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Research Paper

Pension Expense Volatility

Can You Have Your Cake and Eat it Too?

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June 2020

Many sponsors of defined benefit plans focus their investment strategies mainly on mitigating the impact of the company's pension program on its balance sheet; however, a concern for many companies goes beyond the balance sheet. The annual cost of the pension plan (i.e., the pension expense) hits the company's profit and loss statement (P&L), and its change from one year to the next can cause concerns for Plan Sponsors. This article seeks to provide insight into areas plan sponsors should consider to help reduce the volatility of their annual pension expense.

Pension expense is a complex combination of items including service cost, interest cost and expected return on plan assets along with amortization costs associated with plan changes, changes in actuarial assumptions and differences between actual and expected investment returns. This important interaction of both plan assets and liabilities highlights the need to partner with a consulting firm that understands the many levers, both on the liability side and the asset side, that can help a Plan Sponsor achieve their long-term goals for the pension program.

Components of Pension Expense
+ Service Cost
+ Interest Cost
- Expected Return on Plan Assets (eRoA)
+/- Amortizations
= **Annual Pension Expense**

Mitigating the volatility in pension expense due to investment gains and losses seems straightforward - simply align the expected return on plan assets with the portfolio's anticipated return on plan assets. But, as is the case with all aspects of pension plan management, there is much more behind this proverbial curtain.

Service and interest costs together typically comprise the largest component of a company's annual pension expense. While there is little volatility from year to year in these costs, lowering them can be an effective approach to lowering

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overall pension expense. However, the only way to lower these costs is to shrink the total liability on which they are based - essentially share a piece of the liability "cake" with an annuity provider. Service cost captures the additional benefits active participants will earn during the next year. Closing the plan to new entrants while allowing current participants to accrue benefits will limit the growth of the service cost component. However, freezing future accruals will meaningfully and immediately lower the amount of this cost.

Conversely, interest cost is largely based on promises already made, so reducing this cost requires both prudence and care. Interest cost represents the annual growth in the plan's liability (i.e., the liability "cake") due to the reduction of the discounting period, all else equal. It is calculated by multiplying the yield of high-quality corporate bonds by the plan's liability. Decreasing this cost requires reducing the size of the liability "cake." Risk transfer activities such as lump sum windows or annuity purchase agreements can be an effective way to eat this portion of "cake" and thus reduce the annual ongoing interest cost for the remaining life of the plan.

The expected return on plan assets (eRoA) is an offset to the pension expense calculation. Growth in plan assets serves to offset the economic cost of the plan. Increasing the amount you expect the plan assets to grow by is a quick (albeit potentially foolish) way to decrease your pension expense. However, there are two huge issues with this "cost-reduction" approach.

First, a large deviation between the assumption used and a reasonable expectation of future returns of the plan's assets can raise red flags with the plan's actuary and auditor, each of whom is required to opine on the reasonability of this assumption in consideration of the plan's investments.

Secondly, large deviations between these two returns must eventually be recognized, so a mismatch serves only to kick the can down the road rather than to reduce the plan's true cost. Importantly, given recent capital market return expectations, most pension plans have been reducing their eRoA (see Figure 1). Without careful consideration, adjusting your assets to maximize return might lead to lower pension expense, with the tradeoff of higher funded status volatility.

Figure 1:
Plan Sponsor Reported Expected Return on Plan Assets

	Expected Return on Plan Assets (eRoA)	% of Cos. whose Actual RoA Exceeded eRoA
FY 2019	6.50%	96%
FY 2018	6.60%	1%
FY 2017	6.80%	96%
FY 2016	7.00%	68%
FY 2015	7.20%	3%
FY 2014	7.30%	81%
FY 2013	7.40%	79%
FY 2012	7.60%	93%
FY 2011	7.80%	22%
FY 2010	8.00%	97%

Source: 2020 Milliman Corporate Pension Funding Study, April 2020

The final component of the pension expense is the most complex. It is the amortization costs related to any plan amendments and actuarial gains and losses. (For purposes of this article, we will focus on the latter, as the former is generally at the discretion of the Plan Sponsor.) Actuarial gains and losses capture the difference between the plan's

actuarial and investment assumptions versus its actual experience. A pension plan may choose to adopt an accounting smoothing technique known as the “10 percent corridor rule.” This accounting rule requires disclosure of an actuarial gain or loss through the P&L only if the gain or loss exceeds 10 percent of the greater of the liability (a.k.a., Pension Benefit Obligation) or the fair value of plan assets. The 10 percent corridor rule serves to smooth volatility in the expense calculation from one year to the next.

Whether your plan utilizes the 10 percent corridor rule or not, the number of years over which actuarial gains and losses must be smoothed is based on the average remaining working life of the plan’s active population. However, for a mature plan that is closed or fully frozen, those still in the plan and working have fewer and fewer working years left. As a result, the smoothing period shrinks with each passing year, preventing any “smoothing” at all, and increasing pension expense volatility. Depending on your plan demographics and design, it may be appropriate to use a longer amortization period, such as average remaining lifetime, to determine the amount recognized through the plan’s annual pension expense. This change can dramatically dampen the variability in the expense from one year to the next. If your plan does not employ the 10 percent corridor rule or your plan has been closed to new entrants for a significant period, we recommend discussing these important considerations with your actuarial partner.

More closely aligning the assumed return on the plan’s assets (eRoA) used in the expense calculation with the anticipated return of the actual portfolio is also effective in controlling the volatility of your annual pension expense. This is especially true if your plan already takes advantage of the 10 percent corridor rule. The corridor helps to mitigate the P&L mismatch between actual and assumed investment performance in any one year. If, on average, the assumed expected return on plan assets aligns with the plan’s actual returns over the longer term, volatility of investment gains or losses will have limited impact on the plan’s annual pension expense.

Many Plan Sponsors rightfully employ a liability-driven investment approach to manage volatility of the pension’s funded status. However, without considering the impact on the plan’s expected return assumption, they may risk unintended pension expense volatility. While managing both funded status and pension expense volatility may, at times, feel like competing goals, through proper management, a company can “have its cake and eat it too.” Working with a partner that understands the dynamics of how a company’s true pension cost impacts its full financial picture is the first step toward achieving both goals.

For more information on the topics discussed here, please contact any of the professionals at Fiducient Advisors.

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Kate is a Senior Consultant and has spent 20 years serving the investment and actuarial needs of municipalities, corporations, and non-profit institutions. She has significant experience developing and overseeing liability-driven investment strategies, strategic asset allocation, spending policies, and plan design considerations. Kate's clients include defined benefit and defined contribution Plan Sponsors, endowments, and foundations. Prior to joining the firm, she was a Managing Director in Hooker & Holcombe's investment advisory group where she consulted on institutional retirement plans and oversaw their private client area. Kate was also a Senior Investment Strategist and fixed income portfolio manager for Prime Advisors, Inc., where she managed bond portfolios for her insurance-company clients. Kate graduated with a BA from Boston University and is a CFA® charterholder and a credentialed actuary.