Using multiple discount rates to develop benefit plan cost

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In brief

In developing the Interest Cost and Service Cost components of net benefit cost for a defined benefit retirement plan under US GAAP, one key assumption is the discount rate. We understand that many companies and their actuaries have been considering various alternative approaches to determining the discount rate for purposes of calculating Interest Cost and Service Cost. In evaluating a specific fact pattern, the SEC Staff recently indicated it would not object to a registrant changing to certain alternative approaches, including the use of individual spot rates (referred to below as the spot rate approach).

Companies considering changing to an alternative approach will need to evaluate a number of areas, including the appropriateness of the proposed alternative approach, whether the change should be applied consistently for both Service Cost and Interest Cost, how the change would be reflected for accounting purposes, and more. This HRS Insight addresses these considerations.

In detail

*Traditional, single weighted-average discount rate approach*

Under the current, commonly accepted and applied practice for pension and OPEB plans under ASC 715, most companies use the traditional, single weighted-average discount rate approach to develop the Interest Cost and Service Cost components of net periodic benefit cost.

The individual spot rates from the yield curve are used in measuring the pension plan projected benefit obligation (PBO) or OPEB plan accumulated postretirement benefit obligation (APBO) at the measurement date. For simplicity, we’ll refer to both the PBO and APBO as the benefit obligation in this Insight.

The benefit obligation is effectively calculated as the aggregate present value at the measurement date of each future benefit payment related to past service, with each payment discounted using a spot rate from a high-quality corporate bond yield curve that matches the duration of the benefit payment.

Under the traditional, single weighted-average discount rate approach, a single weighted-average rate is developed and used to measure the Interest Cost and Service Cost for the period. The accounting literature provides that ‘a properly weighted average rate can be used for aggregate computations such as the interest cost component of net pension cost for the period.’

Traditionally, the weighted-average discount rate is determined at the plan measurement date, based on the same projected future benefit payments used in developing the benefit obligation.

The traditional single weighted-average discount rate represents the constant annual rate that would be required to discount all future benefit payments related to past service from the date of expected future payment to the measurement date such that the aggregate present value equals the benefit obligation.
Multiple (or disaggregated) discount rate approaches

We understand that many companies and their actuaries have been considering and proposing various alternative approaches to determining the discount rate for purposes of calculating Interest Cost and Service Cost.

Alternative approaches using multiple (or disaggregated) discount rates involve using separate discount rates developed relative to projected future benefit payments for segregated subsets of the plan’s obligation, for example:

- Separate single weighted-average discount rates for Service Cost on the future incremental benefit payments earned during the period and Interest Cost on the aggregate benefit obligation
- Separate single weighted-average discount rates for Interest Cost on the benefit obligation for active participants, terminated vested participants and retirees, in addition to a separate single weighted-average discount rate for Service Cost
- Separate single weighted-average discount rates for Interest Cost on the benefit obligation for each individual plan participant, in addition to a separate single weighted-average discount rate for Service Cost
- Separate discount rates for each future projected benefit payment based on time until payment. For example, the discount rates may be the spot rates associated with each benefit payments’ individual present values in the calculation of the benefit obligation or Service Cost. (This approach has been referred to by some as either the spot rate approach or the full yield curve approach.)

Impact on expense of using multiple (or disaggregated) discount rates

Under each of the alternative multiple discount rate approaches discussed above, the plan’s benefit obligation will be the same as under the traditional, single weighted-average approach. The key impact of using disaggregated discount rates is how the Interest Cost (and, to a lesser extent, the Service Cost) component of the net periodic benefit cost will be calculated.

Other than in rare economic circumstances where there is an inverted (downward sloping) yield curve, when using the multiple discount rate approaches discussed above, the overall Interest and/or Service Cost will be lower than under the traditional, single-weighted average approach.

Since the benefit obligation is remeasured periodically based on discount rates developed from the then current yield curve, it is unaffected by how the Service Cost and Interest Cost were determined between measurement dates.

As a result, any differences in Service Cost and Interest Cost under these alternative approaches directly result in differences in the amount of gains and losses generated during the period.

For most companies, these gains and losses are recognized in other comprehensive income (OCI), and potentially amortized to net benefit cost over many future years.

Observation

As a simple example, consider a plan with a benefit obligation of $100M at the beginning of the year, and $112M at the end of the year, with no benefit payments made during the year. As described above, the benefit obligation amount at the measurement date is not impacted by how the Service Cost and Interest Cost are determined.

Under the traditional, single weighted-average discount rate approach used today, assume that the net benefit cost for the year is $10M, resulting in a loss recognized in OCI of $2M ($100M + $10M – $112M).

Under one of the alternative approaches, assume the net benefit cost is reduced by $1M, from $10M to $9M (as discussed above, in most cases the total cost under an alternative approach will be lower than under today’s traditional single weighted-average discount rate approach). As a result, a loss of $3M will be recognized in OCI and will be amortized to net benefit cost (and thus net income) in future years.

The use of disaggregated discount rates results in a different amount of Interest Cost compared to the traditional single weighted-average discount rate approach because of different weightings given to each subset of payments.

The use of disaggregated discount rates affects the amount of Service Cost because the benefit payments associated with new service credits for active employees tend to be of longer duration than the overall benefit payments associated with the plan’s benefit obligation. As a result, the payments would be associated with longer-term spot rates on the yield curve, resulting in lower present values than the calculations using the traditional single weighted-average discount rate.
Another alternative approach to developing Interest Cost that has been considered is to set the Interest Cost equal to the amounts required to accrete or roll forward the benefit obligation to the amount projected as of the next measurement date (when benefit payments will be one year closer to being paid and therefore matched to spot rates of a shorter duration, which tend to be lower in an upward-sloping yield curve environment) such that no gain or loss would be expected to result (assuming no changes in the yield curve that existed at the current measurement date).

Some have called this latter approach the ‘individual, or implied, forward rates approach’ or the ‘no expected gain/loss approach.’ Under this approach the net periodic benefit cost would generally be comparable to or greater than under the traditional, single weighted-average discount rate approach for most plans.

**Accounting implications and questions**

Companies considering such changes must evaluate a number of areas, including the following:

- What disclosures would be necessary if such a change is made?

**Recent developments**

This topic has been the subject of numerous discussions among the Big 4 accounting firms, the SEC staff and the FASB. Based on our recent conversations, we understand the following:

The SEC Staff would not object to a registrant that historically has used the traditional, single weighted-average discount rate approach to change to a disaggregated discount rate approach to determine Interest and Service Cost. That approach could utilize the duration-specific spot rates embedded in the most recent measurement of the benefit obligation.

The SEC Staff would not object to a registrant treating such a change as a change in accounting estimate.

Companies that make such a change should include robust disclosures in their financial statements and (for those subject to SEC filing requirements) Management’s Discussion and Analysis (MD&A) about the effects of the change. Those disclosures should consider:

- ASC 250-10-50-4 regarding the effect of changes in accounting estimates on income and earnings per share
- ASC 715-20-50-1(k) and (r), as supplemented by ASC 715-30-35-45, regarding discount rates (highlighting the different ways that discount rates have been computed and changes in such computations)
- Regulation S-K Item 303 for MD&A regarding changes in results of operations, and trends or events that will materially impact income from continuing operations
- Regulation G for non-GAAP measures and significant changes to the extent the components of periodic net benefit cost are reflected in non-GAAP measures

Although not viewed as a change in accounting principle, the SEC Staff would not expect a registrant that changes to the use of a disaggregated discount rate approach as a refinement of the calculation of benefit plan amounts to subsequently change back to the traditional, single weighted-average discount rate approach in a future period.

As ASC 715 explicitly allows for the use of an aggregate average rate, the SEC Staff would not object to a registrant continuing to utilize the traditional, single weighted-average discount rate approach. Companies would not be required to change to a disaggregated discount rate approach as a more refined estimate.

The SEC Staff addressed the above in the context of a specific example of a registrant proposing to change to a disaggregated approach utilizing an analysis of each period’s future projected benefit payments and the associated (spot) interest rate based on the yield curve for that period. Other potential changes could yield different answers, and registrants are encouraged to discuss such proposals with the SEC Staff.

We would expect that if a company were to change its approach, such a change in estimate would be applied prospectively from the next measurement date (i.e., it would not be applied retroactively).

We generally would expect a change to be made in connection with a company’s annual year-end measurement, unless circumstances requiring an earlier, interim remeasurement occur (resulting in a full remeasurement of plan assets and obligation).
Other questions – such as whether a disaggregated approach could be applied by companies that use a bond matching approach to determine discount rates, rather than a yield curve approach; or whether a disaggregated approach must be applied consistently to all of a company’s retirement benefit plans – are still being considered and should be discussed with an appropriate advisor.

The takeaway

Companies who sponsor defined benefit pension and OPEB plans and account for them under ASC 715 may consider using multiple discount rates at their next measurement date.

PwC can assist companies in considering the implications of making a change to use disaggregated discount rates under ASC 715.