

Efficient Frontiers (Minimally Constrained)

Basic Combined

	Liability Benchmark	Current (A)	Higher Return (B)	Lower Risk (C)	Midpoint (D)	Higher Return & Risk (E)
Fixed Income	100%	100%	70%	81%	76%	69%
Treasury Bills	3%	---	6%	6%	6%	6%
3x Real Return Bonds	---	---	8%	2%	11%	7%
Real return bonds	58%	---	---	35%	---	---
3x Long Provincial Bonds	---	---	4%	---	---	5%
Provincial short-term bonds	39%	---	---	---	---	---
Provincial mid-term bonds	---	33%	29%	18%	39%	27%
Provincial long-term bonds	---	27%	---	---	---	---
Corporate mid-term bonds	---	9%	3%	---	---	4%
Corporate long-term bonds	---	11%	---	---	---	---
MUSH Bonds	---	20%	20%	20%	20%	20%
Public Equities	---	---	15%	4%	9%	16%
Canadian equity (large cap.)	---	---	11%	4%	9%	12%
All Country World Equity	---	---	4%	---	---	4%
Alternatives	---	---	15%	15%	15%	15%
Commercial mortgages	---	---	5%	12%	9%	4%
Core Canadian Real Estate	---	---	10%	3%	6%	11%
Return Metrics						
Median return - 10 year	1.82%	2.48%	3.66%	2.52%	3.11%	3.77%
Risk Metrics						
Expected excess return - 10 year		0.76%	1.98%	0.73%	1.41%	2.10%
Surplus volatility		3.69%	3.52%	1.22%	2.26%	3.80%
Information Ratio (Excess Return/Risk)		0.21	0.56	0.60	0.62	0.55
5% Value at Risk		129.0 M	125.5 M	56.3 M	76.9 M	136.0 M
Other Metrics						
Minimum Capital Required		16.8 M	163.9 M	65.4 M	104.6 M	173.4 M
Interest Rate Metrics						
Duration	10.3	11.1	10.3	10.3	10.3	10.2
Hedge Ratio	100%	108%	100%	100%	101%	100%

Basic Short Allocation to T-bills¹ Basic Short Proportion of liabilities Basic Combined Allocation to T-Bills

88% **X** **7%** **=** **6%**

Maintained:
20% MUSH, and 15% Alternatives

Compared to **Current**:

1. Median Returns are higher, except (C)
2. Information Ratios are all higher
3. 5% VaR are all lower, except (E)
4. **MCTs are all higher** Minimum Capital Required is higher in all cases

¹Assumed Midpoint (Mix B) from Basic Short analysis on slide 17, given Basic Short has 3 mixes and Basic Long has 4 mixes.

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Basic Short Allocation to T-bills¹ **88%** X Basic Short Proportion of liabilities **7%** = Basic Combined Allocation to T-Bills **6%**

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