Annual Discount Rate Guidance

This section provides guidance to auditors in assessing the accounting discount rate used in the calculation of the defined benefit obligation for a Canadian employee benefit plan when determined by reference to high-quality corporate bonds (or high quality debt instruments) as required under the following accounting standards (referred to in this document as the “Accounting Standards”):

* International Accounting Standard 19 (IAS 19) under IFRS; and
* Section 4600 of part IV (Pension Plans) of the Handbook when, as per paragraph 22, a pension plan measures the pension obligation at the accrued benefit obligation amount determined by the plan sponsor when the plan sponsor’s financial statements are prepared using IFRS.

Selecting the accounting discount rate

The discount rate under these Accounting Standards is based on high-quality corporate bonds and is re-evaluated at each measurement date. When long-term interest rates rise or decline, the accounting discount rate changes in a similar manner. Therefore, it is not permitted for an entity to determine a range of discount rates each year and continue to use the prior year’s discount rate assuming it falls within the range.

Also, it is **not**permitted for an entity to determine a range of discount rates and then arbitrarily select the discount rate to be used from within that range. The Entity needs to have a set methodology in place and apply it consistently from year to year. The reasonable ranges below will generally apply for a large number of pension plans that use high quality long-term corporate bonds to determine the discount rate. If an entity expects to choose a discount rate outside the range of reasonable discount rates, they should support the use of that rate with analysis matching a specific bond portfolio to the liability cash flows. The discount rate should be chosen to match each plan’s expected cash flows (a single rate for multiple plans may be acceptable, if the underlying plans do have comparable profile (profile for their future cash flows) - often called duration).

The discount rate assumption is not management’s best estimate long-term assumption, but rather a market interest rate set in reference to high-quality corporate bonds.

Yield Curves used on the market

There are different approaches used in Canada to determine an appropriate yield curve based on high quality corporate bonds. The Canadian bond market has limited high quality corporate bonds, especially in the longer term. These can result in slightly different discount rates using the different approaches. The most common are:

* [Fiera Capital’s CIA Method Accounting Discount Rate Curve](https://www.fieracapital.com/en/institutional-markets/cia-accounting-curve)
	+ To account for the scarcity of high quality corporate bonds with longer terms, the Fiera Capital curve includes high quality provincial bonds with longer terms and adjusts with an appropriate spread in the analysis.
* Other curves (from actuarial firms) – the CIA curve is not the only acceptable yield curve and other yield curves developed using similar approaches such as the Mercer Model, RATE:Link developed by Willis Towers Watson, or the models developed by Telus Health and Aon Hewitt.

Reasonable Ranges for the Discount Rate:

The following table provides a reasonable range for the accounting discount rates at various dates for typical pension and benefit plans, when an entity has adopted the Fiera Capital curve to determine its accounting discount rates.

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| --- | --- | --- |
| **(e.g Fiera Capital)** | **2022** | **2023** |
| Date | 14 Year Duration | 24 Year Duration | 14 Year Duration | 24 Year Duration |
| December 31 | 5.05% | 5.10% | 4.65% | 4.60% |
| November 30 | 4.90% | 4.95% | 5.15% | 5.10% |
| October 31 | 5.30% | 5.30% | 5.70% | 5.70% |
| September 30 | 4.95% | 4.95% | 5.65% | 5.60% |
| August 31 | 4.80% | 4.80% | 5.15% | 5.15% |
| July 31 | 4.60% | 4.75% | 5.05% | 5.00% |
| June 30 | 5.05% | 5.10% | 4.80% | 4.90% |
| May 31 | 4.75% | 4.80% | 4.85% | 4.95% |
| April 30 | 4.60% | 4.70% | 4.65% | 4.75% |
| March 31 | 3.95% to 4.00% | 4.05% | 4.85% | 5.00% |
| February 28 | 3.65% | 3.80% | 4.90% | 4.95% |
| January 31 | 3.40% | 3.60% | 4.65% | 4.75% |

The rates provided above are applicable to typical pension and benefit plans and may not be appropriate in certain cases.

Certain yield curves provided above are flat from duration 14 years to 24 years. As such, the low end of the range and the high end of the range results at the same rate. Note that for a few of the months presented, the yield curve is slightly inverted leading to lower rates at a higher duration.

Additional Guidance:

* We expect that the discount rate for a typical pension and benefit plan falls within the range set out above.
* If the discount rate is outside the reasonable range it does not necessarily imply it is wrong; however the audit team should consider obtaining additional support from management. In practice we do observe that proprietary curves from actuarial firms will tend to produce rates that could be about 10-15 bps above / below the range.
* We expect consistency within the range year over year. For example, for plans with a discount rate that fell near the high end of the reasonable range last year, they would also fall near the high end of the reasonable range this year.
	+ - Duration - The duration of a pension and benefit plan is a similar concept to the duration of a bond. Duration measures the defined benefit obligation sensitivity to a change in the accounting discount rate. In practice the lower the accounting discount rate, the higher the obligation. At a certain level of discount rate the duration represents the slope of the “obligation curve”. If a plan has a duration of 15 (or 15 years), this means that for a 1% change in the discount rate, the obligation will change by 15%. The actuaries normally calculate the duration by recalculating the obligation at a slightly different discount rate, and determining the percentage change in the obligation divided by the change in the discount rate. The duration also represents the weighted average time until the expected benefit payments of the plan are paid.

Annual Guidance on all assumptions (other than the discount rate)

This section supports auditors in assessing key actuarial assumptions used in the valuation of defined benefit obligations for employee benefit plans at December 31st.The selection of assumptions is a matter of judgment and auditors need to consider the key assumptions each year. Each assumption should be based on the experience of each plan and management’s expectation for the future.

All actuarial assumptions other than the discount rate are long term in nature. The ranges noted in this section are applicable to typical employee benefit plans and may not be appropriate in certain cases.

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| **Assumption** | **Guidance** |
| Inflation Assumption | A reasonable range for the inflation assumption is between 1.75% and 2.00% when the assumption is set with reference to long-term expectations and with reference to the Bank of Canada overnight target. Given the current higher than normal inflation, it would be reasonable that the inflation assumption is higher in the short term and reducing down to the reasonable range for long-term. |
| Salary Increase Assumption | A reasonable range for the salary increase assumption incorporates (1) the inflation assumption (refer to the discussion above for this assumption) PLUS (2) an allowance for productivity, promotion and merit of about 0.75% to 1.75%. For example, if the inflation assumption is 2.00%, we would expect the salary increase assumption to be between 2.75% and 3.75%. The allowance added to the inflation assumption can be itself split again into two elements being (1) productivity (a range of 0.25% to 1.25% is expected) plus (2) promotion/merit/other company specific factors (at least 0.50% is expected, unless support is provided for a lower assumption). As such, the salary increase assumption should be internally consistent with the inflation assumption and reflect the productivity, promotion, and company specific factors for the particular client. Plans that are closed to new entrants and have an aging active membership will usually tend to have a smaller premium value for productivity, merit and promotion. In addition, sometimes the promotion and merit will be in form of scale based on age / service to reflect expectations for the employee specifics. |
| Medical Trend Rates | For Other-than-pension Post-Retirement Employee Benefit (OPEB) plans that have a significant prescription drug component, the initial medical trend rate is expected to be 5.0% or greater. Moreover, the ultimate trend rate is expected to range between 3.5% and 4.5%. The period over which the initial rate is graded down to the ultimate rate is also expected to be at least 5 years, however it is often between 10-20 years. However, the pattern of decline and the number of years between the initial and ultimate rates is generally the most subjective component of the assumption. The frequency of prior changes in this assumption should be considered in supporting this assumption (for example, if the employer changes the year when the ultimate rate will be reached in nearly every valuation, it may be difficult to support an assumption that the ultimate rate will be reached in a short time period and a period of 20 years instead of 5 years should be considered).A significant prescription drug component would be for a plan where maybe 70% to 80% of the obligation is in respect of drugs. Many plans could justify a lower assumption based on their recent experience and the steps they have taken to control the costs of the plan (e.g. introducing drug cards, covering generic drugs only, etc.). Applying the McMaster model is seen as a good practice (even if alternative exists). |
| Mortality: Base Table | Management should consider using one of the final mortality tables (with adjustments as appropriate—see below) published by the CIA in February 2014:* 2014 Mortality Table (CPM2014)—developed from the combined experience exhibited under the public and private sector plans;
* 2014 Public Sector Mortality Table (CPM2014Publ)—based on the separate experience exhibited under the public sector plans; or
* 2014 Private Sector Mortality Table (CPM2014Priv)—based on the separate experience exhibited under the private sector plans.

Adjustments to the published mortality tables mentioned above may be appropriate in the following situations:* Experience adjustment—the recent and credible mortality experience from the pension plan being reviewed may be used to adjust a standard table (or a comparable industry experience study). If the experience is not extensive (fully credible under actuarial principles) but partially credible, this should be reflected in the adjustment, applied so that it could represent a mix of plan experience (the credible part) + the CIA experience for the non credible part.
* Size adjustment—mortality rates vary significantly with size of pension. Size adjustment factors were published by the CIA for each mortality table mentioned above that reflect the difference in mortality rates by income band, for males and females separately. If the pension plan does not have useful mortality experience to support an experience adjustment (e.g., the plan is too small) and there is no suitable reference by industry or a similar larger plan, it may be appropriate to adjust the mortality table using size adjustment factors, particularly when the average size of pensions in the plan being valued differs significantly from that underlying the standard table.

Entities applying Public Sector Accounting Standards and using a valuation prepared for accounting purposes should consider this as well. Auditors should compare these assumptions with the pension plan funding valuation assumptions. They should be the same and any differences identified should be clarified (should relate to timing only). |
| Mortality: Improvement Scale | Entities are expected to include projections of future mortality improvements using a two-dimensional generational mortality scale (rates that vary by year and age), such as the CIA MI-2017 (MI-2017) or the CPM Improvement Scale B (CPM-B), after the base year of the mortality study (both from the base year of the related mortality study to the measurement date and from the measurement date to each future year). The CPM Improvement Scale B (CPM-B) was published by the CIA in 2014. In September 2017, the CIA also published a new mortality improvement scale, the CIA MI-2017 (MI-2017). Both are two-dimensional generational mortality scales, and allow for improvement rates that vary by year and age. MI-2017 was developed using general population data from 1967-2015. CPM-B was developed based on the results of the C/QPP Phase III Report with some refinements, using data from 1967-2007. These both constitute broad and relevant mortality improvement studies for the Canadian population. Given the recent publication of both scales and the similar data sets used in their development, it may be appropriate to use either scale in the absence of credible information to the contrary, such as the publication of a successor scale by the CIA.Support should be obtained from management if no mortality improvements are considered or if a different improvement scale than the MI-2017 or CPM-B is used.Auditors should compare these assumptions with the pension plan funding valuation assumptions. They should be the same and any differences identified should be clarified (should relate to timing only). |
| Other Demographic Assumptions | Other key demographic assumptions (e.g. retirement age and turnover) should reflect the provisions of the plan and past experience. For instance, we would expect to see significant rates of retirement prior to the normal retirement age for a plan with generous early retirement benefits and past experience illustrating members electing to retire early.Auditors should compare these assumptions with the pension plan funding valuation assumptions. They should be the same and any differences identified should be clarified (should relate to timing only). |