WillisTowersWatson

Pension Finance Watch

First Quarter 2020

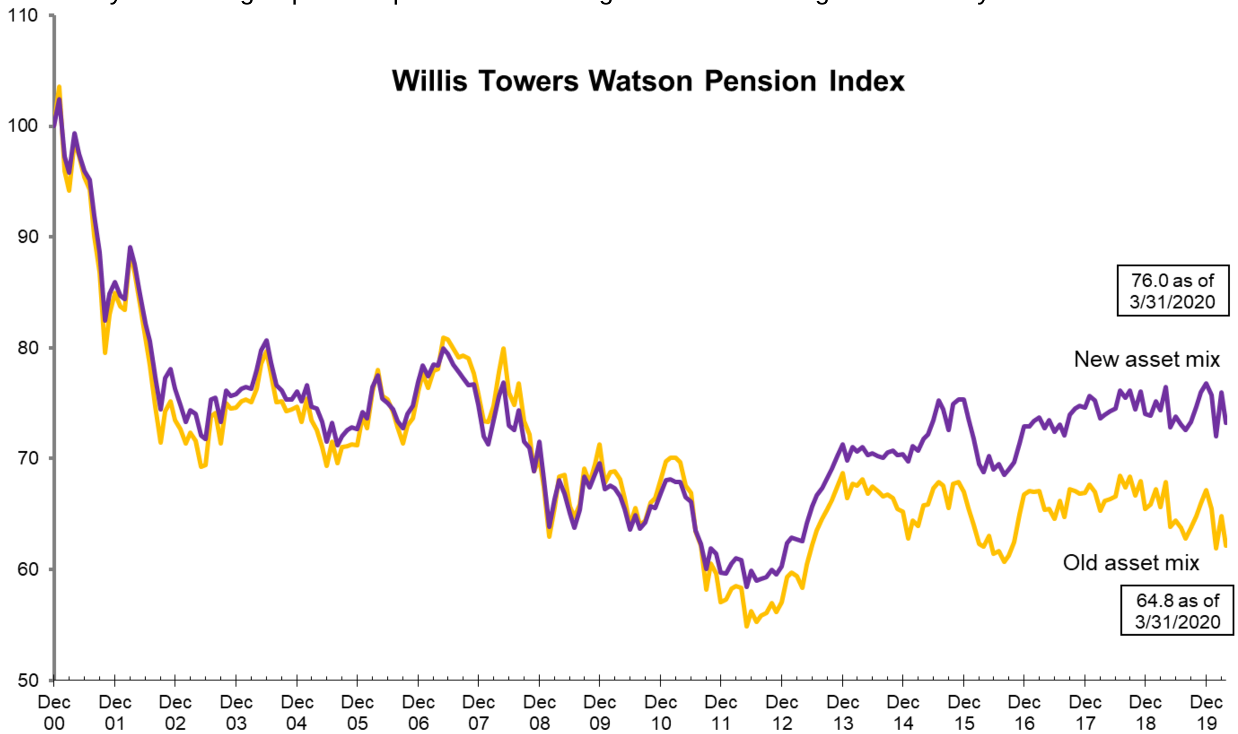
Updates to the Pension Index

The asset mix underlying the Willis Towers Watson Pension Index has been changed to be more representative of the typical asset mixes of pension plans in Canada. The allocation to equities has been reduced, with a lower relative weighting to Canadian equities, and long-bonds have replaced universe bonds in the fixed income component. We will display the Pension Index under both asset mixes for this quarter to allow readers to see the impact of changing the asset mix.

Results for Canadian Defined Benefit Pension Plans

The Willis Towers Watson Pension Index has decreased in the first quarter as sharply negative investment returns were mostly offset by a decrease in the liability index due to an increase in discount rates. The net effect on our benchmark plan was a decrease of 3.5% in the Willis Towers Watson Pension Index (from 67.2 to 64.8) for the quarter under the old mix, while the net effect with the new mix was a decrease of 1% in the Willis Towers Watson Pension Index (from 76.8 to 76.0).

With the recent market volatility, it's important to highlight that the Canadian Pension Finance Watch captures the impact of quarterly market changes on an accounting basis. Indexes focused on solvency or going concern liabilities would have shown a much steeper decline in Q1 2020. Further, our publication represents a point in time view, Willis Towers Watson supports the daily monitoring of pension plans for those organizations wishing to inform key business decisions.



About This Report

This report reviews how capital and equity market performance affected Canadian defined benefit pension plans, with a focus on linked asset/liability results. Specific plan results depend on liability characteristics, portfolio composition and actual investment results, among other factors.

This information has been prepared for clients of Willis Towers Watson. For information on how this issue affects your organization, please contact your consultant, or one of the following consultants:

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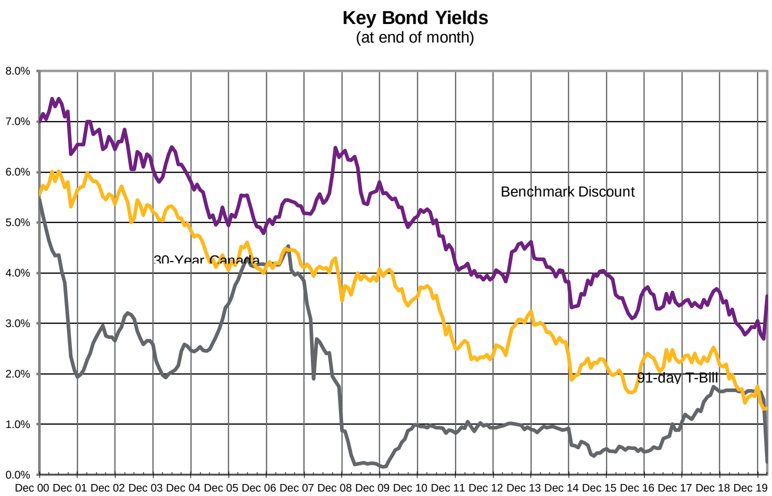
Canadian Interest Rates

In an effort to soften the economic impact of COVID-19 the Bank of Canada cut its benchmark interest rate twice in the quarter down to 0.25%. The yield on 30-year Canada treasuries hit record lows at the beginning of March falling to 0.52% before climbing back up and ending the quarter at 1.32%. Similarly, the 91-day T-bill rate saw a decrease during the quarter, falling by 141 bps. While the yield on Canada treasuries fell, the prospect of a global recession created a liquidity crisis in the bond market and an increase in credit spreads. As a result, the benchmark discount rate determined under the RATE:Link methodology used to determine defined benefit obligations increased by 49 bps, leading to a significant decrease in accounting liability measures over the quarter.

Canadian Bond Yields (End of Period)	*Mar. 2020*	*Dec. 2019*	*Mar. 2019*
Canada Treasuries(1)			
30-year	1.32	1.76	1.90
10-year	0.71	1.70	1.62
91-day T-bill	0.25	1.66	1.67
Corporate Bonds(1)			
FTSE	3.24	2.80	2.93
Benchmark Discount Rate	3.54	3.05	3.17



(1) Source: Information prior to June 2015 and FTSE Corporate bond yield provided by FTSE Global Debt Capital Markets Inc. Copyright © FTSE Global Debt Capital Markets Inc. All rights reserved. The information contained herein may not be redistributed, sold or modified or used to create any derivative work without the prior written consent of FTSE Global Debt Capital Markets Inc. Effective June 2015, Canada 10 and 30 year yield were obtained from the Bank of Canada; the 91-day T-bill yield was obtained from Scotiabank.

Investment Returns

Equity markets started the year off with positive gains as the U.S. signed off on phase one of the trade deal agreement with China and Brexit officially occurred at the end of January. However, downward pressure, primarily from fears of the spread of COVID-19, triggered volatility in all markets throughout the last week of February and continued with significant volatility in March. Global stock markets rebounded dramatically over the last week of March but remain well below pre-crisis peaks, with negative returns in all major equity markets in the range of -20% (local currency) for the quarter. Oil markets have seen the biggest losses since 1991, as the OPEC oil states and Russia failed to reach an agreement to cut oil production to help balance supply and demand. As the oil prices fell the CAD depreciated versus the US dollar and against other major currencies which, for unhedged Canadian investors, increased CAD returns on US and international equities investments.

Corporate bonds saw negative returns over the quarter due to increasing yields as credit spreads widened while returns on government bonds were positive.

Asset Class Returns

	Q1 2020	YTD	Last 12 months
Stock Returns			
Canadian Equities – S&P/TSX Composite (2)	-20.9%	-20.9%	-14.2%
U.S. Equities – S&P 500 (Canadian dollars) (3)	-12.1%	-12.1%	-1.3%
Non-North American Equities – MSCI EAFE (Canadian dollars) (4)	-15.6%	-15.6%	-9.1%
Canadian Fixed Income Returns			
91-day T-Bills	0.7%	0.7%	1.9%
FTSE Universe Bonds	1.6%	1.6%	4.5%
FTSE Long Bonds	0.2%	0.2%	5.6%

(2) Source: Bloomberg LP. All S&P/TSX Composite indices are registered trademarks of The Toronto Stock Exchange Inc. and Standard & Poor's Corporation.
(3) Source: Bloomberg LP. All S&P indices are registered trademarks of Standard & Poor's Corporation
(4) Source: Bloomberg LP. All MSCI indices are registered trademarks of Morgan Stanley Capital International Inc.

The benchmark plan's 50% equity / 50% fixed income portfolio decreased 7.8% for the quarter (10.1% decrease under the old 60% / 40% asset mix). The more conservative 30% equity portfolio decreased 4.6% for the quarter, and the more aggressive 70% equity portfolio decreased 10.8% for the quarter.

Pension plan liabilities under Canadian, International and U.S. accounting standards are measured using a discount rate based on yields available on high-quality corporate bonds as of the measurement date. Using the same RATE:Link methodology as we use for the Willis Towers Watson Pension Index in other countries, the discount rate for our benchmark plan increased over the quarter by 49 basis points to 3.54% at March 31, 2020. Among other factors, the selected discount rate depends on projected plan cash flows, the bond data and the methodology utilized for constructing the yield curve. The RATE:Link approach represents one possible methodology; other acceptable methodologies may result in higher or lower discount rates, and consequently lower or higher plan liabilities.

Willis Towers Watson tracks the monthly change in its Pension Index in a series that dates back to December 31, 2000. Similar to bond prices, pension liability values move in the opposite direction to interest rates. The Willis Towers Watson Pension Liability Index decreased by 6.8% for the quarter, reflecting the combined effect of interest accumulation and the discount rate change.

The impact of the increase in the liability discount rate together with the negative investment returns resulted in a net decrease in the Willis Towers Watson Pension Index over the quarter, from 67.2 as at December 31, 2019 to 64.8 as at March 31, 2020, using the old asset mix. The impact recorded with the new asset mix was a net decrease in the Willis Towers Watson Pension Index over the quarter, from 76.8 to 76.0 as at March 31, 2020. The change in the Willis Towers Watson Pension Index does not reflect any contributions made to reduce the size of any deficit or any contribution holiday taken on account of any surplus.

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Canadian Pension Index Results

	Q1 2020		*YTD*		*Last 12 Months*	
Portfolio Returns						
30% Stocks/70% Fixed Income	-4.6%		-4.6%		1.9%	
50% Stocks/50% Fixed Income	-7.8%		-7.8%		-0.7%	
70% Stocks/30% Fixed Income	-10.8%		-10.8%		-3.2%	
Benchmark Plan Liability Results						
Change in Pension Liability Index	-6.8%		-6.8%		-2.8%	
	Old mix	*New mix*	*Old mix*	*New mix*	*Old mix*	*New mi*
Percentage Change in Pension Index	-3.5%	-1.0%	-3.5%	-1.0%	-1.3%	2.2%

A Note to Our Readers

This publication tracks the asset/liability performance of a hypothetical Canadian benchmark pension plan, based on a 50/50 asset mix and a typical liability profile. The index is not intended to represent an average funded ratio. Rather, the intent is to provide plan sponsors with a consistent and relevant measure to serve as a general indicator of the effects of capital market events on pension plan financing.

Definition of Terms

Bond Yields

- The 30-year Canada semi-annual bond yield reflects the yield on the actively-traded Government of Canada bond maturing in 30 years.
- The 10-year Canada semi-annual bond yield reflects the yield on the actively-traded Government of Canada bond maturing in 10 years.
- The 91-day T-Bill semi-annual yield refers to the yield on Government of Canada treasury bills which mature in 91 days.
- The FTSE Corporate semi-annual bond yield reflects the yield on the FTSE Corporate Bond Index composed of corporate bonds with varying maturity.

Asset Class Returns

- Total return incorporates the combined effect of price changes and interest or dividend income. This will typically differ from the daily results published in financial journals, which are based only on price changes.
- S&P/TSX Composite refers to the “S&P/TSX Composite Index”, which tracks larger companies in the Canadian market.
- S&P 500 refers to the “S&P 500 Index”, which tracks the largest 500 companies in the U.S. based on the market value of their equity. Total return is reported in terms of the Canadian dollar and therefore includes the effect of currency changes.
- MSCI EAFE refers to the “Morgan Stanley Capital International Europe, Australasia, Far East Index” of equity securities. Total return is reported in terms of the Canadian dollar and therefore includes the effect of currency changes.
- 91-Day T-bill returns are based on the “FTSE 91-day Treasury Bill Index”.
- FTSE Universe Bonds refers to the “FTSE Universe Bond Total Return Index” for government and corporate bonds of all maturities in excess of one year.
- FTSE Long Bonds refers to the “FTSE Long Term Bond Total Return Index” for government and corporate bonds with maturities in excess of 10 years.

Portfolio Returns

- The new Willis Towers Watson Pension Index 50% / 50% portfolio return is based on a diversified portfolio of 50% equity (10% Canadian, 20% U.S. and 20% MSCI EAFE) and 50% fixed income (FTSE Long Bonds).
- The 30% and 70% equity portfolios are constructed with similar composition within their equity and fixed income components.
- The old Willis Towers Watson Pension Index 60% / 40% portfolio return is based on a diversified portfolio of 60% equity (30% Canadian, 15% U.S. and 15% MSCI EAFE) and 40% fixed income (FTSE Universe Bonds).

Benchmark Discount Rate

- The discount rate is determined each month for this benchmark pension plan based on observed yields for high-quality corporate bonds and the benchmark plan's projected cash flows. Higher or lower discount rates may be more appropriate for other plans with different expected cash flows.* Furthermore, a variety of methodologies may be used to interpret the data available on long-term Canadian corporate bonds. This calculation uses the same RATE:Link methodology as we use for the Willis Towers Watson Pension Index in other countries. Other acceptable methodologies may result in higher or lower discount rates, depending on market conditions.

Willis Towers Watson Pension Liability Index

- The Pension Liability Index tracks the change in the benchmark plan's obligations due to the accumulation of interest and changes in financial assumptions. For this purpose, the obligations are measured based on the requirements of U.S. and International accounting standards.*
- Contributions are set equal to the level of benefit payments for the benchmark plan.

Willis Towers Watson Pension Index

- The Willis Towers Watson Pension Index is the ratio of market value of assets to accounting obligations for the benchmark plan. Assets change from month to month based on the investment performance of the 50% / 50% portfolio, assumed contributions and benefit payments. Liabilities change from month to month due to accumulated service cost and interest, benefit payments and the effects of any other changes in the Willis Towers Watson Pension Liability Index. The Willis Towers Watson Pension Index is an accounting measure, not a funding measure. As such, it is not appropriate to consider this as a measure of a pension plan's funding, which is based on statutory requirements.

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* The discount rate assumption is adjusted to reflect changes in market interest rates. Our benchmark plan is a traditional final-pay pension plan with approximately half of the liabilities in respect of active employees and half of the liabilities in respect of terminated vested and retired employees. Plans with different designs or demographic characteristics will see different results in terms of both the level of appropriate discount rate and the plan's response to changes in financial assumptions.
