

Public Utilities Board (PUB)

2019 GRA Information Requests on Intervener Evidence

October 5, 2018

PUB (CAC) 1-5

Revision to PUB (CAC) 1-5: The graph showing the return reduction from not introducing RRBs in the Pension Portfolio has been updated, along with the calculation, to show that the effect is ~ 0.2% (not ~ 1.8% as reported). (1.8% represents the difference in return between the optimized portfolio (including RRBs) and current portfolio (rather than optimized portfolio excluding RRBs).)

Document:	MPI'S Investment Portfolio: Asset / Liability Analysis and Previous Recommendations	Page No.:	9, 21
PUB Approved Issue No.:	8. Performance of the Investment Portfolio 21. Asset Liability Management Study		
Topic:	Asset Mix		
Sub-Topic:			

Preamble to IR (If Any):

Mr. Viola has provided an estimate of the impact of removing Real Return Bonds (RRBs) from the portfolio, to demonstrate Mercer's observation that their absence removes an opportunity for improvement at lower levels of risk.

Question:

Please explain the estimates provided of the impact of removing Real Return Bonds on returns of the portfolio.

Rationale for Question:

To understand the implications of excluding RRBs from MPI's Basic and Pension portfolios.

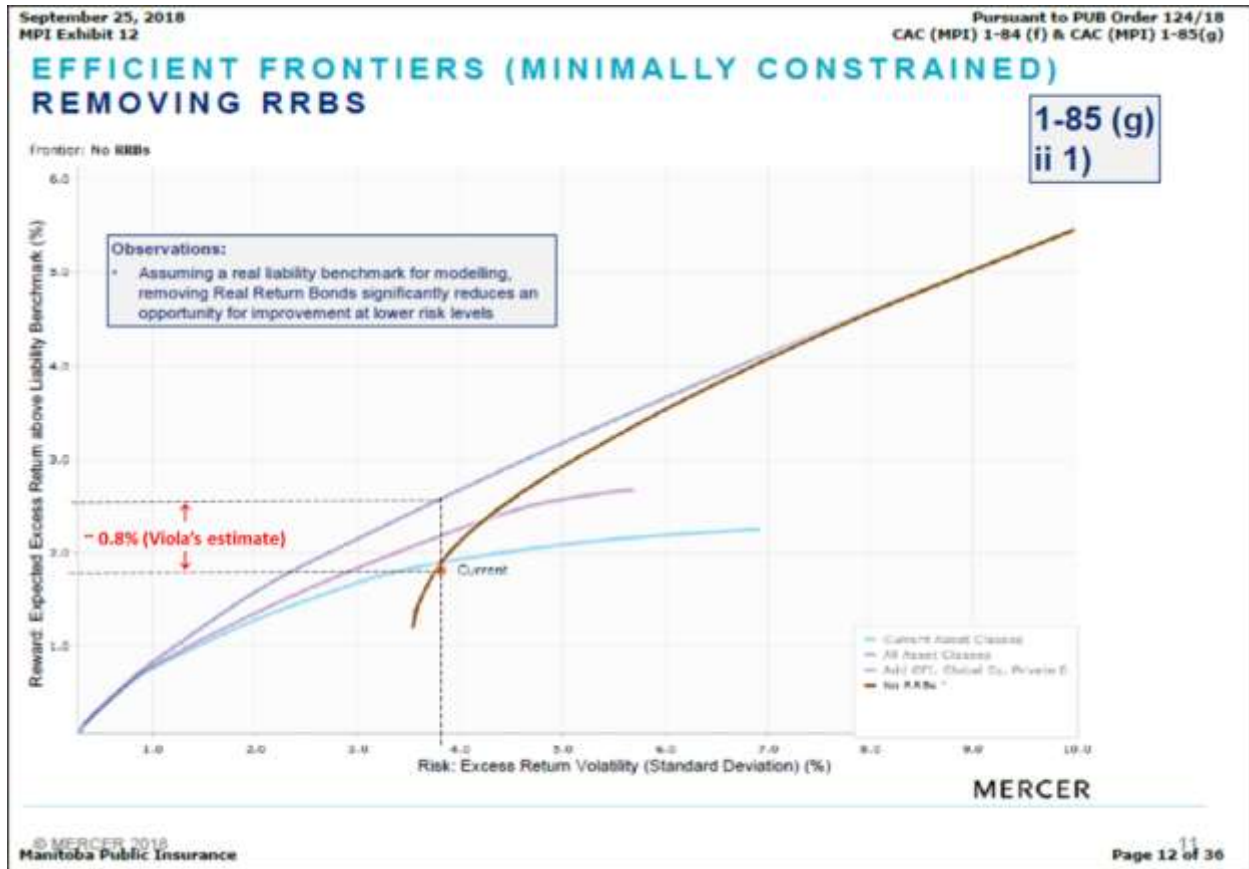
RESPONSE:

Mercer's "observations" in MPI Exhibit 12 indicate that "removing Real Return Bonds significantly reduces an opportunity for improvement at lower risk levels."¹

¹ MPI Exhibit 12, page 12 of 36

0.8% Return Reduction in Basic Portfolio

The 0.8% adverse impact of removing RRBs from the **Basic** Portfolio is inferred from Mercer’s analysis in MPI Exhibit 12, page 12 of 36 (below).



At “current” risks levels (vertically at x = Risk = 3.8%), Mercer’s efficient frontier suggests that the expected excess return above the Liability Benchmark drops by ~ 0.8%, from a visual inspection of the graph. In other words, the upper efficient frontier is the most efficient, while the one labelled “No RRBs” excludes RRBs. The vertical distance between those two graphs (measured at the current risk level of 3.8%) measures the cost of removing RRBs (lower “excess return above Liability Benchmark”). Mercer did not include a “table” of statistics for returns in the above graph, so the vertical difference or cost of the constraint appears to be ~ 0.8% as the difference calculated below.

- ~ 2.6% “Excess return”, **including** RRBs (X = top dotted horizontal line)
- ~ 1.8% “Excess return”, **excluding** RRBs (Y= bottom dotted horizontal line)
- ~ 0.8% Cost **excluding** RRBs (X - Y = vertical distance, at 3.8% risk)

0.2% Return Reduction in Pension Portfolio

Similarly, for the **Pension** Portfolio, the return reduction appears to be ~ 0.2% from a visual inspection of the graph below (page 24 of 36 in MPI Exhibit 12).

~ 2.9% "Excess return", **including** RRBs (X = top dotted horizontal line)

~ 2.7% "Excess return", **excluding** RRBs (Y= bottom dotted horizontal line)

~ 0.2% Cost **excluding** RRBs (X - Y = vertical distance, at 4.9% risk)

