ALM & INVESTMENTS

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2024 General Rate Application

MANITOBA PUBLIC INSURANCE

Agenda

- Investment Objectives
- Interest Rate Forecasting
- Economic Update
- Portfolio Performance
- Implementation of New Asset Mixes
- Inflation Hedging/Bond Overlay Strategy

Investment Objectives

Basic Claims Portfolio

Objective:

- To ensure funds are available pay claims when necessary
- To hedge risks associated with the liabilities

The main risks are due to changes in interest rates & inflation

- Interest rate risk is well managed – the net impact was within $1.0M of the budget in 2022/23
- Inflation risk will be addressed through the new Bond Overlay Strategy

ALM Strategy Continues to be Effective at Limiting Interest Rate Risk

Net impact of changes in interest rates from March 31, 2022 to March 31, 2023 on a Corporate basis was within $1.0 million of budget on total fixed income assets of $2,817 million. Rapidly rising interest rates put many financial institutions under stress and caused the bankruptcy of two regional banks in the united states.

	Millions
Loss on Marketable Bonds	($119.6)
Increase in Claims Incurred due to Discount Rate Change	($104.2)
Net Impact of Interest Rate Changes	($15.4)
Budget	($14.8)
Actual Impact vs. Budget	($0.6)

Objectives of the RSR and EFB Portfolios

Objective of the RSR:

To ensure that sufficient levels of capital are maintained so that Basic is in satisfactory financial condition; Sufficient capital to withstand plausible adverse events and deliver rate stability & predictability

Objective of the EFB:

To ensure that pension and other obligations are paid as they become due

Interest Rate Forecasting

Interest Rates Used for Rate Making

New Money Yield is a weighted average of current interest rates for fixed income types held within the Basic Claims investment portfolio

Favourable Impact to AAP Rate Indication of 1.33%

Bond Type	IPS Target Weights	March 31, 2023	Aug. 31, 2023
Government	37%	3.64%	4.55%
Corporate	28%	4.99%	5.68%
Mortgages	5%	5.95%	6.79%
Total	70%	4.35%	5.16%
Inv. Mgmt. Fees		(0.12%)	(0.12%)
Weighted Avg		4.22%	5.04%

Yields as per FTSE Russell indices

Interest Rates used to calculate Asset Values within the Forecasted Financial Statements

Naïve forecast recommended

- MPI continues to recommend using a Naïve interest rate forecast, which assumes that the current level of interest rates will remain unchanged during the forecast period
- While the consensus bank forecasts have been closer to actual interest rates in the short-term, over the long-term the Naïve forecast has been closer to actual interest rates. Hard to say what will occur in the future.
- MPI does not take a position on the future direction of interest rates
- Stability in the forecasting methodology is important in delivering rate stability to customers
- The cost of inaccurate interest rate forecasting in the past was significant ($163M)

Changes to Forecasting Methodology for Investments

Based on recommendations from Mercer the following changes were made:

- Infrastructure benchmark changed from CPI +5% to CPI +4% (approx. $2.0M reduction in income)
- Bond spreads now use mean reversion assumptions (reduced investment income by $1.0M to $1.5M annually)
- Equity forecast based on historical returns starting in 1991 rather than 1956 (expected return was unchanged at 6.6%)

Interest Rates for Discounting Claims

Under IFRS 17, MPI no longer uses a singular naïve discount rate

- Liability discount curve provided by Addenda
- Top down methodology with reference portfolio based on IPS target weights for fixed income including commercial mortgages which are expected to be purchased by end of the fiscal year
- Liability discount curve provided by Addenda on a monthly basis
- Credit risk adjustment removes both expected & unexpected credit risk
- The yield curve is to reflect the characteristics of the liabilities
- Future periods are discounted using forward rates which are provided by Addenda

Economic Update

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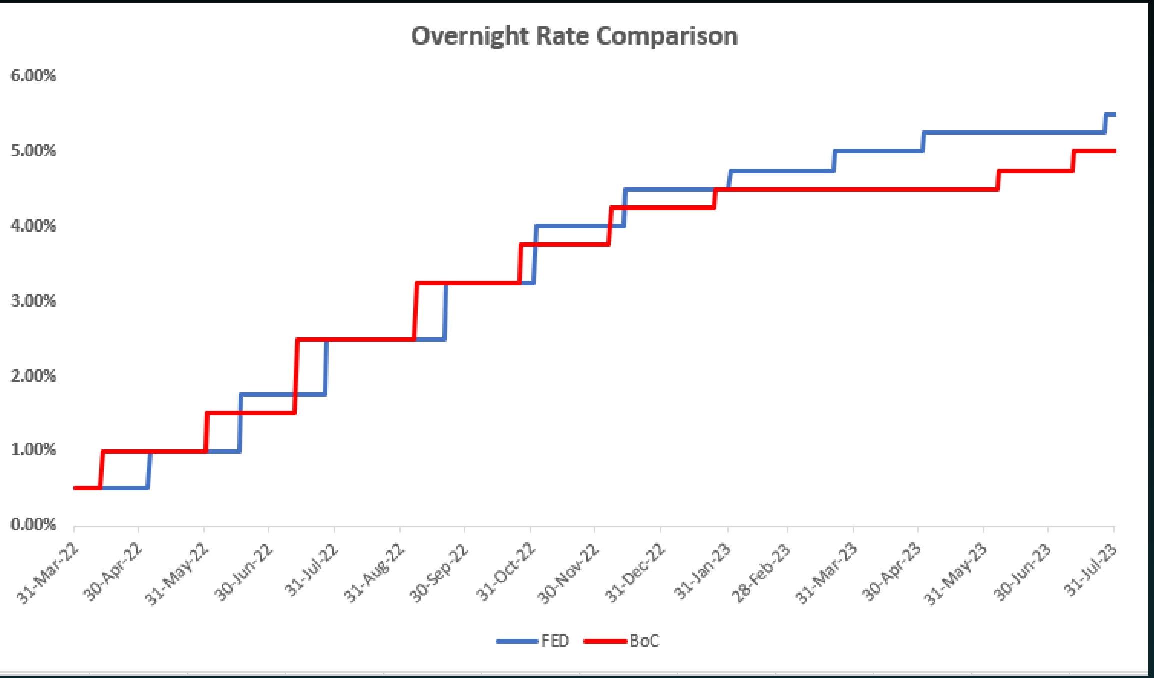
Short-Term Interest Rates Rising

Central banks have increased interest rates to fight inflation

- BoC hiked the overnight rate 9 times from April 2022 to July 2023 increasing the rate from 0.5% to 5.0%
- The Fed's O/N rate increased from 0.5% to 5.5% over the same period
- The labour market remains strong with unemployment 1.3% below the 5 year average at 4.3%



Long-Term Interest Rates Continue to Rise

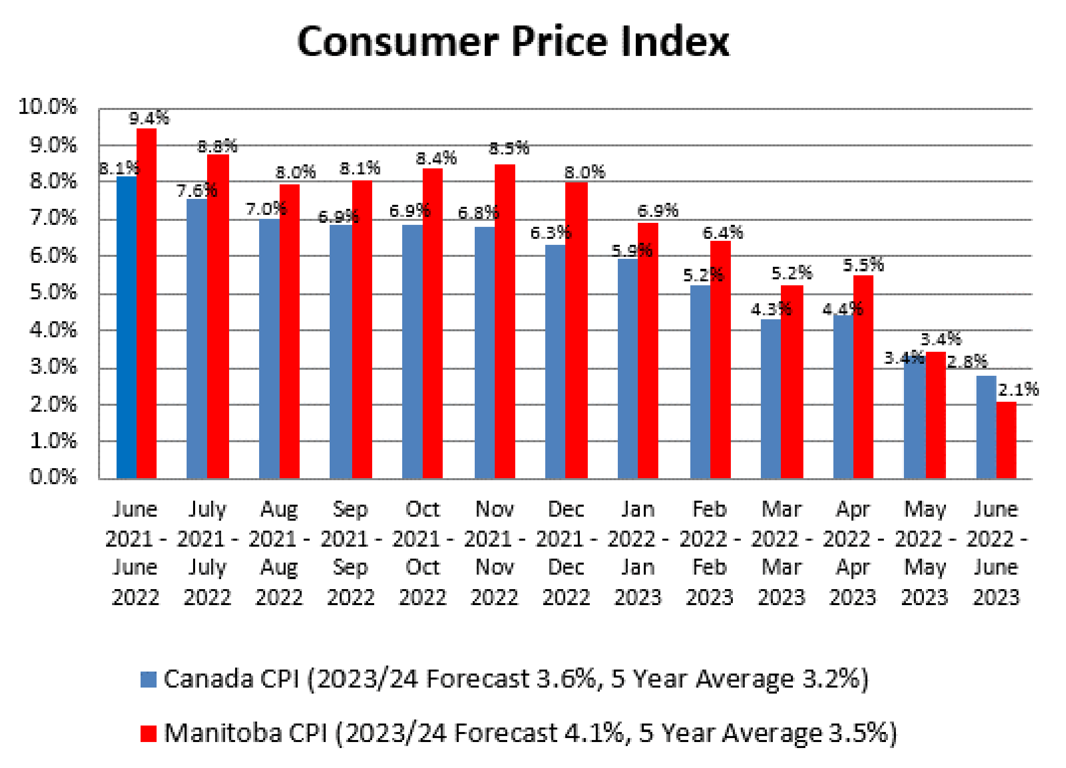
Government of Canada 10 year, corporate and Provincial bond yields

Bond Type	Yield at March 31, 2022	Yield at March 31, 2023	Change since March '22	Yield at Aug. 31, 2023	Change since March '23
Corporate BBB	4.07%	5.27%	1.20%	5.79%	0.52%
Corporate A	3.62%	4.83%	1.21%	5.39%	0.56%
Provincial	3.05%	3.84%	0.79%	4.43%	0.59%
GCAN 10 Year	2.41%	2.90%	0.49%	3.56%	0.66%

Source: FTSE Russell – Debt Market Indices

Inflation has Fallen Rapidly

Manitoba CPI fell from 9.4% to 2.1%



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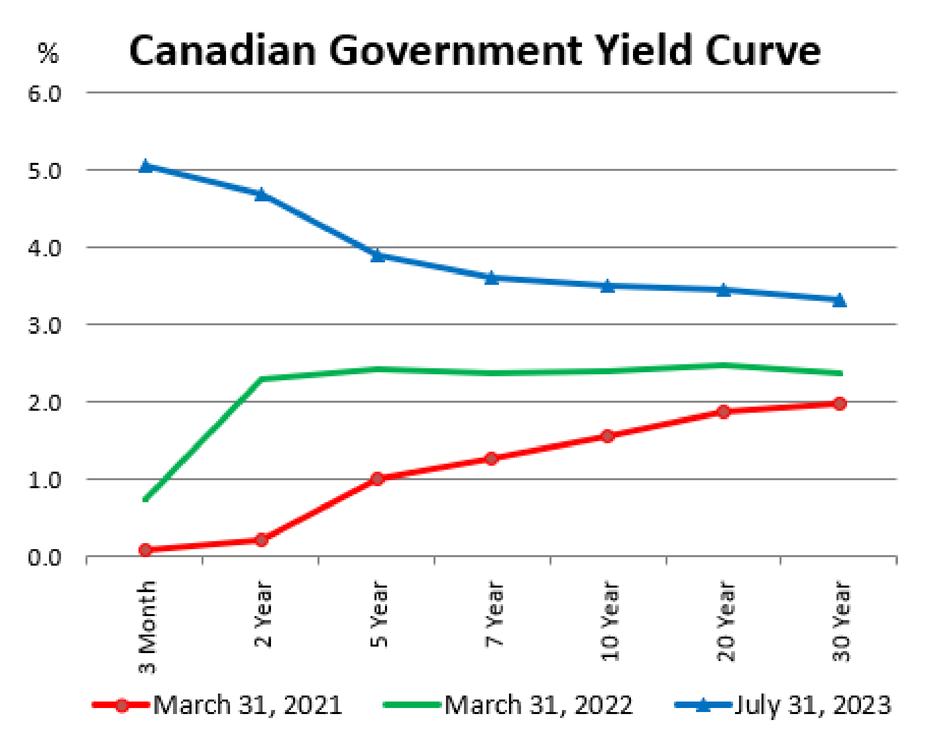
Investment Performance

Impact on Fixed Income Portfolio

Increasing interest rates causes bond prices to fall

- Yield curve remains inverted, signaling a recession is likely
- Bond spreads are unchanged
- MPI's Corporate & Provincial bonds declined by 2.7% & 3.9% in 2022/23
- At March 31, 2023 MPI wrote down $14.4M in the EFB portfolio & $8.1M in the RSR portfolio (corporate bonds & private debt)



Impact on Public Equity Portfolio

Strong performance from the equity portfolio

- Canadian equity portfolio was up 0.7% vs. -7.1% for the benchmark in 2022/23
- Global equity portfolio was up 6.2% vs. 1.3% for the benchmark in 2022/23
- No write downs of equities in 2022/23
- Equity markets have performed well in 2023 with the MSCI World, TSX & BMO small cap indices up 15.7%, 8.4% & 6.3%
- Fiscal YTD (March 31 – June 30) MPI's equity portfolio has increased by 0.4% vs. 2.2% for the benchmark

Impact on Private Equity Portfolio

Modest returns from the private equity portfolio

- Returns over the 12 months ended at March 31, 2023
  - Infrastructure: 0.0%
  - Real Estate: 2.8%
- Returns for fiscal YTD ending at June 30, 2023
  - Infrastructure: 5.6%
  - Real Estate: 1.4%

Benchmarking Performance

Mercer Recommended:

- “not continuing with peer comparison at the total fund level”
- “comparing investment performance [of each manager] against:
  - A suitable benchmark
  - Peer investment managers”
- Mercer recommended comparing MPI’s returns against the policy portfolio
- Policy Portfolio = sum of (Benchmark return) x (IPS target weight) for each asset class
- Performance evaluation completed by Ellement shows that Basic & EFB outperformed the policy portfolio while RSR underperformed in 2022/23 (see next slide)

Actual vs. Benchmark Returns

Basic Claims & EFB outperformed over 12 months ended at March 31, 2023

	Basic Claims*	RSR	EFB
Portfolio	-1.8%	0.2%	0.2%
Benchmark	-2.4%	0.7%	-0.6%
Value Added	0.6%	-0.5%	0.8%

*MUSH bond returns calculated using book values

Impact of IFRS 9

All investments are now classified as Fair Value Through Profit & Loss

- Due to the adoption of IFRS 9 MPI elected to classify all investments as Fair Value Through Profit & Loss (FVTPL). Previously equities were available for sale (AFS) and MUSH bonds were held to maturity (HTM).
- MUSH bonds will now be reported at market value rather than at book value
- This change had a minor impact on MPI's ALM strategy
- Previously a portion of the claims liabilities were carved out and matched to the MUSH bonds in a cash flow matching strategy; this is no longer necessary.
- MUSH bonds will now be included with the marketable bonds in the moment matching strategy
- The duration & convexity of the total bond portfolio will be matched to the duration & convexity of the Basic Claims liabilities


Implementation of
New Asset Mixes
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Implementation of New Asset Mixes

Tasks Completed

- Transitioned RSR & EFB equity portfolios to new target weights
- Rebalanced Basic Claims portfolio to reach target weight for corporate bonds
- Issued RFP & selected investment manager search consultant

Tasks to be Completed:

- Cost/benefit analysis of bond overlay strategy
- Determine how to account for repurchase agreements
- Develop policy to determine an appropriate hedge ratio
- Liquidate real estate in EFB portfolio & invest in infrastructure
- Complete searches for new investment managers of: mortgages, inflation linked bonds, real estate & infrastructure

Changes to Asset Allocation Targets

New Asset Mix Implemented on April 1, 2023 as a result of 2022 ALM Study

Asset Class	Prior	Current	Change
Provincial Bonds	60.0%	37.0%	-23.0%
Corporate Bonds	20.0%	28.0%	8.0%
MUSH Bonds	20.0%	20.0%	0.0%
Mortgages	0.0%	5.0%	5.0%
Real Estate	0.0%	10.0%	10.0%

Asset Class	RSR	EFB
Fixed Income	-5.0%	-7.0%
Equities	-7.0%	-1.0%
Alternatives	+12.0%	+8.0%

Impact of Change in Asset Mix on MCT

for 2022/23 under IFRS 4

	Actual Asset Allocation	New Asset Allocation
Available Capital	$383,101	$383,101
Required Capital	$345,847	$416,048
MCT Ratio	110.8%	92.1%

Mortgages increase the required capital (due to a 10% capital charge), but their higher yield has a favourable impact on the rate indication

Lessons Learned from Prior ALM Study

- Illiquid asset classes (private debt, mortgages, real estate, infrastructure, etc.) can take a very long time to become fully invested
- Private debt took about 2 years to become fully invested
- Goal is to be fully invested in mortgages & real estate by March 31, 2024
- Use of a real liability benchmarks is important to accurately capture the impact of inflation on the claims liabilities


Bond Overlay Strategy
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Background

- Inflation is a significant risk for MPI as PIPP benefits are fully indexed to Manitoba CPI
- In 2022 MB inflation was 8.0%; CPI is expected to remain above 2.0% until 2025
- MPI reserves for expected inflation but has no protection from unexpected inflation
- A strategy to hedge inflation was approved by the Investment Committee in February 2023
- The goal is to hedge the impact of unexpected inflation
- Allocation to the strategy has yet to be determined

Cost & Risk

- Size of hedge will depend upon the risk appetite of the Board & the cost to hedge
- Cost is estimated to be $1.1M annually for a 50% hedge & $2.2M to be 100% hedged
- Impact of inflation in 2021/22 was $63.5M and in 2022/23 it was $55.0M
- Risk related to the strategy is low as the worst case scenario is that the corporation loses the inflation protection, which returns the corporation to its current position

Benefits of the Bond Overlay Strategy

- The overlay will not alter the current composition of the Basic Claims portfolio which will ensure that the yield and liquidity of the portfolio are not negatively impacted.
- The current interest rate hedging strategy, which is working well, remains intact.
- No impact to the discount rate whereas a cash purchase of inflation linked bonds would reduce the discount rate and increase the liabilities.
- Ease of implementation: the term of the inflation linked bond purchased does not matter as all ILBs provide the same inflation compensation payment

Why is Addenda here?

- The 2022 ALM study was completed with Mercer
- Mercer recommended buying real return bonds on a cash basis
- Addenda manages MPI's corporate bonds & the moment matching strategy
- Addenda identified two issues with buying RRBs on a cash basis & recommended the bond overlay to address those issues

Conclusion

Interest Rate Risk continues to be well managed, inflation risk will be addressed through the bond overlay strategy

- The new asset mixes are partly implemented:
  - Liquid asset classes have been rebalanced
  - Several manager searches are required for illiquid asset classes
- Despite record increases in interest rates the net impact to the Corporation has been small due to the effective ALM strategy
- The bond overlay strategy will hedge unexpected increases in inflation

Appendix

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Asset Allocation Targets

Figure INV-11: Asset Mix Implemented on April 1, 2023

Line No.	Target Weights	Basic Claims	RSR	Employee Future Benefits
1	**Fixed Income**			
2	Provincial Bonds	37.0%	22.0%	0.0%
3	Corporate Bonds	28.0%	0.0%	16.0%
4	MUSH	20.0%	0.0%	0.0%
5	Private Debt	0.0%	23.0%	17.0%
	Commercial Mortgages	5.0%	0.0%	0.0%
6	**Total Fixed Income**	**90.0%**	**45.0%**	**33.0%**
7	**Public Equities**			
8	Canadian Equities	0.0%	12.0%	14.0%
9	Global Equities	0.0%	8.0%	10.0%
10	Global Low Volatility	0.0%	8.0%	10.0%
11	**Total Equities**	**0.0%**	**28.0%**	**34.0%**
12	**Alternatives**			
13	Canadian Real Estate	10.0%	16.0%	10.0%
14	Infrastructure	0.0%	11.0%	23.0%
15	**Total Alternatives**	**10.0%**	**27.0%**	**33.0%**
16	**Overlay**			
17	Real Return Bonds/TIPS	34.0%		
18	Federal Canada/ US Treasuries	-34.0%		
19	Net Overlay Exposure	0.0%		

Approval Process

MPIC Act states that the Minister of Finance is responsible for MPI's investments

- Management makes recommendations to the ICWG
- ICWG reviews recommendations and provides direction
- Management makes recommendations to the Investment Committee
- Investment Committee makes recommendations to MPI's Board
- Investments in asset classes not included in the Financial Administration Act (FAA) require an Order in Council (OiC) from Cabinet
- Representatives of the Minister of Finance are members of the ICWG, attend IC meetings and brief the Deputy Minister and the Minister as necessary