendation

15. Effectiveness of Duration Policy

Aon Response to PUB Pre-Ask Question #2

a) An important consideration is that the inflation assumption that impacts liabilities is based on a survey of Canadian banks. There is no financial instrument that is priced on this basis and, as such, in practice it is difficult to achieve precise protection against inflation.

   The ALM study considered the impact of changes in realized inflation and nominal interest rates on the liabilities. At a total portfolio level, the combination of the growth portfolio and liability matching portfolio needed to cover the entire liability return, including the impact of realized inflation.

b) It is unclear that Real Return Bonds would reduce risk, as currently defined by MPI, and may reduce reward (as outlined in the response to Recommendation #14).

Mr. V. Viola's Recommendation #16

Mr. V. Viola's Recommendation

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

Aon Response to PUB Pre-Ask Question #2

a) The objective of the duration matching portfolio is to match the interest rate risk of liabilities. The growth portfolio is treated separately and takes risk to seek additional reward but is not specifically seeking to match liabilities. Growth portfolio components (real estate, infrastructure and equities) have sensitivity to various economic factors which contribute to the enhanced returns and increased volatility of the growth portfolio. Any hedging would therefore change the risk-reward profile of the growth portfolio.

b) Reflecting the 4% difference in real estate debt would increase the return and volatility of the real estate asset class. The impact of this recommendation, if any, on the ALM analysis is not certain. However, we do not expect there would be a material impact on the asset mix recommendation because, for the 30% growth portfolio, real estate and infrastructure are both at their minimum allocation and, together, are at the maximum allocation for illiquid investments.

Mr. V. Viola's Recommendation #17

Mr. V. Viola's Recommendation

17. Removal of 105% Rule in Investment Policies

Aon Response to PUB Pre-Ask Question #2

a) We would defer to MPI on this recommendation.

b) This recommendation does not impact the ALM.

Mr. V. Viola's Recommendation #18

Mr. V. Viola's Recommendation

18. Pension Fund

Aon Response to PUB Pre-Ask Question #2

a) A separate pension plan would allow MPI to develop an investment policy that considers the risk and reward characteristics of the assets specific to the pension plan liabilities. This approach would be consistent with other public and private sector organizations that generally have separate funds for pension plan assets. As such, we support the recommendation that MPI review the merits of segregating pension assets.

b) The impact of this recommendation would require the completion of another ALM study.