Quarterly Update on Estimated Solvency Funded Status of Defined Benefit Plans in Ontario

Update as at September 30, 2018

- **The median solvency ratio is 101% (compared to 97% as at June 30, 2018)**
- **September 30, 2018 marks the first time Ontario's median solvency ratio has exceeded 100% since FSCO began monitoring solvency ratios in December 2009**
- **39.5% of plans had a solvency ratio between 85% and 100%**
- **52.3% of plans had a solvency ratio greater than 100%**

Ontario DB pension plan solvency positions continued to improve in the third quarter of 2018 mainly due to reduced solvency liabilities resulting from increased long-term Canadian bond yields against which solvency liabilities are highly negatively correlated.

Partly related to domestic NAFTA/USMCA negotiation uncertainties as well as increasing interest rates, the S&P/TSX pulled back in the third quarter and recorded a 0.6% loss from its previous 6.8% gain in the second quarter. Globally, strong U.S. S&P 500 returns offset negative EAFE markets and powered MSCI World equity returns. In aggregate, MSCI World equities returned 3.2% in the third quarter despite the dampening effects of Canada's appreciating dollar relative to the euro, British pound and U.S. dollar.

Domestic interest rates across all durations were up in the third quarter. The FTSE TMX Universe was down 1.0% in the third quarter while 91-day T-Bills returned 0.5%. TMX Long Term bonds fell by 2.4% in the third quarter in response to Government of Canada marketable bond yields over 10-years rising to 2.43% from 2.20% at June 30.

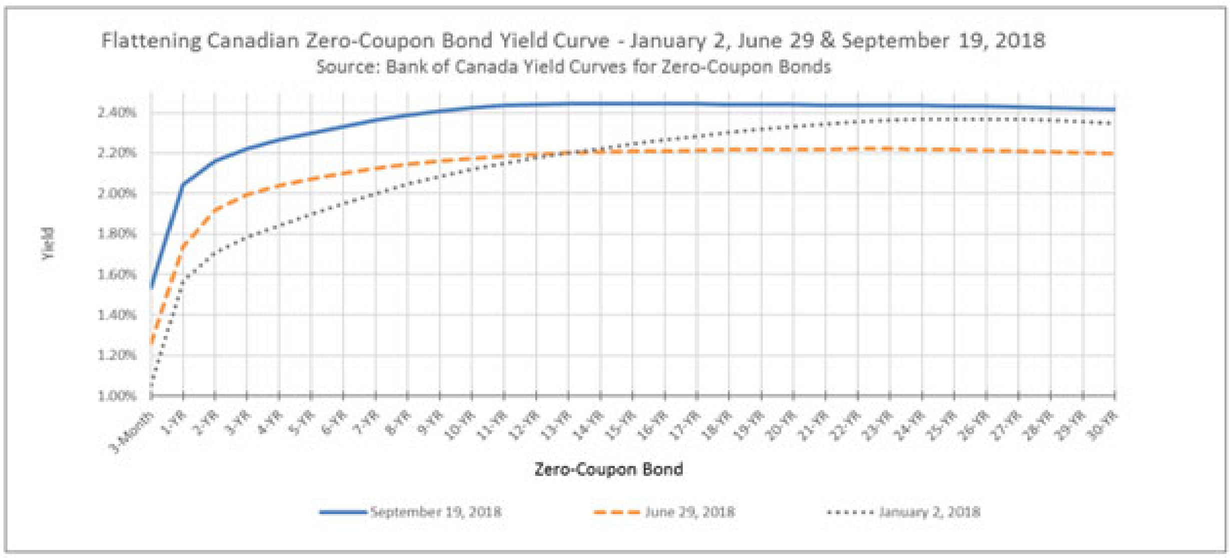
The resulting third quarter median gross plan asset-weighted index return was 0.1% and the median net after-expense return was -0.2%. However, the decrease in solvency liabilities as a result of the 20+ basis points ("bps") increase in long-term Canadian bond yields was much more than enough to offset slight third-quarter solvency investment losses.

Other Funding Matters – Flattening Canadian Yield Curves

In Q3 2018, most pension plan solvency positions were very positively impacted by the parallel 20+ bps shift in the yield curve. Given the importance of yield curves, it is interesting to look at

Canada’s changing yield curve throughout 2018 and in particular the 3rd quarter.

In 2018, Canada’s yield curve became flatter and has moved to the cusp of inversion. The gap between 2-year and 30-year zero-coupon bonds was 64 bps (2.35% - 1.71%) at January 2, 2018 but had shrunk to 28 bps (2.20% - 1.92%) at June 29, 2018. By mid-September 2018, the spread closed to 26 bps (2.42% - 2.16%) and the 10-year vs. 30-year spread had inverted (30-year yield at 2.417% vs 10-year yield at 2.425%). Because of strong gross domestic product growth, the Bank of Canada (“BOC”) has been increasing bank rates and expectations for further rate increases helped strengthen the Canadian dollar in Q2 & Q3.

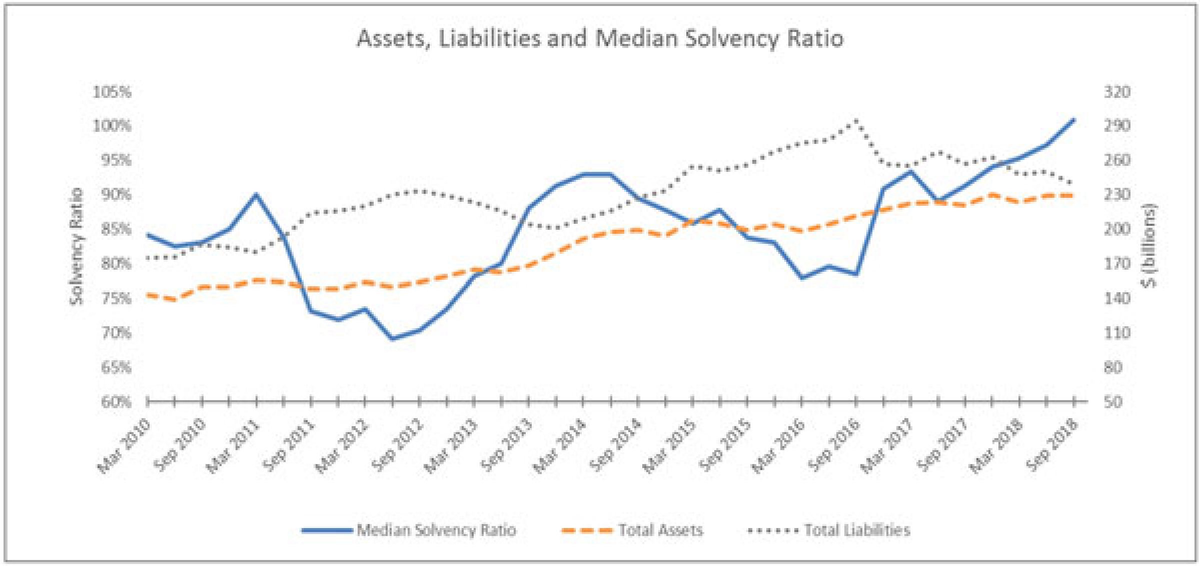


View accessible description of Flattening Canadian Zero-Coupon Bond Yield Curve

While Inverted yields along the full-length of the curve typically signal recessions1, the BOC believes overwhelming demand for long-dated bonds is distorting the yield curve’s recession signaling mechanism. Some money managers agree and believe that recent financial market adjustments make it difficult to draw traditional conclusions from 2018’s yield curve flattening. Other managers disagree. Whatever position plan sponsors and their advisors may espouse, it will be important for plan sponsors to monitor and carefully act upon future yield curve movements/inversions.

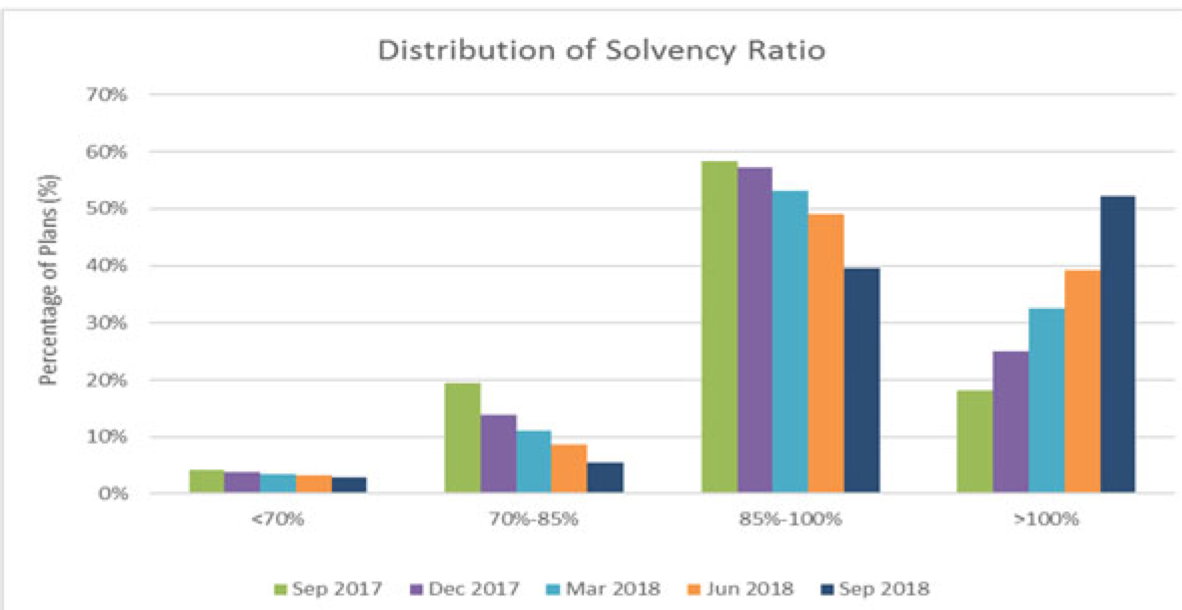
1Inversions of the curve between 3 months and 10 years successfully predicted GDP contractions beginning in 1981, 1990 and 2008, but failed to warn of slowdowns in 1962, 1998 and 2015.

Assets, Liabilities and Median Solvency Ratio



View accessible description of Assets, Liabilities, and Median Solvency Ratio Line Chart

Distribution of Solvency Ratio



View accessible description of Distribution of Solvency Ratio Bar Chart

Methodology and Assumptions:

1. The results reported in each plan's last filed actuarial valuation reports (assets and liabilities) were projected to September 30, 2018 based on these assumptions:

- sponsors would use all available funding excess and prior year credit balance for contribution holidays, subject to any statutory restrictions;
- sponsors would make normal cost contributions and special payments, if required, at the statutory minimum level;
- cash outflows equal to pension amounts payable to retired members as reported in the last filed valuation report were assumed. Plan administration costs were not directly reflected in cash outflows, but indirectly through net after expense investment earnings.

2. Each plan's annual net rates of return for years prior to 2018 were calculated based on individual plan filed IIS information. Rate of return statistics for 2017 and 2016 are summarized as follows:

	5th Percentile	1st Quartile	2nd Quartile	3rd Quartile	95th Percentile
2017 Gross Return:	12.6%	10.0%	8.9%	7.6%	5.0%
2017 Net After Inv. Expense:	12.2%	9.6%	8.4%	7.2%	4.7%
2017 Net After All Expense:	11.6%	9.2%	7.9%	6.6%	3.8%
2016 Gross Return:	11.6%	8.1%	6.4%	4.7%	2.2%
2016 Net After Inv. Expense:	11.1%	7.6%	5.9%	4.3%	1.9%
2016 Net After All Expense:	10.6%	7.2%	5.4%	3.7%	1.0%

3. Each plan's unique quarterly 2018 returns were estimated based on each plan's 2017 filed IIS asset allocation in combination with 2018 market index returns, offset by a 25 basis point quarterly expense charge. Estimated plan gross and net after expense return statistics are as follows:

	5th Percentile	1st Quartile	2nd Quartile	3rd Quartile	95th Percentile
2018 Q3 Gross Return:	0.7%	0.2%	0.1%	-0.3%	-1.3%
2018 Q3 Net After All Expense:	0.5%	-0.1%	-0.2%	-0.6%	-1.5%
2018 Q2 Gross Return:	4.0%	3.5%	3.2%	2.7%	1.1%

2018 Q2 Net After All Expense:	3.8%	3.2%	2.9%	2.3%	0.8%
2018 Q1 Gross Return:	0.1%	-0.4%	-0.7%	-0.9%	-1.2%
2018 Q1 Net After All Expense:	-0.2%	-0.6%	-0.9%	-1.1%	-1.5%

The following table summarizes 2017 average IIS plan asset allocations by major asset class:

Cash	Canadian Equities	Foreign Equities	Fixed Income1	Real Estate	Other
2.9%	23.7%	23.0%	44.8%	3.0%	2.6%

1 50% FTSE TMX Universe Bonds and 50% FTSE TMX Long Term Bonds.

Market index returns on the major assets classes have been as follows:

	S&P / TSX Total Return Index	MSCI World Total Net Return Index	FTSE TMX Universe Bond Index	FTSE TMX Long Bond Index
Q3 2018	-0.6%	3.2%	-1.0%	-2.4%
Q2 2018	6.8%	3.8%	0.5%	0.9%
Q1 2018	-4.5%	1.6%	0.1%	-0.0%

4. Estimated solvency liabilities were calculated based on the Canadian Institute of Actuaries Standards of Practice and the Canadian Institute of Actuaries Educational Notes, with these key assumptions:

Valuation Date	Commuted Value Basis	Annuity Purchase Basis2
September 30, 2018	Interest: 3.30% for 10 years 3.40% thereafter	Interest: 3.33%

	Mortality: CPM2014 generational	Mortality: CPM2014 generational
June 30, 2018	Interest: 3.10% for 10 years, 3.20% thereafter Mortality: CPM2014 generational	Interest: 3.00% Mortality: CPM2014 generational

2 based on a medium duration illustrative block

Return to top