Asset Mix Strategy Review – Introduction

Toronto Investment Board

June 19, 2023

Purpose and Objectives

The purpose of this document is to review the process followed and decisions made during the last asset mix review

In addition, this document includes a comparison of the Capital Market Assumptions (“CMAs”) used for the asset mix review in 2017 versus Aon’s most recent CMAs as at December 31, 2022.

Asset Mix Review

Process and Morneau Shepell's Recommendation

In 2017, the City of Toronto (the "City") engaged Morneau Shepell (now Telus Health) to advise on the inaugural asset mix strategy for the Investment Board

In order to perform this work, the following steps were performed:

- Morneau and the City met to discuss the City's investment objectives and constraints
- Morneau built a financial model, in consultation with the City, that incorporated the interactions between the Short Term Fund ("STF"), Long Term Fund ("LTF") and Sinking Fund ("SF") so that the impact of asset mix decisions could be evaluated against the impacts on the funds
- The fund values of the funds were then projected, in a stochastic framework, to compare various alternative investment policies
- Morneau recommended that the investment policy be the same for the ST and the LTF
- The investment policy that Morneau recommended is provided on the right

Asset Class	Allocation
Bond Portfolio	70%
Canadian Equity	4%
US Equity	10%
International Equity	3%
Emerging Market Equity	3%
Canadian Real Estate	10%

Asset Mix Review

Aon's Recommendation

Based on Morneau's recommendation and other implementation considerations, Aon then recommended the asset mix on the right

The Toronto Investment Board adopted this asset mix.

We also provide the expected return and risk characteristics of the asset mix using our December 31, 2017 Capital Market Assumptions which were originally used to select the asset mix and the return statistics using our December 31, 2023 Capital Market Assumptions.

Definitions

Expected return: Average annualized 10-year compound return

Average Annual CTE: Average Annual Conditional Tail Expectation ("CTE") is equal to the average of each year's worst 5% of returns

10-year Annualized CTE: Average of the worst 5% of 10-year annualized returns

Allocation	
Fixed Income	70%
Global Equity (MSCI ACWI)	20%
Return Statistics – December 31, 2017 Capital Market Assumptions	
Expected Return	
Standard Deviation	
Average Annual CTE	-6.4%
10-year Annualized CTE	
Return Statistics – December 31, 2023 Capital Market Assumptions	
Expected Return	5.2%
Standard Deviation	5.5%
Average Annual CTE	-5.8%
10-year Annualized CTE	2.0%

Capital Market Assumption Comparison

December 31, 2017 Capital Market Assumptions

	Expected return	Standard Deviation	Average Annual CTE
Universe Bonds	2.2%	5.0%	-7.5%
All Country World Index (ACWI)	6.6%	14.8%	-22.9%
Real Estate	5.5%	12.5%	-23.8%
Infrastructure	7.0%	19.0%	-29.9%

December 31, 2022 Capital Market Assumptions

	Expected return	Standard Deviation	Average Annual CTE
Universe Bonds	4.1%	5.8%	-6.6%
All Country World Index (ACWI)	7.2%	16.2%	-28.1%
Real Estate	5.3%	15.8%	-27.0%
Infrastructure	6.7%	11.6%	-14.8%

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