LifeWorks

2022 survey: Economic assumptions in accounting for pension and other post-retirement benefits

October 2022

Highlights of our annual survey results

LifeWorks is pleased to provide a survey of the assumptions used by 83 Canadian public companies, reporting under IAS19, to account for the costs of their defined benefit plans. Information is collected from audited financial statements as at December 31, 2021. This is the twenty-second year the survey has been conducted.

The survey is intended to provide information regarding the assumptions disclosed by a wide range of companies based on economic conditions as at December 31, 2021. Consideration should be given to the significant rise of bond yields since the end of 2021 as this could be tied to many factors including inflation and could have impacts on other assumptions besides discount rate, including salary increases and medical cost trend. Moreover, long-term impact due to COVID-19 pandemic on many aspects including mortality is still uncertain at this point. Hence, readers should exercise caution with the interpretation and use of these results. As budget discussions begin for 2023, your LifeWorks consultants would be pleased to discuss how the market changes since the end of 2021 may impact your employee benefit plans.

Discount rate for pension plans

Discount rates at December 31, 2021 have increased when compared to the prior year. The median discount rate was 3.00% as at December 31, 2021 compared to 2.50% a year earlier. Roughly 95% of companies surveyed increased their discount rate in 2021. The following charts summarize the discount rates used in the valuation of defined benefit pension plans as at December 31, 2021 (rounded to the nearest 25 bps), as well as the historical evolution of the median discount rate over the last 10 years, based on our past surveys.

Figure 1 – Discount rate / Pension plans

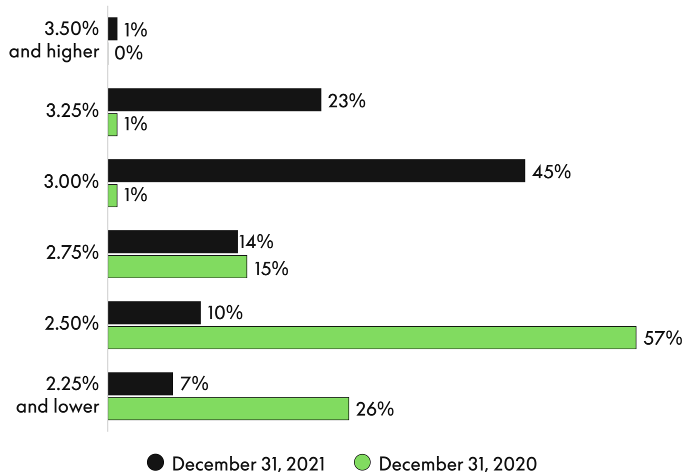
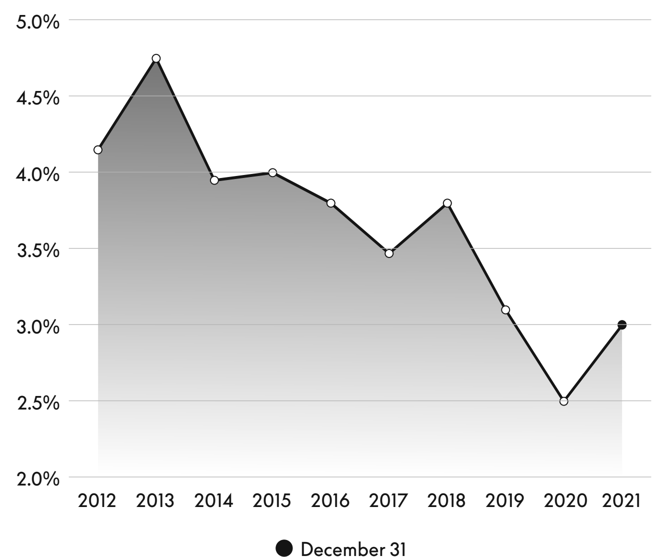


Figure 2 – Historical evolution of the median discount rate



The spread in discount rates has remained stable since last year. About 82% of companies used a discount rate between 2.75% and 3.25% (a spread of 0.50%), while 87% of companies used a discount rate between 2.25% and 2.75% (a spread of 0.50%) at the end of the preceding year. The change in discount rates over the year is consistent with the Bank of Canada (BoC) rates. The average BoC rates for maturities over 10 years (V39062) have increased from 1.10% at the end of 2020 to 1.66% at the end of 2021.

As stated in the accounting standard, the discount rate must reflect the estimated timing of benefit payments. In practice, companies often achieve this by applying a single weighted average discount rate that reflects the estimated timing and amount of benefit payments. Consequently, the discount rate used by one company will vary depending on the duration of the pension plan. Not all companies in the survey disclosed the duration in their financial reports.

Over time, the yields on high-quality long-term corporate bonds may vary considerably. The discount rate should be expected to vary in a similar fashion. The figure 3 compares the spot rate curves as at December 31 for the years 2020, 2021, and more recently for August 31, 2022. Spot rate curves, provided by LifeWorks, conform to the principles of the CIA Educational Note, revised in December 2020 (Second Revision).

If the spot rate curve were to remain at August 2022 levels until the end of the year, the expected accounting discount rates at December 31, 2022 would be approximately 150 to 200 bps higher than those used at December 31, 2021.

The figure 4 compares the median discount rates (rounded to the nearest 25 bps) in our survey to the median discount rates from a U.S. study[1].

Figure 3 – High-quality corporate bonds

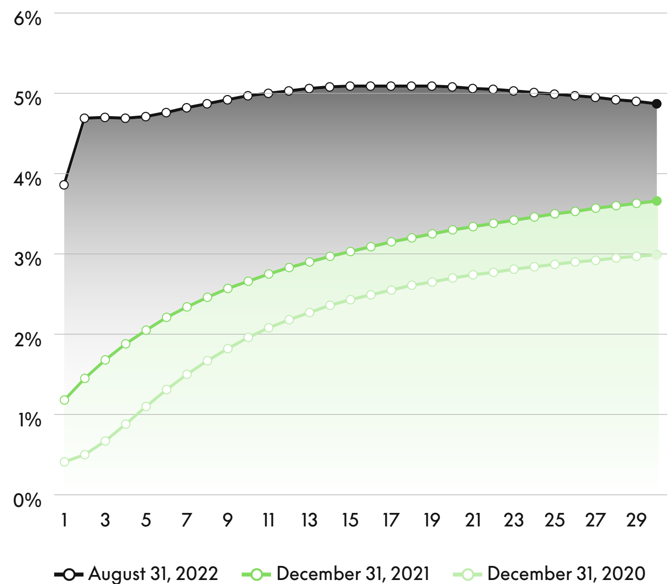
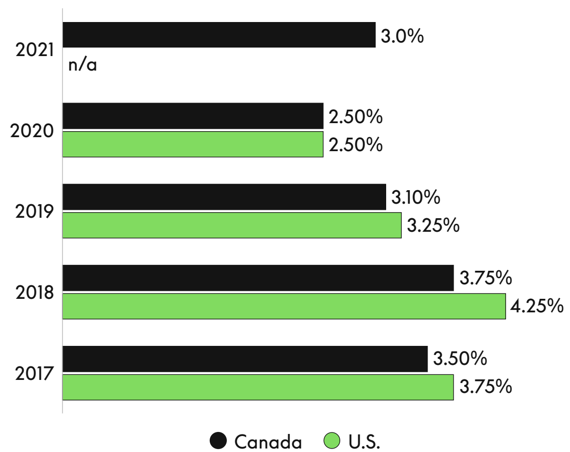


Figure 4 – Median discount rate by country



2022 update

If maintained to the end of the year, the significant increases in discount rates will lead to significant decreases in employer service costs and therefore overall pension expense for 2023. There will also be a decrease in defined benefit obligation on the balance sheet, partially offsetting declining asset market values experienced by many pension funds, which may potentially trigger pension asset ceiling issues, as many pension plans revealed an accounting surplus in 2022. Moreover, plans that adopted de-risking glide paths based on accounting funded status may have reached their trigger points. The overall impact will vary from plan to plan depending on the maturity and plan investment strategy.

[1] Source: *2022 Study of Economic Assumptions, prepared by Deloitte & Touche Human Capital Advisory Services (U.S.). (At the time of preparing this survey, the 2022 U.S. study had not yet been published by Deloitte and the average discount rate at December 31, 2021 for U.S. companies was unavailable. This survey will be updated once the U.S. study is published.)*

Discount rate for non-pension benefits

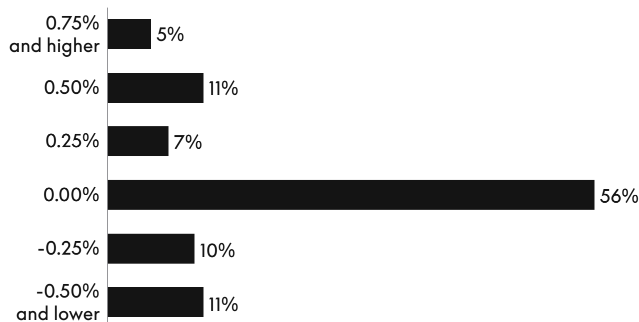
The duration of non-pension post-employment benefits is often significantly different from that for pensions. For example, the duration of the defined benefit obligation ("DBO") for a retiree medical plan is often longer than that for pension plans, while the durations of the DBO for an accumulating non-vesting sick leave program and a severance or retirement allowance program is often shorter. As a result, the choice of discount rate for the valuation of post-employment benefits can be different than it is for pensions, in theory (see the Appendix on selecting the discount rate for more on this). While some companies use rates that differ by type of plan, many elect to use a single blended rate, or they simply use the rate for the most material plan.

The median rate used as at December 31, 2021, for non-pension benefits is 3.00%, a rate identical to the median rate used for pensions.

The figure 5 shows the difference between the discount rate used in the valuation of non-pension benefits and that used for pension plans, rounded to the nearest 25 bps (a positive value indicates a higher rate for non-pension benefits than for pensions and vice versa).

In 2021, 56% of the companies surveyed used similar discount rates for pensions and non-pension benefits, while 44% of companies used a significantly different discount rate for non-pension benefits (compared to 45% in our previous survey).

Figure 5 – Difference in discount rates (non-pension benefits vs. pensions)

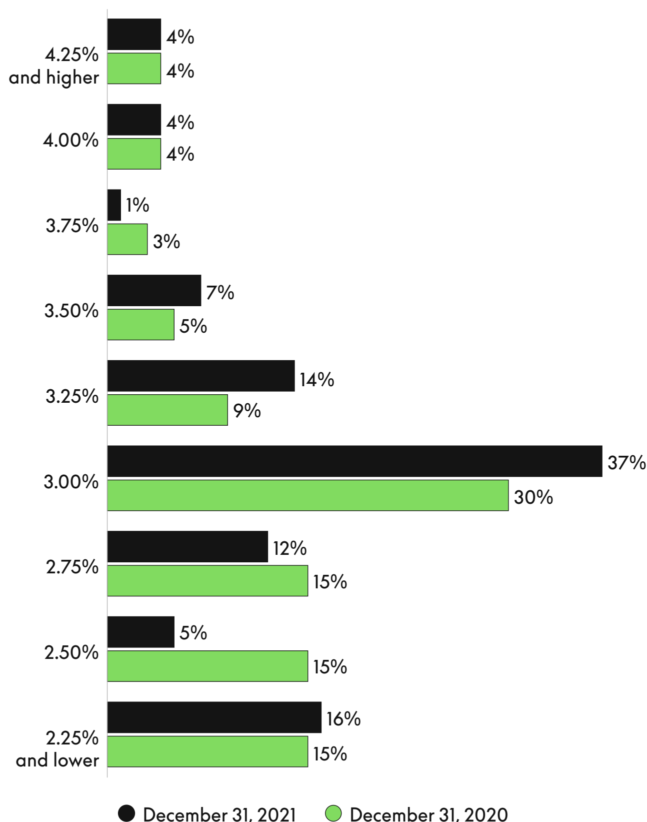


Rate of compensation increase

Plans that provide pay-related benefits are required to make an assumption about the rate of compensation increases (figure 6). IAS 19 indicates that it should reflect "inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market".

The median compensation increase assumption as at December 31, 2021 was 3.00%, which is 10 bps higher than last year's median (2.90%). We found 75% of companies using rates between 2.50% and 3.50%. In some cases, however, this assumption is much lower than the median, leading one to question whether some companies are reflecting the long-term expectation before taking into account the current high inflation and labour shortage we are currently experiencing on the market, while others are reflecting the current impact of individual job progression in their disclosed assumption and/or adjusting the expectation on the inflation assumption which is typically used as a basis to set the compensation increase assumption.

Figure 6 – Rate of compensation increase



The figure 7 shows the spread between the discount rate and the rate of compensation increase. The spread can have a significant impact on the DBO for defined benefit pension plans. The median spread is 0.00% as at December 31, 2021, which is 50 bps higher than last year. An increase in the spread between discount rate and the rate of compensation increase results in a lower DBO.

Our survey shows that about 28% of companies changed the rate of compensation increase assumption by approximately 25 bps or more (down or up) at December 31, 2021 (figure 8). There is some debate over how frequently this assumption should be changed. IAS 19 states that financial assumptions should be based on market expectations at the end of the reporting period. These results on salary increase assumption should be interpreted with care as they may be skewed due to employers with closed plans that are part of this survey. Thus, they may not fully consider the effect of future salary increases for new entrants.

2022 update

The recent increase in inflation expectations could affect compensation increase. However, compensation increase also depends on other factors, including the effects of the COVID-19 pandemic & the labour shortage on the company or industry in which the company operates. At the time of preparing this survey, the Bank of Canada is projecting inflation to decline to about 3% by the end of 2023, and to return to the 2% target by the end of 2024. It still aims to keep long-term inflation at 2% which sits in the middle of a range from 1% to 3%.

Figure 7 – Spread: discount rate / compensation

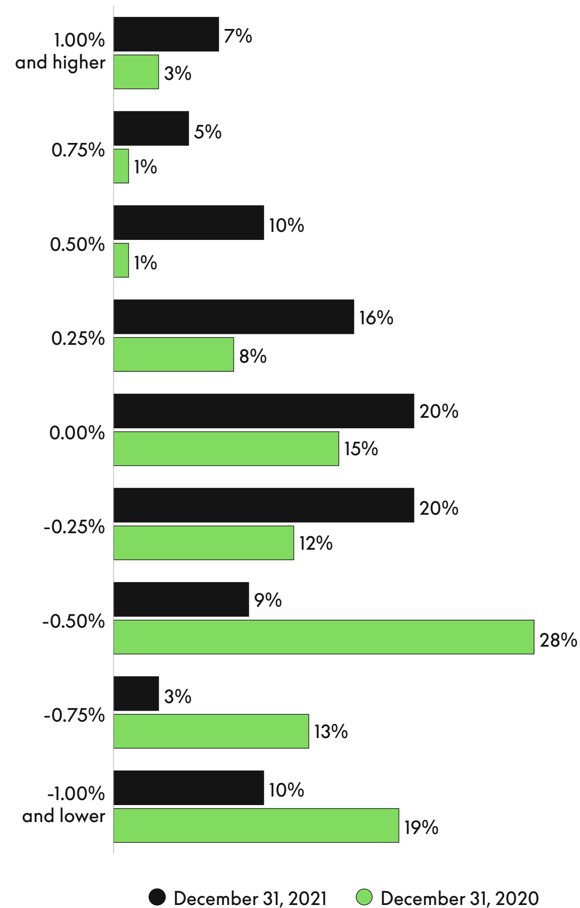
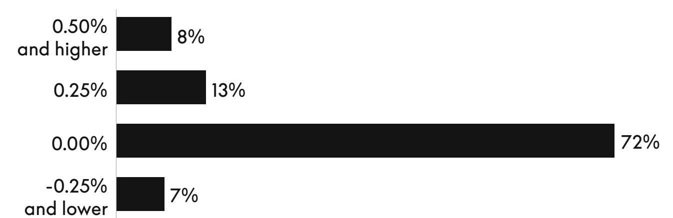


Figure 8 – Change in compensation increase assumption (2021 vs. 2020)

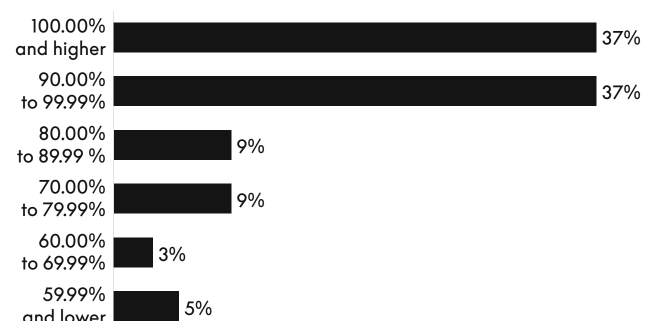


Pension plan financial situation and financial assumptions

The companies in our survey show a 104% overall ratio of pension assets to DBO for accounting purposes.

This result may be slightly understated since it includes some non-registered plans for which no funding is legally enforced under the Canadian regulatory environment. The ratio is highly influenced by the actual return on plan assets, the discount rate assumption and special contributions made to cover pension plan deficits. The distribution of companies based on their overall ratio at December 31, 2021 is shown in the figure 9.

Figure 9 – Pension plan ratio of asset value to accounting DBO (distribution of companies)

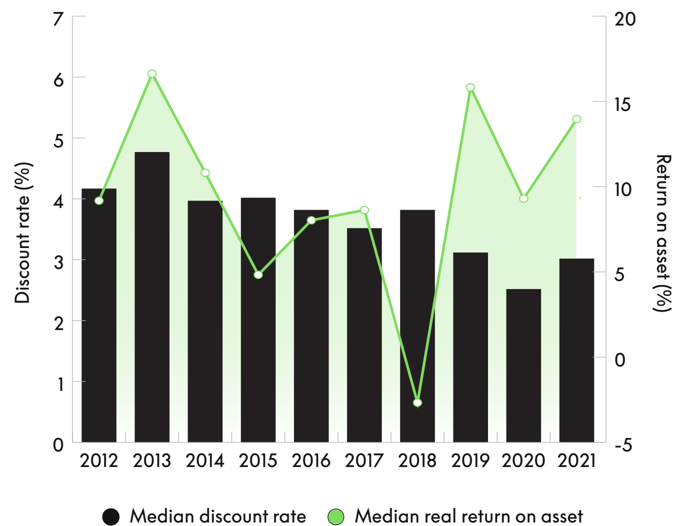


As mentioned, the ratio is highly influenced by return on assets and discount rate, for which we have summarized historical data in the figure 10.

2022 update

We estimate that the overall funding ratio of 104% at the end of 2021 would have risen to about 106% at the end of August. Our estimate is based on the evolution of corporate bond yields in 2022 year-to-date. It is also based on an average plan duration of 15 years and on LifeWorks's benchmark portfolio of 50/50 debt/equities 2022 year-to-date return. The average duration and portfolio mix are consistent with data collected through this survey.

Figure 10 – Discount rate and actual return on assets



Medical cost trend

When retiree medical coverage is offered, a key assumption in the valuation of the DBO is the rate of future medical cost increases. IAS 19 provides guidance on factors that companies should consider in selecting this assumption. In addition, the Canadian Institute of Actuaries (CIA) and the Society of Actuaries (SOA) released a jointly sponsored report in March 2018, Model of Long-Term Health Care Cost Trends in Canada. The purpose of this report was to develop a model to forecast long-term health care inflation in Canada (known as the "McMaster Model").

Often, medical costs are assumed to increase at a higher rate in the short-term, declining in steps to an ultimate rate over a period of several years.

The figures 11 and 12 show the December 31, 2021 medical cost trend assumption compared to December 31, 2020. About 66% of the companies surveyed that are offering a retiree medical coverage used an ultimate trend rate between 4.00% and 5.00%. The median rate as at December 31, 2021 is 4.05%, which is 30 bps lower than last year (4.35%).

The median assumption for the short-term medical cost trend rate was 5.15% at December 31, 2021, which is 20 bps lower than last year's median rate (5.35%). A total of 92% of companies used an assumption of less than 7.00% (91% in 2020).

The medical cost increase rate reaches its ultimate level in 2032 (median), which is 1 year later than the median year of last year's survey (2031) and 11 years later than the median year of the 2014 study (2021). The increase in projection period is consistent with past practice of adjusting the calendar year in which the health care cost trend assumption will reach the

Figure 11 – Ultimate medical cost trend

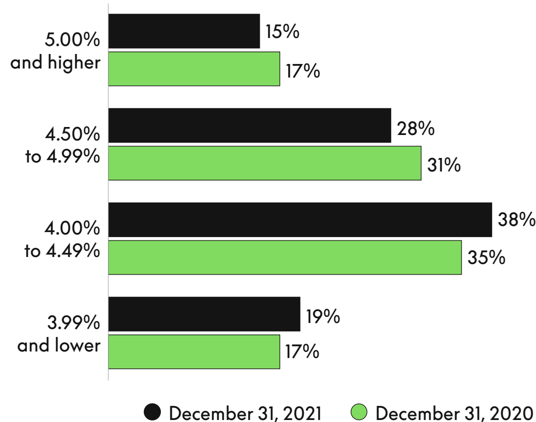
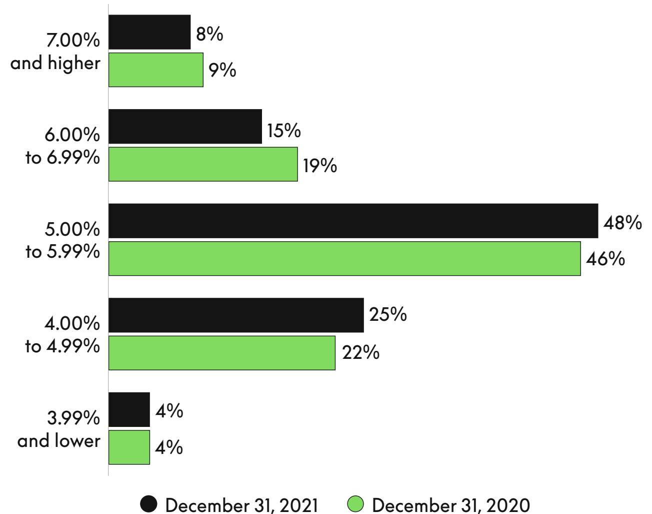


Figure 12 – Short-term medical cost trend



ultimate rate, for the sole purpose of maintaining the same projection period, and an assumed increased in the number of plan sponsors reflecting the McMaster Model in their medical trend assumptions. The median projection period has remained reasonably stable since 2010 (about 9 years). We will continue to closely monitor to this assumption in future surveys. See the figure 13 for the distribution of the year for ultimate level reach.

COVID-19 impact

The COVID-19 pandemic affected members' claiming patterns, reducing claims for most benefits during the first few months of the pandemic. For some benefits, a period of higher than normal claims followed before returning to more normal levels. The impact varied by benefit, program and region. When developing updated claims cost assumptions, recent plan experience should be closely reviewed for whether or not it is representative of expected future claiming patterns under the program. In the long-term, it is unlikely that the pandemic will have a material impact on the ultimate medical cost trend assumption.

Pension plan asset allocation

Under IAS 19, the allocation of pension fund assets between equities, fixed income and other assets must be disclosed. Additional categories may be added to facilitate the readers' understanding of the investment risks faced by the fund.

The average asset allocation as at December 31, 2021, was 40% in equities, 47% in fixed income and 13% in other assets (same allocation as at December 31, 2020). The distribution of the proportion of funds invested in equities and in other assets (excluding fixed income) is shown in the figure 14.

2022 update

The significant rise of bond yields since the end of 2021 may present opportunities for plans to invest in fixed income as well as to implement certain de-risking activities.

Figure 13 – Ultimate medical cost trend (year in which ultimate rate is attained)

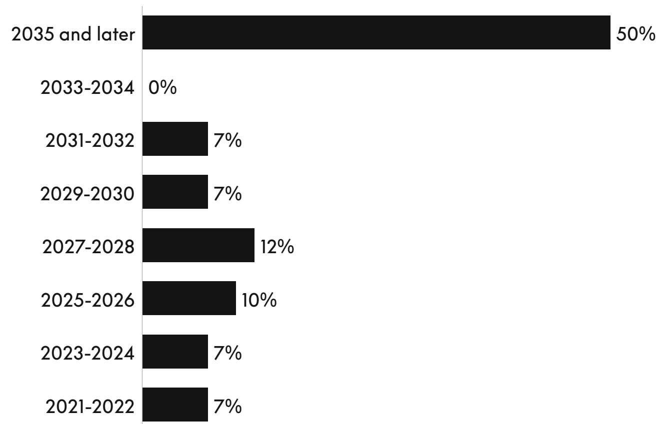
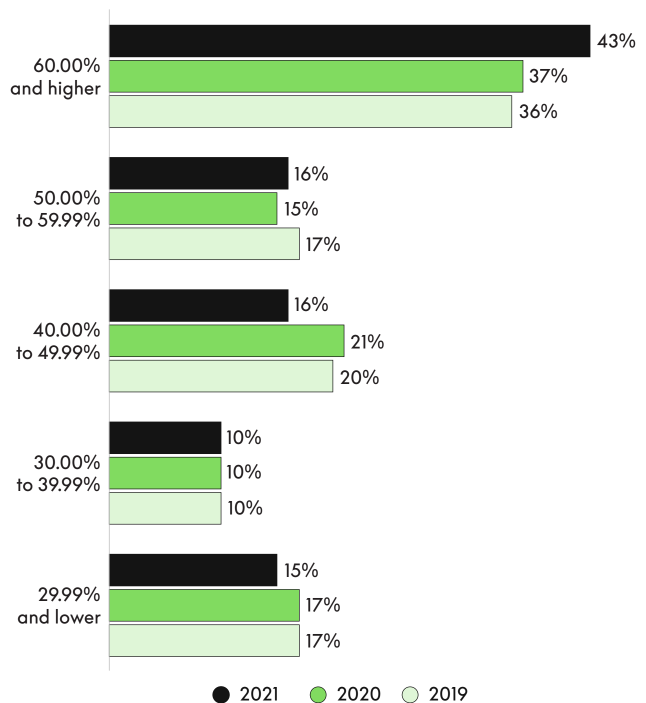


Figure 14 – Company distribution by pension plan equity and other assets weighting



Defined benefit cost – IAS 19

With respect to pension plans, the figure 15 shows the aggregate amount recognized in profit or loss (sum of the service cost and the net interest on the net defined benefit liability) and the aggregate amount recognized in other comprehensive income (remeasurements of the net defined benefit liability).

For 2021, these amounts are $3.2 billion and $-12.0 billion respectively. The remeasurements of $-12.0 billion consist mainly of actuarial gains on the defined benefit obligation resulting from the revision of the discount rate assumption as at December 31, 2021, as well as gains on plan assets in 2021 (compared to the interest generated by using the discount rate).

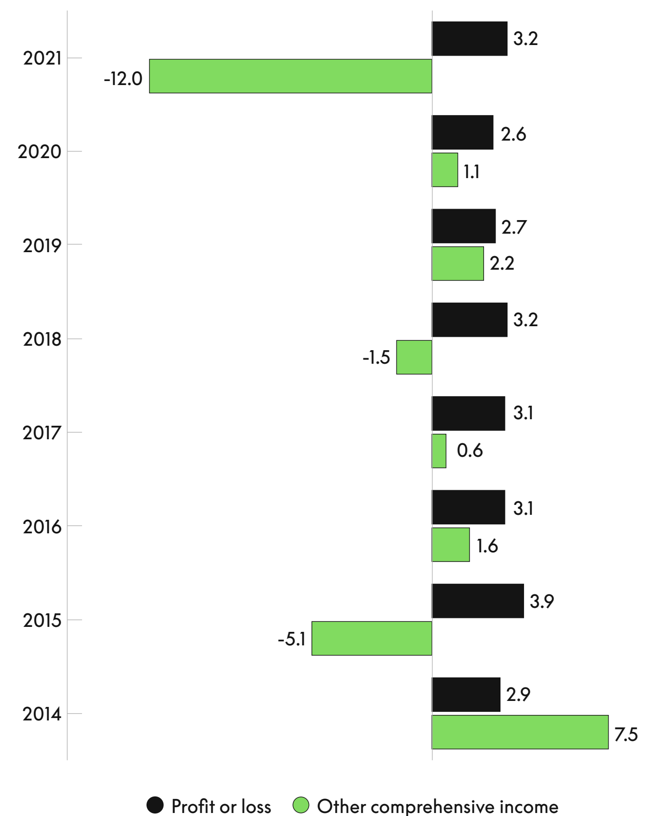
In IAS 19, remeasurements may be transferred to any other component in equity. Alternatively, they may be left in accumulated other comprehensive income ("AOCI"). About 69% of the companies in our survey are transferring the remeasurements immediately to retained earnings, while the others (31%) are recognizing the amounts in AOCI.

With effect from January 1, 2019, IAS 19 requires a re-measurement of the defined benefit cost following a special event, based on the assumptions at the date of the event. As the discount rates have significantly increased in 2022 so far, the re-measurement requirement may have a downward impact on expense for certain entities that have special events in 2022.

2022 update

Since the beginning of 2022, the pension expense has decreased by approximately 40% mainly due to the increase in the discount rates (all other things being equal).

Figure 15 – Historical amounts recognized in profit or loss and remeasurements recognized in other comprehensive income ($ billion)



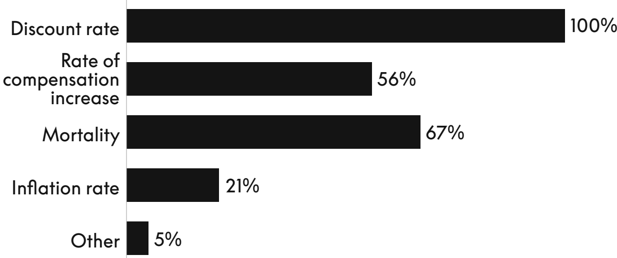
Additional disclosures – IAS 19

In IAS 19, some information with respect to the level of risk inherent in an entity's defined benefit plans have to be disclosed. However, some parts of the standard may be subject to interpretation and require professional judgment. Consequently, the level of detail in the disclosures may vary from one company to another. For example, 94% of the companies surveyed disclosed a sensitivity analysis of the defined benefit obligation, as required by IAS 19, while 6% did not disclose any. The figure 16 shows which actuarial assumptions were used for those companies that disclosed a sensitivity analysis.

COVID-19 impact and 2022 update

The COVID-19 pandemic that resulted in the level of volatility seen through 2020 as well as the recent significant rise in bond yields in 2022 partially caused by rising inflation should encourage companies to expand some of the disclosures they provide, in particular those disclosures that give users of accounts a better understanding of the risk mitigation techniques currently being used by the sponsoring employer. In March 2021, IASB published an exposure draft on proposing changes to the disclosure requirements of IAS 19, the disclosure focus would shift from a "checklist" approach to a more "objective-defined" approach. The consultation period has closed in January 2022. At the time of preparing this survey, we would not anticipate the proposed changes to take effect before the end of 2022.

Figure 16 – Actuarial assumptions used in the sensitivity analysis



For more information

This survey is intended to provide information regarding the assumptions disclosed by a wide range of companies and, as such, can provide an indication of trends. The assumptions used for your own employee benefit plans will depend on a number of factors. For more information, please speak to your LifeWorks consultant.

Appendix: Selecting the discount rate

In general, the DBO for defined benefit plans is highly sensitive to the discount rate assumption. For example, a 25 bps decrease in the discount rate can increase the DBO by as much as 5%.

IAS 19 provides general guidance for the selection of the discount rate assumption. The discount rate should be determined by reference to market yield on high-quality corporate bonds. In countries where there is no deep market in such bonds, the market yield on government bonds should be used. The discount rate should reflect the estimated timing of benefit payment, but it is common practice to apply a single weighted average rate. However, the precise methodology for computing this rate is not prescribed.

The Canadian Institute of Actuaries (CIA) published an Educational Note in September 2011 (subsequently revised in June 2018 as well as in December 2020), which offers advice to pension actuaries who are engaged by an entity to provide guidance on the discount rate to use for accounting purposes. The Educational Note describes a methodology to extrapolate the long end of the high-quality corporate yield curve that the Task Force believes would be appropriate in the current economic environment. This methodology uses high-quality corporate and provincial (adjusted) bonds. It is possible that some entities may not have applied the proposed methodology set forth by the CIA in establishing the discount rate as at December 31, 2021, instead using an alternative model that still conforms to the principles of the Educational Note. This could result in different discount rates for similar pension plans, given current conditions in financial markets.

Information on high quality Canadian corporate and provincial bonds (rated AA or higher) is generally available from independent sources, and can serve as a starting point in the determination of the discount rate.

About LifeWorks

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