

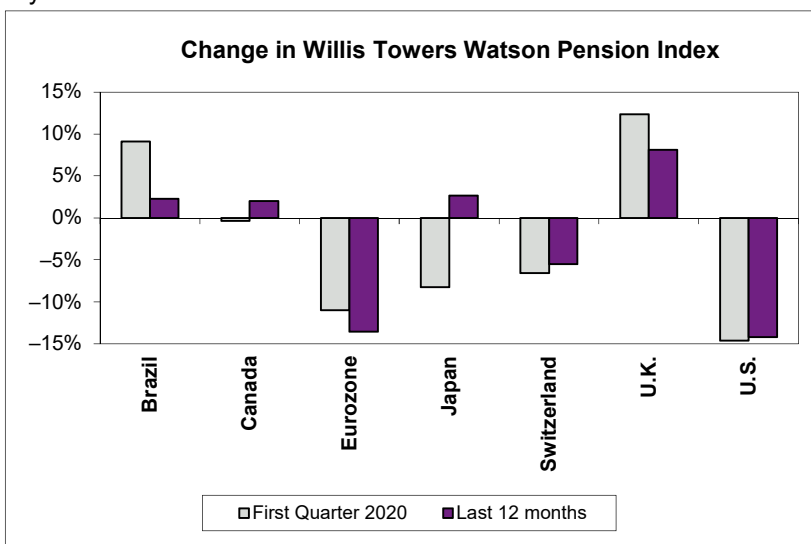
## Global Pension Finance Watch First Quarter 2020

### Negative start to 2020 for global pension plans

Extreme market volatility and poor equity returns in the face of the COVID-19 pandemic dominated the story of global financial markets during Q1 2020. The negative asset performance was only partially offset by increasing discount rates moderating the liabilities in some locations (Brazil, Canada, Switzerland and the U.K.), while decreasing discount rates drove the liability values up in the remaining regions (Eurozone, Japan and the U.S.). The overall impact of these changes resulted in negative pension index returns over the first quarter in all global regions with the exception of Brazil and the U.K.

While it is always the case that Global Pension Finance Watch captures results at the end of each quarter, we particularly want to highlight the point in time view of this publication in light of recent market volatility. Willis Towers Watson supports the daily monitoring of pension funded status and other key metrics for those organizations wishing to inform key business decisions.

Change in Willis Towers Watson	Q1 2020	Last 12 months
Brazil	9.1%	2.3%
Canada	-0.3%	2.0%
Eurozone	-11.0%	-13.6%
Japan	-8.3%	2.7%
Switzerland	-6.6%	-5.5%
U.K.	12.4%	8.1%
U.S.	-14.6%	-14.2%



The Willis Towers Watson Pension Index is the ratio of the market value of assets to the projected benefit obligation (PBO) for a hypothetical benchmark plan.

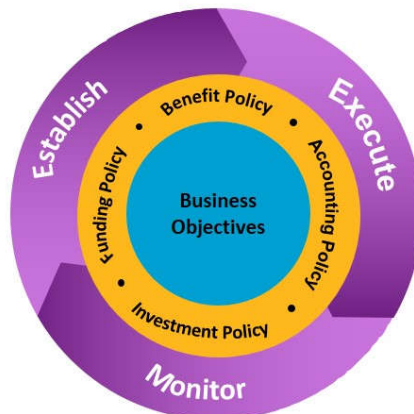
#### About this report

*Global Pension Finance Watch*, published quarterly, reviews how capital market performance affects defined benefit pension plan financing in major retirement markets worldwide, with a focus on linked asset/liability results. We cover defined benefit pension plans in Brazil, Canada, the Eurozone, Japan, Switzerland, the U.K. and the U.S. Specific plan results will vary, often substantially, based on liability characteristics, contribution policy, portfolio composition and management strategy among other factors. The passage of time since quarter end, may also have a significant impact on pension plan financing.

The impact of capital markets on these pension plans is twofold:

- Investment performance on fund assets
- Changes in economic assumptions on plan liabilities (as measured under international accounting standards)

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## Investment returns and liability growth

All regions experienced negative returns in the first quarter with the exception of the U.K. – due in large part to the heavier fixed income allocation of typical U.K. plans. The regions with particularly poor results over Q1 were the Eurozone, Switzerland and the U.S, mostly as a result of the volatility in the equity markets in late March.

Investment returns	Q1 2020	Last 12 months
Brazil	-2.7%	12.4%
Canada	-7.1%	-2.0%
Eurozone	-10.0%	-2.6%
Japan	-5.7%	1.0%
Switzerland	-10.4%	-4.8%
U.K.	4.5%	13.0%
U.S.	-12.4%	-3.2%

Note: All regional financial results are stated on a local currency basis.

Benchmark discount rates decreased in the Eurozone, Japan and the U.S. over the first quarter. The remaining regions experienced increasing discount rates with the largest discount rate increase in Brazil.

Benchmark discount rate*	Mar. 2020	Dec. 2019	Mar. 2019
Brazil	9.78%	8.65%	9.78%
Canada	3.54%	3.05%	3.17%
Eurozone	1.13%	1.16%	1.61%
Japan	0.82%	0.95%	0.69%
Switzerland	0.49%	0.24%	0.50%
U.K.	2.18%	1.90%	2.34%
U.S.	3.32%	3.45%	3.95%

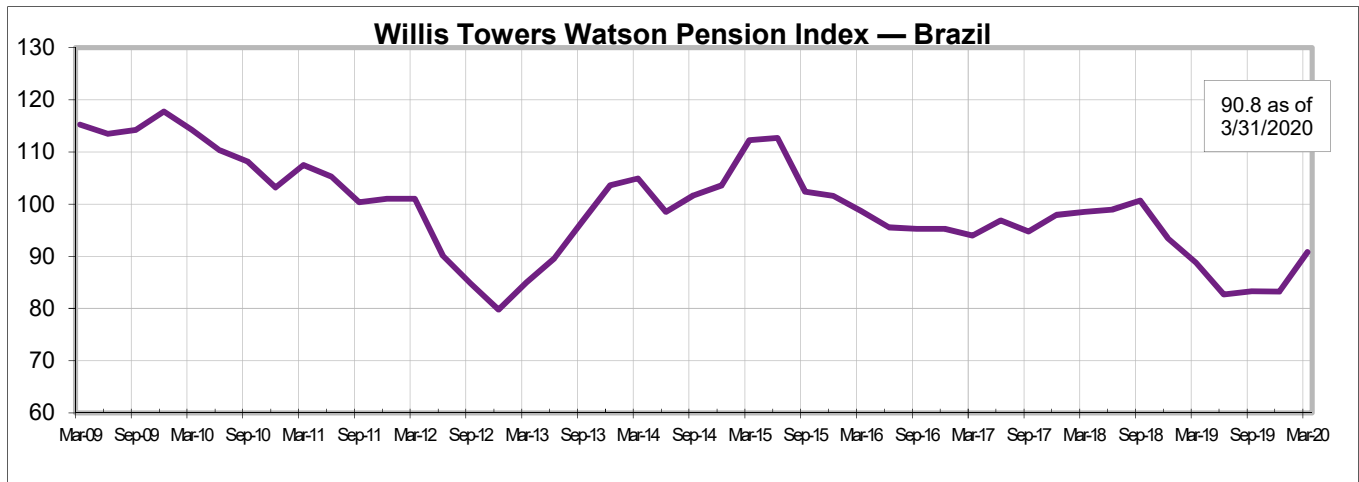
\*Discount rates for the benchmark plans were determined using Willis Towers Watson's RATE:Link methodology in those countries where it is available. There is generally more than one acceptable approach for determining the discount rate in each country. The approach used for index purposes is one of several possible approaches; other acceptable methodologies may result in higher or lower discount rates.

Liability values increased for those regions that experienced discount rate declines over the first quarter, while liability values declined for the remaining regions where discount rates increased. The regions with the largest liability value declines were Brazil, Canada and the U.K.

Liability growth factor	Q1 2020	Last 12 months
Brazil	-10.8%	9.9%
Canada	-6.8%	-2.8%
Eurozone	1.1%	12.7%
Japan	2.8%	-1.6%
Switzerland	-4.1%	0.7%
U.K.	-7.0%	4.5%
U.S.	2.7%	13.0%

Note: The liability growth factor reflects the net change in the benchmark plan's PBO due to interest accumulation and changes in financial assumptions.

**Brazil**



Domestic equities showed strong negative returns over the first quarter while domestic bonds were positive. Overall, the benchmark portfolio decreased 2.7% over the quarter.

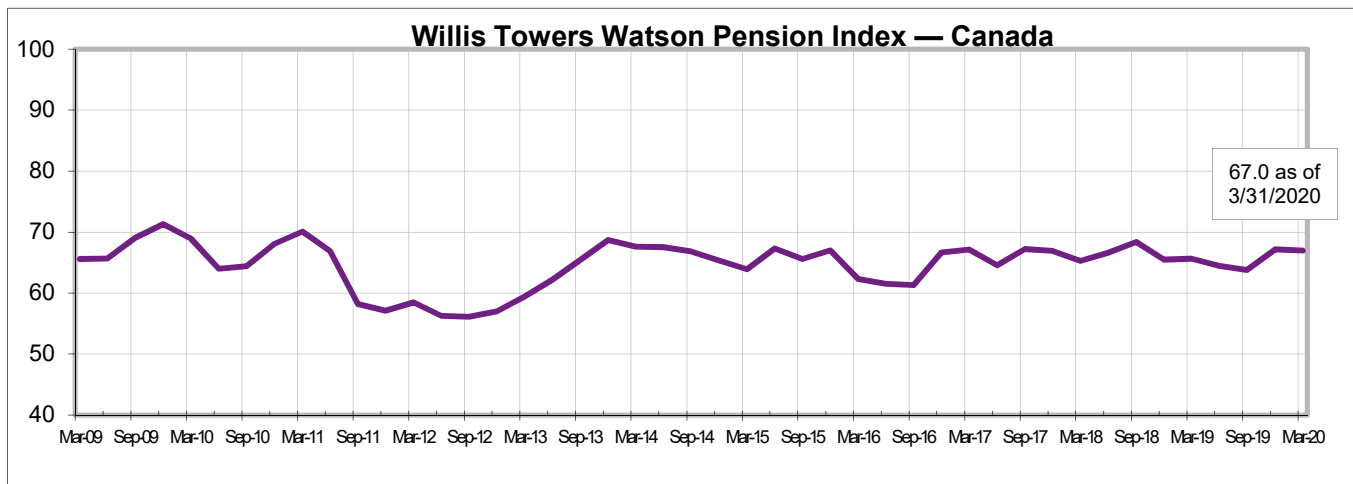
The nominal benchmark discount rate increased 113 basis points over the quarter. This change combined with interest accumulation resulted in a liability decrease of 10.8% over the first quarter.

The combined asset and liability effect was a 9.1% increase in the pension index for the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-36.0%	-21.8%
International equity	NA	NA
Domestic fixed income	1.4%	15.4%
International fixed income	NA	NA
Benchmark portfolio	-2.7%	12.4%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond (real)	4.55%	3.48%	4.55%
10-year govt. bond (real)	3.00%	2.25%	4.08%
Three-month govt. bond (nominal)	3.40%	4.35%	6.31%
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate (nominal)	9.78%	8.65%	9.78%

Canada



Both domestic and international equities exhibited strong negative returns over the quarter, while domestic bonds were positive. Overall, the benchmark portfolio decreased 7.1% over the quarter.

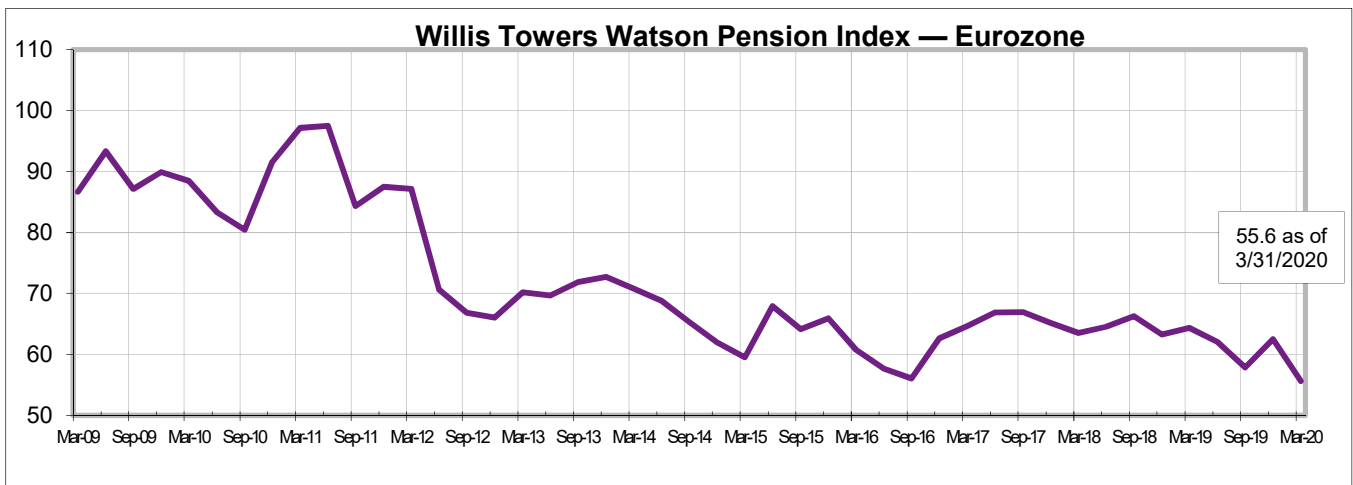
The benchmark discount rate increased by 49 basis point over the quarter. This change combined with interest accumulation decreased the liability by 6.8% over the quarter.

The combined effect of the asset and liability movements was a 0.3% decrease in the pension index over the first quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-20.9%	-14.2%
International equity	-13.9%	-5.2%
Domestic fixed income	0.2%	5.6%
International fixed income	NA	NA
Benchmark portfolio	-7.1%	-0.6%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	1.32%	1.76%	1.90%
10-year govt. bond	0.71%	1.70%	1.62%
Three-month govt. bond	0.25%	1.66%	1.67%
Long-term AA-rated corporate bond	2.58%	2.80%	2.93%
Benchmark discount rate	3.54%	3.05%	3.17%

**Eurozone**



Both domestic equities and bonds showed negative returns over the quarter. Overall, the benchmark portfolio decreased 10.0% over the first quarter.

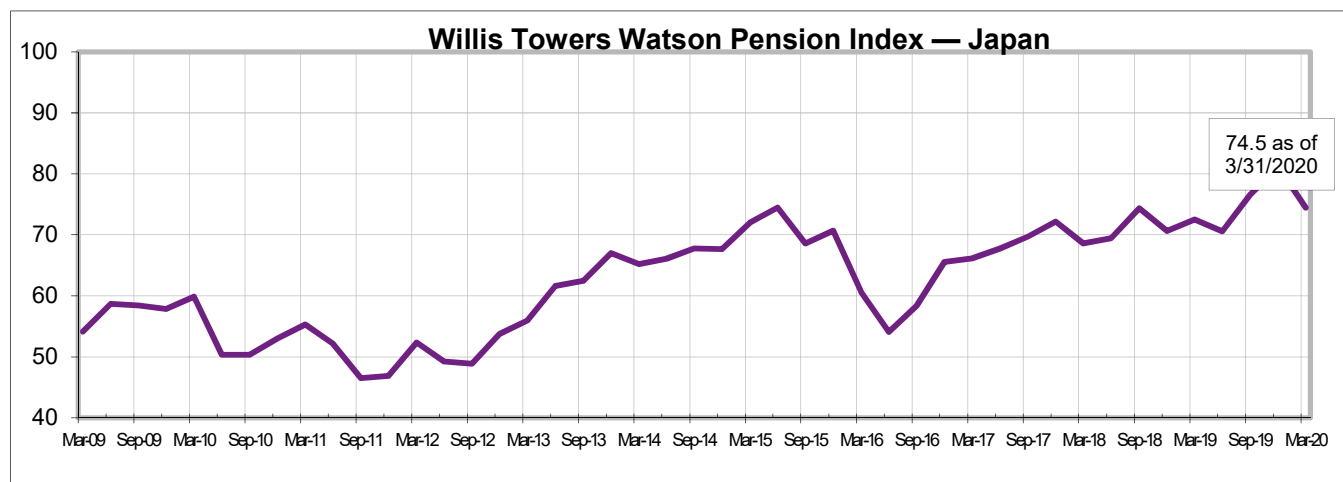
The benchmark discount rate decreased by 3 basis points over the quarter. This change combined with interest accumulation increased the liability by 1.1% over the first quarter.

The combined effect of the asset and liability movements was a 11.0% decrease in the pension index over the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-22.5%	-13.0%
International equity	NA	NA
Domestic fixed income	-1.1%	2.2%
International fixed income	NA	NA
Benchmark portfolio	-10.0%	-2.6%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	0.04%	0.35%	0.63%
10-year govt. bond	-0.47%	-0.17%	-0.08%
Three-month govt. bond	-0.54%	-0.42%	-0.33%
Long-term AA-rated corporate bond	1.42%	0.77%	1.04%
Benchmark discount rate	1.13%	1.16%	1.61%

## Japan



Equities and domestic bonds showed negative returns over the quarter, while international bonds were positive. This resulted in a 5.7% decrease in the benchmark portfolio over the quarter.

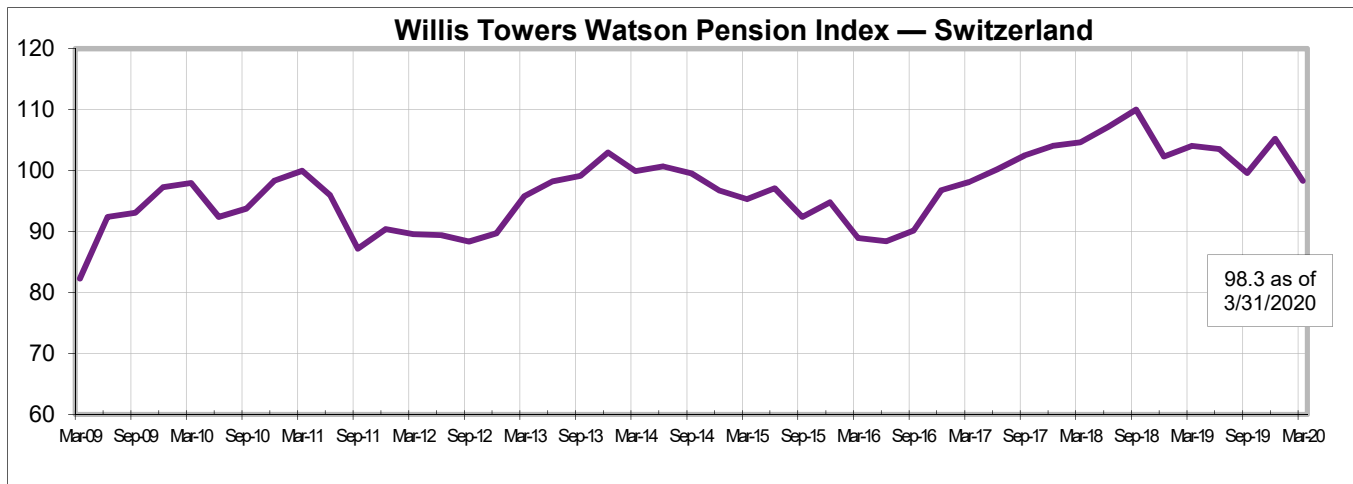
The benchmark discount rate decreased by 13 basis points over the quarter. This change combined with interest accumulation increased the liability by 2.8% over the quarter.

The combined effect of the asset and liability movements was a 8.3% decrease in the pension index over the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-17.2%	-9.2%
International equity	-21.5%	-12.1%
Domestic fixed income	-0.5%	0.4%
International fixed income	2.0%	4.9%
Benchmark portfolio	-5.7%	1.0%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	0.42%	0.41%	0.51%
10-year govt. bond	0.03%	-0.02%	-0.08%
Three-month govt. bond	-0.21%	-0.11%	-0.15%
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate	0.82%	0.95%	0.69%

Switzerland



Both domestic equities and bonds declined in value over the quarter. Overall, the benchmark portfolio decreased 10.4% over the quarter.

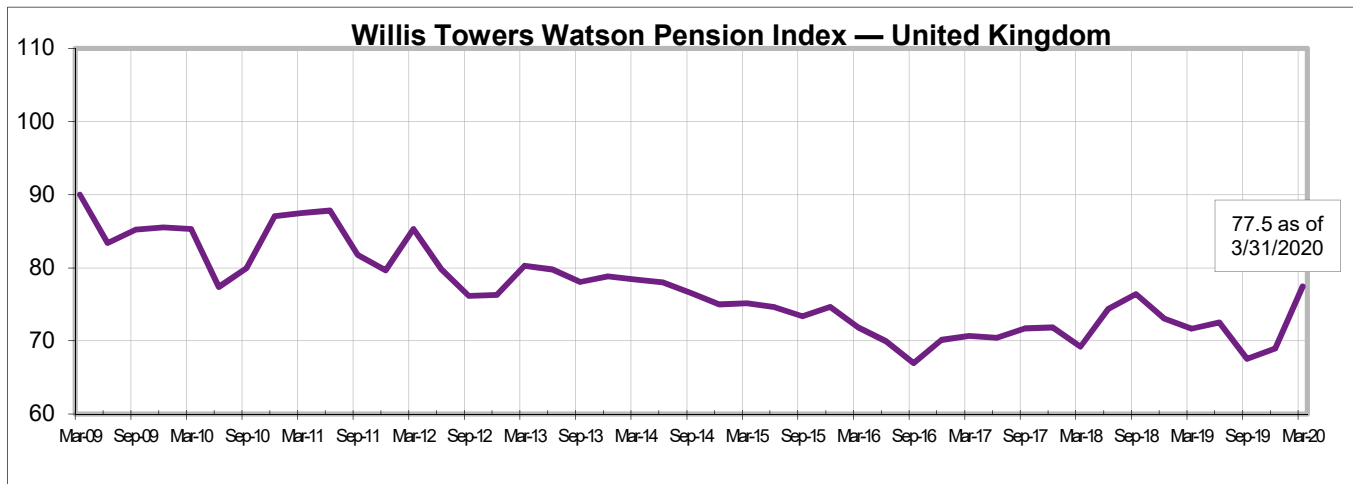
The benchmark discount rate increased 25 basis points over the quarter. This change combined with interest accumulation decreased the liability by 4.1% over the quarter.

The combined effect of the asset and liability movements was a 6.6% decrease in the pension index over the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-11.8%	0.7%
International equity	NA	NA
Domestic fixed income	-2.6%	-1.4%
International fixed income	NA	NA
Benchmark portfolio	-10.4%	-4.8%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	-0.11%	-0.15%	0.18%
10-year govt. bond	-0.34%	-0.44%	-0.38%
Three-month govt. bond	NA	NA	NA
Long-term AA-rated corporate bond	NA	NA	NA
Benchmark discount rate	0.49%	0.24%	0.50%

United Kingdom



Equities showed strong negative returns during the first quarter, while domestic bonds were positive. Overall, the benchmark portfolio increased 4.5% over the quarter.

The benchmark discount rate increased 28 basis points over the quarter. Overall, this change combined with interest accumulation and allowance for potential future convergence of RPI and CPI measures of inflation decreased the liability by 7.0% over the first quarter.

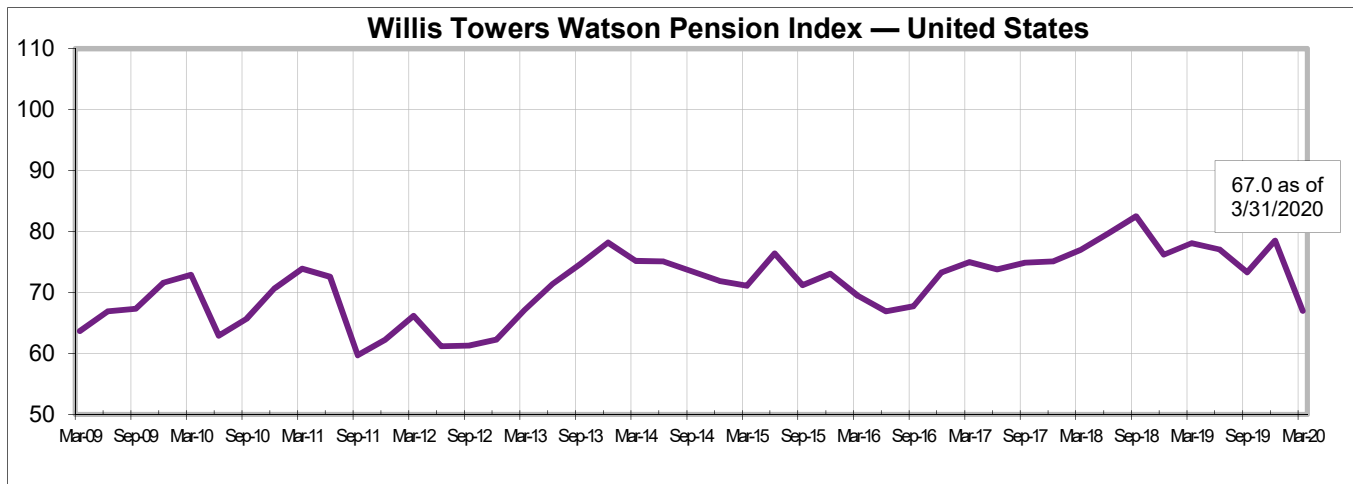
The combined effect of the asset and liability movements was a 12.4% increase in the pension index over the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-24.2%	-18.4%
International equity	-15.5%	-5.5%
Domestic fixed income	11.2%	17.6%
International fixed income	NA	NA
Benchmark portfolio	4.5%	13.0%

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	0.83%	1.33%	1.55%
10-year govt. bond	0.36%	0.82%	1.00%
Three-month govt. bond	0.16%	0.71%	0.75%
Long-term AA-rated corporate bond	2.31%	2.00%	2.36%
Benchmark discount rate	2.18%	1.90%	2.34%



United States



Both domestic and international equities exhibited strong negative returns during the first quarter, while domestic bonds were positive. Overall, the benchmark portfolio decreased 12.4% over the quarter.

Investment returns	Q1 2020	Last 12 months
Domestic equity	-21.6%	-10.1%
International equity	-22.8%	-14.4%
Domestic fixed income	2.8%	8.0%
Benchmark portfolio	-12.4%	-3.2%

The benchmark discount rate decreased 13 basis points for the quarter. This change combined with interest accumulation increased the liability by 2.7% over the first quarter.

Interest rates	Mar. 2020	Dec. 2019	Mar. 2019
30-year govt. bond	1.35%	2.39%	2.81%
10-year govt. bond	0.70%	1.92%	2.41%
Three-month govt. bond	0.11%	1.55%	2.40%
Long-term AA-rated corporate bond	3.06%	3.15%	3.76%
Benchmark discount rate	3.32%	3.45%	3.95%

The combined effect of the asset and liability movements was a 14.6% decrease in the pension index for the quarter.

**General comments**

In order to obtain a general indication of pension plan performance in various countries, we defined a benchmark pension plan that is intended to be representative of the pension liabilities and plan assets (including asset mix) that are typically found in each global market. Note that certain simplifying assumptions are made about cash contributions made to the benchmark plan and other characteristics.

**Liability measurement**

Pension plan liabilities under many commonly used international accounting standards (including ASC 715, CICA 3461, CVM 371, FRS 17 and IAS 19) are measured using a discount rate that is set based on yields available on high-quality corporate bonds as of the date that liabilities are measured.

While the discount rate is the most commonly quoted assumption, liability and expense calculations depend on a number of additional assumptions, both economic (such as expected salary increases and expected benefit increases) and demographic. Other financial assumptions are adjusted so as to remain consistent with changes in the discount rate.

**Asset smoothing**

ASC 715 and CICA 3461 allow plan sponsors to use smoothing mechanisms to buffer the effects of year-to-year investment performance. Plans using these approaches will see the effect of investment return experience spread over a period of years.

**Currency effects**

The results presented in this document are in local currency. Changes in relative currency values may have a significant impact on asset and liability measurements. The effect of currency movements depends on the company’s reporting currency and its global allocation of assets and liabilities. The accompanying table shows the value of foreign currency that equates to one U.S. dollar at various measurement dates.

Exchange rates (currency per US\$1)	Mar. 2020	Dec. 2019	Mar. 2019
Brazil	5.14	4.04	3.93
Canada	1.41	1.31	1.34
Eurozone	0.90	0.89	0.89
Japan	107.83	109.1	110.89
Switzerland	0.96	0.97	1.00
U.K.	0.81	0.76	0.77

**Local regulatory requirements**

This update reviews financial results for pension plans based on measurements defined by international accounting standards. Local accounting or funding requirements may be based on significantly different types of asset or liability measures in some locations.

**Eurozone benchmark plan**

The results shown for the Eurozone are based on typical funded plans found in Belgium and the Netherlands.

## Definition of terms

### Bond yields

- Government bond yields are based on published information. Government bond yields for the Eurozone are based on German government bonds. Due to the lack of marketable securities, Brazilian government bond yields are real rates, except for the three-month government bond yield, which is a nominal rate (i.e., includes inflation).
- Corporate bond yields reflect the FTSE TMX Corporate Bond Index for Canada, iBoxx EURO Corporates AA 10+ for the Eurozone, iBoxx 15+ AA Corporate Bond Index for the U.K. and ML 10+ High-Quality Index in the U.S.
- Benchmark discount rates are determined for the average plan based on yields available on high-quality corporate bonds as of the date that liabilities are measured. Discount rates for Canada, the Eurozone, Japan, Switzerland, the U.K. and the U.S. are based on our RATE:Link methodology. Discount rates for Brazil are a proxy for the yield on corporate bonds, developed from the real yield on 30-year government bonds with an adjustment to account for liquidity characteristics and the addition of a long-term inflation assumption. Higher or lower discount rates might be appropriate for other plans.

### Benchmark investment returns

- Benchmark investment returns reflect 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 solely on price changes.
- Investment returns have been based on commonly quoted local benchmarks, as detailed below:
  - For Brazil, domestic equity returns are based on the FTSE All-World Brazil index, and domestic fixed-income returns on the iBoxx GEMX Brazil index.
  - For Canada, domestic equity returns are based on the S&P/TSX Composite, international equity returns on 10% S&P 500 (in Canadian dollars), 20% S&P TSX Composite (in Canadian dollars), 10% MSCI EAFE Total Return Index Net Dividends (in Canadian dollars) and domestic fixed-income returns on 60% FTSE TMX Long Bond Total Return.
  - For the Eurozone, domestic equity returns are based on the MSCI Eurozone market index, international equity returns on the MSCI World ex-EMU total return index and domestic fixed-income returns on the iBoxx EUR Overall index.
  - For Japan, domestic equity returns are based on the FTSE All-World Japan index, international equity returns on the MSCI World (ex-Japan) Index with net dividends reinvested, domestic fixed-income returns on the FTSE Japan Government Total index and international fixed-income returns on the FTSE Global Government Bond index.
  - For Switzerland, portfolio returns are based on the Pictet Index 2005 BVG-40+ index.
  - For the U.K., domestic equity returns are based on the FTSE All Share, international equity returns on the FTSE All-World ex-U.K. and domestic fixed-income returns on the FTSE Over 15 Years Gilts.
  - For the U.S., domestic equity returns are based on 80% S&P 500 Index and 20% Russell 2500, international equity returns on the MSCI EAFE Index, and domestic fixed-income returns on 87.5% Barclays Capital Aggregate Bond Index and 12.5% three-month T-bills.
- Benchmark portfolio returns have been based on a typical diversified portfolio in each country that has not yet been secured via an insurance policy. Benchmark portfolio returns for this quarter have been based on the following asset allocations:
  - Brazil: 10% domestic equity and 90% domestic fixed income
  - Canada: 40% equity (20% domestic, 20% international) and 60% domestic fixed income
  - Eurozone: 40% domestic equity and 60% domestic fixed income
  - Japan: 30% equity (20% domestic, 10% international) and 70% fixed income (50% domestic, 20% international)
  - Switzerland: 30% equity (10% domestic, 20% international), 50% fixed income (30% domestic, 20% international), 10% real estate and 10% other assets (5% hedge funds, 5% private equity)
  - U.K.: 20% equity (10% domestic, 10% international) and 80% domestic fixed income
  - U.S.: 60% equity (50% domestic, 10% international) and 40% domestic fixed income

### Willis Towers Watson Pension Index

- The Willis Towers Watson Pension Index is a measure of the PBO funded ratio, or the ratio of the market value of assets to the PBO for a benchmark plan. Asset values change from quarter to quarter based on the investment performance of the benchmark portfolio, assumed contributions and benefit payments. Liability values change with accumulated service cost and interest, benefit payments and the effect of any changes in financial assumptions. Contributions are assumed to be equal to the service cost for each benchmark plan, so that the Index captures the impact of capital market results.
- Pension Finance Watch is designed to support our clients in the ongoing financial management of their global retirement plans. The report tracks the value of the Willis Towers Watson Pension Index in a series that was initiated in 1990. The index reflects

the asset/liability performance of a hypothetical benchmark pension plan, and it provides an indicator of capital market effects on pension plan financing. Individual plan results will vary based on such factors as portfolio composition, investment management strategy, liability characteristics and contribution policy.

## About Willis Towers Watson

Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has over 45,000 employees serving more than 140 countries and markets. We design and deliver solutions that manage risk, optimize benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas — the dynamic formula that drives business performance. Together, we unlock potential. Learn more at [willistowerswatson.com](https://willistowerswatson.com).

For more information on *Global Pension Finance Watch*, visit [willistowerswatson.com](https://willistowerswatson.com).