2021 Global Survey of Accounting Assumptions

For Defined Benefit Plans

Executive Summary

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The 2021 Global Survey of Accounting Assumptions for Defined Benefit Plans is the 32nd annual Willis Towers Watson survey of assumptions selected by major corporations for their defined benefit (DB) plans around the world.

In broad terms, accounting standards aim to enable employers to approximate the cost of an employee's pension or other postretirement benefit over that employee's service tenure. Any benefit accounting method that recognizes the cost of benefits before their payment becomes due must be based on estimates or assumptions about future events that will determine the amount and timing of benefit payments.

Two key economic assumptions in the determination of benefit costs under an accounting standard are the discount rate and inflation. Under ASC 715, there is another key economic assumption: the expected long-term rate of return on plan assets (for funded plans). In many countries, four additional economic assumptions, which are somewhat linked to inflation, can play a key role: (1) rate of salary increase; (2) rate of increase in pensions, both in deferment and in payment; (3) cash balance interest crediting rate; and (4) rate of increase in the social security parameters reflected in the pension benefit formula. We discuss these in our full report.

Although this survey mainly explores economic assumptions, we have again shown data regarding mortality assumptions, which are receiving closer attention because of increasing longevity.

The observations in this report reflect data at or near the end of 2020. Consideration should be given to market movements since December 31, 2020. As discussions around accounting assumptions start for the 2021 year-end, your Willis Towers Watson consultant would welcome the opportunity to discuss how that volatility might have affected your plans' liabilities and assets.

Key findings

Our full report, which represents 1,464 companies with data from 49 countries, includes the following key findings:

- Overall, during 2020 we observed a downturn movement in government and corporate bond yields from last year-end. Government bond yields decreased for 38 of the 43 countries covered, while corporate bond yields declined in most markets surveyed.
- After a challenging start to 2020, most equity markets recovered in the second half of the year closing at similar levels as at year-end 2019. Bond yield movements translated into discount rate declines in most major markets, with negative effects on liabilities. Overall, this led to mixed results for funding levels.
- At year-end 2020 average expected rates of return for 2021 were generally lower compared with the previous year.
- A new figure was added this year to the full report, showing the percentage of pension plans that are unfunded by country. This figure, when taken into consideration with other information presented in the report, such as expected return of assets, asset allocation and funding ratio, helps to show a clearer picture of funding and investment practices in each country.

Discount rates

Discount rates are used to calculate benefit obligations as well as the service and interest cost portion of the employee benefit cost.

While ASC 715 does not explicitly define the quality of the bond yields, most plan sponsors base their discount rate on AA-rated bonds. IAS 19 refers to high-quality corporate bond yields, which is generally interpreted to mean AA-rated or better. The primary focus for corporations has been placed on long-term, high-quality corporate bonds of appropriate duration consistent with the benefit obligation.

Where there is no deep market in corporate bonds, it is customary for ASC 715 discount rates to be based on government bonds but adjusted by some level of risk premium to approximate corporate bond yields. By contrast, IAS 19 requires the use of government bonds with no additional risk premium in such situations; therefore, we present discount rates for both accounting standards separately.

Figure 1 shows the average discount rates for benefit obligations at the end of 2020 and 2019, using ASC 715 and IAS 19. These tables include values for companies with December 31 balance sheet dates only.

The similarity of ASC 715 and IAS 19 discount rates in most of the countries shown in Figure 1 reflects the fact that these countries are regarded as having a sufficiently deep corporate bond market. In our complete findings, we see that in some countries where the corporate bond market is not deep enough — e.g. Mexico, Poland, South Africa, Thailand and the United Arab Emirates — the average discount rate is noticeably lower under IAS 19 than under ASC 715.

For countries with a deep market in corporate bonds, it has become increasingly common to match expected cash flows from the plan either to a portfolio of bonds that generates sufficient cash flows or to a notional yield curve generated from available bond information. This is a common approach in Canada, the Eurozone, Japan, Switzerland, the U.K. and the U.S. and is becoming more common in Australia, Norway and Sweden.

Inflation

The assumption for long-term price inflation influences other economic assumptions, such as:

- Rate of salary increase
- Rate of increase in pensions, both in deferment and in payment
- Rate of increase in the social security parameters reflected in the pension benefit formula
- Cash balance interest crediting rate for some plans

Figure 2 shows the average inflation assumption for the 2021 and 2020 expense. For some developing countries, inflation has historically been very volatile, which has led some companies to select assumptions on a real basis (i.e., net of inflation). Most of the developed economies showed inflation rates that were broadly similar to last year’s levels. In the U.K. and Eurozone countries, inflation curves are often used to derive a plan’s inflation assumption.

Figure 1. Discount rates for benefit obligations — averages

	Averages — ASC 715		Averages — IAS 19	
	2021	2020	2021	2020
Canada	2.52%	2.99%	2.50%	3.01%
Germany	0.70%	0.94%	0.68%	0.94%
Japan	0.94%	0.54%	0.96%	0.52%
Netherlands	0.80%	1.08%	0.72%	0.88%
Switzerland	0.10%	0.24%	0.12%	0.23%
United Kingdom	1.36%	1.93%	1.40%	1.96%
United States	2.59%	3.32%	2.47%	3.22%

For the purposes of this table, 2021 represents the discount rate assumption used for benefit obligations at the end of 2020.

Figure 2. Inflation assumptions — averages

	2021	2020
Canada	2.03%	2.03%
Germany	1.74%	1.76%
Japan	1.41%	1.34%
Netherlands	1.76%	1.72%
Switzerland	0.98%	1.09%
United Kingdom*	2.91%	3.01%
United States	2.51%	2.57%

*Retail price index

Expected rates of return

The expected rate of return on assets is the long-term expectation of the annual earnings rate on the assets of the pension fund. Under ASC 715, the expected return on assets is a component of the employee benefit cost. Expected rates of return reflect the plan sponsor's outlook based on the plan's asset allocation.

Figure 3 shows the average allocation split among equities, bonds, property, cash and insurance contracts/other investments. The weighted average of the expected long-term rate of return on each class gives an indication of the appropriate expected return on assets assumption. In comparing with results from last year's survey, we witnessed only minor changes in asset allocations across the board.

Asset allocations are likely to be driven by several factors, such as funded status, sponsor risk appetite, nature and maturity of the obligations, and local regulations. The complete results show that sponsors in Australia, Hong Kong, New Zealand and the U.S. are holding relatively large equity positions (more than 40%). Bangladesh, Brazil, India, Indonesia, Mexico and Taiwan are countries where regulatory investment restrictions influence their asset mix.

Figure 4 shows the average expected rates of return for 2021 and 2020 expense for all plans reported under ASC 715 only. The lower expected rates of return assumptions in almost all the developed countries for 2021 could possibly be attributed to a more conservative stand by pension sponsors regarding the fixed-income and equity markets returns in the future. As expected, there is a positive correlation between expected rate of return and the amount of plan assets held in equities by plan sponsors.

Figure 3. Average asset allocation by country

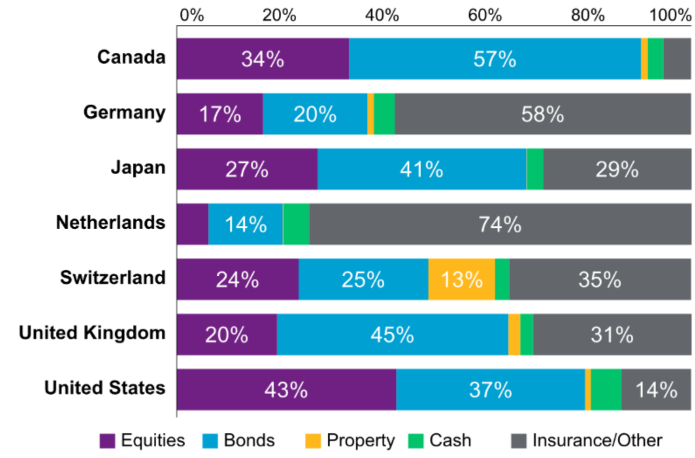

Figure 4. Expected rates of return — averages

	2021	2020
Canada	4.35%	4.79%
Germany	3.44%	3.45%
Japan	2.45%	2.38%
Netherlands	1.69%	1.86%
Switzerland	2.58%	2.67%
United Kingdom	3.64%	4.21%
United States	5.79%	6.15%

Mortality tables

Figure 5 shows the assumed life expectancy at age 60 for both a male currently age 60 and a male currently age 40. Note that some tables are generational while others are static. The latter do not include an allowance for improvement in life expectancy for future employee cohorts; thus, life expectancy at age 60 is the same for a male currently age 60 and a male currently age 40.

The majority of surveyed countries have implied life expectancies of between 20 and 30 years. The impact of the differences in this assumption will vary depending on the payment form (lump sum or annuity), form of the annuity and the mix of current plan participants, among other factors.

Projected benefit security ratio

The projected benefit security ratio is the ratio of the current market value of plan assets to the plan's projected benefit obligation. The projected benefit obligation is the actuarial present value of all benefits attributed by the benefit formula to service before the balance sheet date, including benefits based on expected future salary increases. Under IAS 19, this is known as the defined benefit obligation.

Figure 6 shows the average projected benefit security ratio for 2021 and 2020, for funded plans in each country. Overall, ratios either improved only slightly or remained broadly unchanged for the countries shown in Figure 6; however, for the full survey, the majority of countries showed funding levels with slight decreases.

Figure 5. Life expectancy of a 60-year-old male

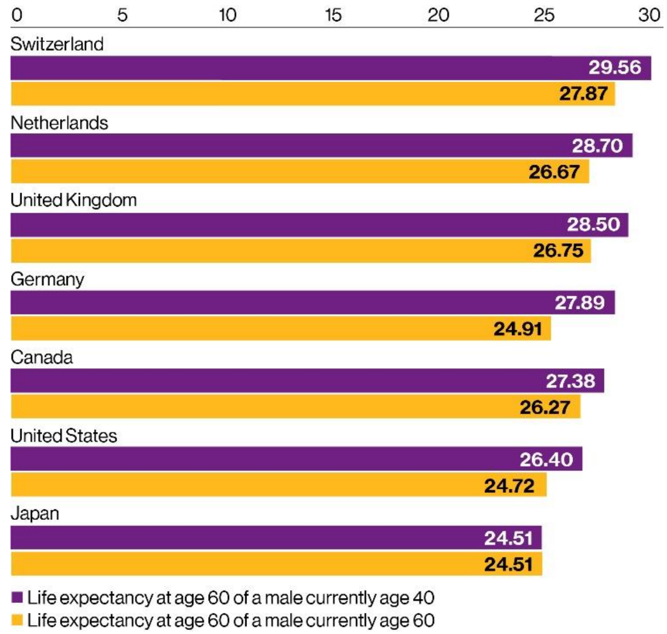

Figure 6. Projected benefit security ratio — averages

	2021	2020
Canada	1.01	0.99
Germany	0.56	0.58
Japan	0.99	0.95
Netherlands	0.92	0.90
Switzerland	0.78	0.79
United Kingdom	1.02	1.02
United States	0.91	0.90

About the survey

The 2021 Global Survey of Accounting Assumptions for Defined Benefit Plans is the 32nd annual Willis Towers Watson survey of assumptions selected by major corporations for their DB plans around the world.

The full report covers accounting assumptions under various global standards; for this report, 53% of the survey participants report under ASC 715 and 47% under IAS 19 or other similar accounting standards. This is similar to the mix of participants last year.

We collected retirement plan data using a survey form and various Willis Towers Watson databases that maintain accounting assumptions. Results in the full report are shown on a plan-level basis; therefore, some results could differ from what is reported on a company level.

Willis Towers Watson believes these surveys have elicited useful information, and we would be pleased to provide you with more detail. A snapshot of findings for a few key markets is available in this executive summary. For further information, or to access the complete survey findings, please contact your Willis Towers Watson consultant or:

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The 1,464 companies included in the full report have disclosed assumptions for their DB plans. The report reflects data at or near the end of 2020. While this executive summary covers only Canada, Germany, Japan, the Netherlands, Switzerland, the United Kingdom and the United States, the following 49 countries are represented in the full report:

Argentina	India	Portugal
Australia	Indonesia	Puerto Rico**
Austria	Ireland	Saudi Arabia
Bangladesh	Israel	Singapore
Belgium	Italy	South Africa
Brazil	Japan	South Korea
Canada	Luxembourg	Spain
Chile	Malaysia	Sri Lanka
China	Mexico	Sweden
Colombia	Netherlands	Switzerland
Costa Rica	New Zealand	Taiwan
Ecuador	Norway	Thailand
Finland	Pakistan	Turkey
France	Panama	United Arab Emirates (U.A.E.)
Germany	Philippines	United Kingdom
Greece	Poland	United States
Hong Kong*		

* Hong Kong is a special administrative region of China.
** Puerto Rico is an unincorporated territory of the United States.