

Performance and Risk Dashboard

Pension Committee Meeting

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Portfolio Performance vs. Benchmarks

Performance Summary - December 31, 2012					
	Net Return (after costs)				
	Q4 2012	H1 FY 2013	1 Year	2 Years	4 Years
University Targets: CPI + 4%	1.16%	2.49%	4.91%	5.59%	5.73%
Reference Portfolio Return: Pension	2.23%	6.18%	8.48%	4.28%	9.10%
Benchmark Portfolio Return: Pension	2.23%	6.18%	8.67%	4.66%	6.42%
Actual Portfolio Return: Pension	3.02%	6.05%	9.29%	5.14%	6.30%

New Reference Portfolio is effective May 2012; BM portfolio also becomes the new Reference Portfolio.

- Considerable restructuring activity within portfolio during H1/2013.
- Some impact on H1 performance versus RP but main drag was effect of private investments – not unexpected in a strong equity market environment.
- Portfolio performance generally favorable versus appropriate benchmarks over longer periods.

Capital Markets Environment

Selected Market Benchmark Returns						
(Before Fees)						
	Q4 2012	Q3 2012	H1 FY 2013	1 Year	2 Years	4 Years
Market Benchmarks:						
Equity:						
S&P/TSX (CAD)	1.7%	7.0%	8.9%	7.2%	-1.1%	11.7%
S&P 500 (USD)	-0.4%	6.4%	6.0%	16.0%	8.8%	14.6%
MSCI EAFE (Local)	7.5%	4.7%	12.5%	17.3%	1.5%	7.7%
MSCI EM (Local)	5.3%	5.9%	11.6%	17.0%	1.0%	17.3%
Fixed Income:						
DEX Universe (CAD)	0.3%	1.2%	1.5%	3.6%	6.6%	6.3%
DEX Government (CAD)	0.1%	0.9%	1.0%	2.6%	6.4%	5.2%
DEX Corporate (CAD)	0.8%	2.1%	2.9%	6.2%	7.2%	9.4%
Foreign Exchange:						
US Dollar	1.2%	-3.5%	-2.3%	-2.2%	0.1%	-5.2%
Euro	3.7%	-2.2%	1.5%	-0.7%	-0.8%	-6.5%

- Monetary policy initiatives by various central banks continue to provide considerable support to equity markets.
- H1 results strong but Q4 was a more challenging environment, especially for North American equity markets.
- Note bond market underperformance versus equities in last year.

Private Markets Investments

Private Markets Local Currency Returns --Pension						
	(After Fees)					
	Q4	Q3	H1	1	2	4
	2012	2012	FY 2013	Year	Years	Years
Private Investments:	3.7%	1.1%	4.8%	12.2%	12.6%	10.6%
Buyout	2.7%	1.2%	3.9%	14.0%	14.0%	9.7%
Distressed Debt	6.8%	0.3%	7.1%	16.3%	11.2%	14.1%
Venture Capital	-4.1%	2.6%	-1.6%	-16.8%	2.9%	-0.6%
Real Assets	2.4%	1.9%	4.3%	7.3%	8.6%	2.3%
Real Estate & Infrastructure	2.2%	1.9%	4.2%	10.1%	12.2%	1.7%
Commodities	2.6%	1.7%	4.4%	1.8%	2.0%	2.9%

- Results always reported with a lag; Q4 performance reflects Q3 valuations.
- CY 2012 results are quite respectable versus Public Markets.
- Longer term performance remains strong versus Public Markets.

Performance vs. Reference Portfolio

Performance Attribution - Q4/2012	
Reference Portfolio (CAD):	Pension 2.23%
<i>Asset Mix Differences</i>	0.00%
<i>Style Tilts</i>	0.24%
<i>Manager Selection</i>	0.41%
<i>Incremental FX Exposure</i>	0.12%
<i>Residual</i>	0.01%
Actual Portfolio (CAD)	3.02%
Value-Add	0.78%

Performance Attribution - CY 2012	
Reference Portfolio (CAD):	Pension 8.48%
<i>Asset Mix Differences</i>	0.40%
<i>Style Tilts</i>	-0.10%
<i>Manager Selection</i>	0.75%
<i>Incremental FX Exposure</i>	-0.16%
<i>Residual</i>	-0.08%
Actual Portfolio (CAD)	9.29%
Value-Add	0.81%

- Attribution analysis only available on a quarter and CY basis, at present.
- ‘Privates’ provided an assist in Q4, but a solid contributor was also manager selection by UTAM team.
- CY 2012 results difficult to interpret due to RP not being adopted as the ‘policy’ or performance benchmarking portfolio until May.

Performance vs. 'Linked' Benchmark Portfolio

Value-Add vs. Benchmark Portfolio -Q4/2012-	
Benchmark Portfolio (CAD):	Pension 2.23%
Actual Portfolio (CAD)	3.02%
Value Add	0.78%

Value-Add vs. Benchmark Portfolio -CY 2012-	
Benchmark Portfolio (CAD):	Pension 8.67%
Actual Portfolio (CAD)	9.29%
Value Add	0.62%

- Q4 Benchmark portfolio is identical to the new Reference Portfolio (Q1 & Q2 benchmark quite different).
- CY 2012 benchmark portfolio is based on a mixture of the old policy asset mix and the new Reference Portfolio asset mix.

Style Tilts & Manager Selection

Style & Manager Value-Add -Q4/2012-	
	Pension
	(bps)
Cdn. Equity	15
U.S. Equity	47
EAFE Equity	-24
EM Equity	12
Fixed Income	n.a.
Credit	24
Rates	0
Absolute Return	-8
Hedge Funds	n.a.
Value-Add	66

Style & Manager Value-Add -CY 2012-	
	Pension
	(bps)
Cdn. Equity	37
U.S. Equity	39
EAFE Equity	-46
EM Equity	22
Fixed Income	21
Credit	27
Rates	0
Absolute Return	-37
Hedge Funds	2
Value-Add	65

- 'Active' Public Markets managers generally outperformed asset class benchmarks in Q4 (except EAFE).
- 'Privates' added to performance in Q4 with main positive contributor being US Equity (approx. +36 bps).
- Main drag was in EAFE equity (approx. -16 bps from Privates).
- CY 2012 difficult to interpret due to changes in policy portfolio against which performance is measured.

Pension Asset Mix vs. Min / Max Bands

Pension - December 31, 2012						
	Reference Portfolio		Actual Portfolio %	Outside Band	----- Bands -----	
					Min. %	Max. %
Equity:						
Canadian	16		15.8	N	11	21
US	18		17.8	N	13	23
EAFE	16		16.3	N	11	21
EM	10		10.2	N	5	15
Total	60		60.1	N	50	70
Credit:	20		20.2	N	10	25
Rates:	20		10.9	N	10	30
Other:						
Absolute Return			8.9			
Cash			-0.1			
Total	0		8.8	N	0	15
	100		100.0			
FX Exposure:	18.5		24.1	N	5	25

➤ All exposures within bands.

Risk Analysis Dashboard

Total Risk Attribution

PENSION	Volatility %	VaR % (1 Month)	CVaR% (1 Month)	Max Loss% (1 Year)
Reference Portfolio	9.68%	-4.02%	-6.71%	-22.27%
Actual Portfolio	10.66%	-4.75%	-7.59%	-25.38%

Contributions to Volatility

PENSION	Reference Portfolio	Actual Portfolio
Total Portfolio	9.68%	10.66%
Canadian Equity	2.18%	2.48%
US Equity	1.91%	2.21%
EAFE Equity	2.25%	2.50%
EM Equity	1.84%	1.73%
Alternative Credit		-0.19%
Investment Grade	0.24%	0.15%
Rates	-0.10%	-0.09%
Absolute Return		-0.21%
Cash and FX Hedges	1.32%	2.07%

- System operative but UTAM still analyzing various components.
- Dec. 2012 portfolio risk appears marginally above that of Reference Portfolio and Risk Limit (RP + 75 bps).
- As expected, majority of risk associated with the 60% equity exposure.
- The second largest risk contributor is the 75% FX hedging policy.

Additional Perspectives on Risk

Impact on NPV due to the Scenario Changes

PENSION	Reference Portfolio	Actual Portfolio
Rates up by 1%	-2.6%	-4.4%
S&P 500 Down 10%	-4.0%	-4.4%
Credit Spread Rise by 1%	-1.4%	-1.1%
CAD Down 5%	1.1%	1.1%

Portfolio Stress Testing

PENSION	9/11 Attack 5-Day	Asian Crisis 97-98 5 -Day	Black Monday 5-Day	Bond Crash Feb 94 – May 94
Reference	-4.1%	-3.9%	-10.3%	-2.6%
Actual	-4.7%	-4.1%	-11.4%	-3.2%

PENSION	IR Steepening Sep 98 – Nov 98	Euro Breakup Scenario 1	Greece Exit Scenario 1	2008 Credit Crisis
Reference	6.1%	-8.6%	-4.0%	-18.0%
Actual	-6.0%	-7.8%	-3.7%	-21.6%

- The system will provide a valuable tool for management going forward.
- Tables indicate type of performance that might be expected under various scenarios.
- Results need to be treated as very tentative at this point.

Current Investment Environment

- **No real change in outlook.**
- **US economic growth expected to remain tepid – constrained by lack of wage and credit growth.**
- **Euro-zone issues are far from resolved.**
- **Emerging markets economies still provide opportunity.**
- **Rates may stay low for considerable period; but today's risk / return profile is one of heightened rate sensitivity and significantly less coupon to offset principal losses in event of increasing rates.**
- **Credit still appears quite attractive but a selective approach needed.**
- **Equities not expensive but also not cheap in a long term context (especially in the US); remaining neutral to overall policy weight.**