

# PENSION RISK PERSPECTIVE

Insight for Corporate Defined Benefit Plan Sponsors

## Pension risk perspective: Insight for corporate defined benefit plan sponsors

Tim Connor, FSA, EA, MAAA, Scott Preppernau, FSA, EA, MAAA, and Zorast Wadia, FSA, EA, MAAA

### Why are defined benefit plan sponsors so concerned with pension risk?

There is no denying that defined benefit pension plans are a critical component of the U.S. retirement system. Of the \$23 trillion in total U.S. retirement assets at the end of 2013, nearly \$8.6 trillion was accounted for in defined benefit plans. Of that figure, about \$3 trillion was invested in defined benefit plans in the private sector.<sup>1</sup>

While defined benefit plans in the private sector play an important role in providing a predictable and secure retirement for millions of Americans, the cost of providing that predictable security is an unpredictable path for plan sponsors. In the 1990s, that path was paved with the rock-solid returns of a booming stock market, before undergoing the wear and tear of two significant market corrections in the 2000s that have left the road to retirement feeling more like it was paved with quicksand.

Weak market returns, declining interest rates, and improvements in longevity have all combined to bring contribution and funded status volatility to the forefront of plan sponsors' financial concerns. Further, many plans have been in place for decades, and the maturing size and age of the covered population has caused liabilities to increase substantially. For many sponsors, the size of the plan has increased dramatically relative to the size of the company. What started out as one part of an overall employee benefit package has now turned into a miniature insurance company operating under the roof of the sponsor. It's not uncommon to see a plan that has as many retired participants as it has active employees. As this happens, the plan sponsor's sensitivity to risk rises.

Following a life-cycle approach to investing, individuals saving for retirement are told to invest while they're young, so that they have the most time to reap the benefits of compound returns and recover

from the inevitable bumps in the road along the way. Young savers are also generally told they can be more aggressive with their investments. Again, they have time to deal with risk. They can recover. They can afford to take on risk. As savers age, though, they begin to reduce their risk exposure. They begin to think more about risk, what it can do to their (hopefully) large build-up of investments, and how difficult it would be to recover from a loss with a shorter horizon. The same story is happening with many sponsors today, with the plan, rather than an individual, aging through the life cycle. Maturing plans have more at stake, as the size of the portfolio has grown, and less time to recover, with shorter horizons at least in part linked to the portion of assets needed to cover current retiree obligations.

### What strategies have been employed to deal with pension risk?

Traditional approaches in dealing with pension risk focused on one side of the equation, i.e., the asset side or the liability side. On the asset side, the historical and simple approach in dealing with risk focused on diversification within the portfolio across a broad range of investments. Again, this is not all that different from what young investors are told to do with their personal accounts. Regarding liabilities, the historical approach in handling risk was often a reactionary one. If costs escalated, sponsors might consider plan changes, including lowering prospective accruals, changing ancillary benefits, and freezing benefits or restricting plan participation.

The more recent view of pension risk management focuses on the funded status of a plan. This view contemplates both the assets and liabilities of a plan together, and how they behave relative to one another. When pension risk is viewed this way, various approaches can be utilized to manage contribution and/or funded status volatility. The approaches take several forms, from the design of plans to investment strategy to liability transfers.

<sup>1</sup> Comtois, J. (March 26, 2014). U.S. retirement assets reach \$23 trillion – ICI. Pensions & Investments. Accessed April 14, 2014, at: <http://www.pionline.com/article/20140326/ONLINE/140329919/us-retirement-assets-reach-23-trillion-8212-ici>.

Certain plan designs lend themselves as a built-in protector against certain risks, and those plan designs have been gaining a lot of attention in recent years. These include cash balance and variable annuity plan designs. The latter is not as popular, but may become more popular in the near future for sponsors who are looking to minimize certain pension risks. A variable annuity plan is typically designed to shield an employer from investment and interest rate risk, just as a defined contribution plan would, while retaining the participant advantages of longevity pooling and professional investment management, which are characteristic of defined benefit plans.

Liability-driven investing (LDI) was not as widespread or well-known a concept 10 years ago as it is today. But after two significant market corrections where equities took a beating at the same time that interest rates steadily declined to historical lows, virtually all investors are now knowledgeable about the benefits of LDI. The concept is to invest in instruments that have similar characteristics as the liability they are backing, namely long bonds. Investing in this way with the liability characteristics in mind serves to insulate a plan from the impact that declining interest rates have on the valuation of liability. As interest rates fall, actuaries generally communicate higher resulting liabilities, since future pension promises are now discounted at lower rates. If the investments supporting that liability are in long bonds, then the declining interest rates will result in a higher value of the investments as well, to a similar degree as the increased value in liability. Thus, a sponsor can effectively “lock-in” the funded status and eliminate its volatility.

More recently, the news in pension risk management has highlighted some form of a pension risk transfer, whether it is through an annuity purchase or through payment of lump sums. Defining the “economic value of a plan” as its U.S. GAAP accounting liability, sponsors can expect that a transfer of liabilities to an insurer will generally cost more than the economic value of the plan (since insurers need to make money). The benefit to the sponsor is a transfer of risk that it no longer has to manage. Lump sums present a way for sponsors to settle liabilities themselves and transfer all risk to the participant, but the process is ongoing, and the risks remain both in the interim and for all who do not elect a lump sum.

## What is to come with pension risk management?

We suspect that 2014 will see a continued trend of sponsors looking to de-risk their plans through the various methods mentioned above. In addition, we believe sponsors will investigate the benefits of a hybrid plan design such as the variable annuity plan for the reasons mentioned above.

**Pension Risk Perspectives** is published by Milliman’s Pension Risk Task Force as a service to our clients. This electronic newsletter is available at [milliman.com](http://milliman.com). Articles or excerpts from this publication may be reproduced with permission when proper credit is attributed to the firm and the author.

### Editor-in-Chief

Tim Connor

### Committee

Tim Connor  
Gregg Rueschhoff

Scott Preppernau  
Zorast Wadia

Bart Pushaw

Another trend likely to continue is the implementation of lump-sum windows or permanently increased lump-sum thresholds. These strategies have found favor with many plan sponsors, particularly in response to recent increases in Pension Benefit Guaranty Corporation (PBGC) premiums. Because PBGC premiums include a per-participant charge, and because that charge has increased substantially in recent years, sponsors will no doubt continue to take a hard look at the idea of offering lump sums if it translates into fewer participants for whom they must pay those premiums. In addition, the rates utilized to pay out lump sums have been fully phased in for a few years now, from the previous basis of 30-year Treasury rates. That old basis resulted in a period of time where lump sums were seen as costly to sponsors. That is no longer the case. On a U.S. GAAP accounting basis, plans are valuing liability at rates that are close to the rates that are now utilized to pay lump sums. In other words, there is no longer much of an accounting gain or loss to a plan that pays out a lump sum. Yet, it does accomplish de-risking by transferring management of the pension to the participant.

On the investment side, we also expect sponsors to explore some non-traditional de-risking solutions. Not all sponsors share the belief that leaving the space of equity investments makes sense in the long term. Some feel they can’t afford not to be seeking returns in the market. For them, a tail risk hedging investment strategy can be an attractive de-risking solution. A typical strategy allows for upside through equity investments, while at the same time mitigating downside losses that occur in volatile, declining markets. The concept of hedging tail risk is quite familiar to the insurance industry, which utilizes such strategies to manage its own risk in guaranteeing certain products, such as variable annuities. It makes natural sense for defined benefit plan sponsors to incorporate the approach to de-risk their own pension promises.

2013 was a favorable year for defined benefit plan sponsors. Equity returns were strong, and at long last, interest rates finally climbed back up from historically low levels. The positive performance presents an opportune time for sponsors who have not yet employed significant de-risking strategies to do so in 2014. Because while plans may be better funded today than they were a year ago, now there is also more to lose.

---

Tim Connor, FSA, EA, MAAA, is a consulting actuary with Milliman’s Woodland Park, New Jersey office. Contact him at [timothy.connor@milliman.com](mailto:timothy.connor@milliman.com).

Scott Preppernau, FSA EA, MAAA, is a consulting actuary with the Portland, Oregon, office of Milliman. Contact him at [scott.preppernau@milliman.com](mailto:scott.preppernau@milliman.com).

Zorast Wadia, FSA, EA MAAA, is a principal and consulting actuary with the New York office of Milliman. Contact him at [zorast.wadia@milliman.com](mailto:zorast.wadia@milliman.com).

---

Because the articles and commentary prepared by the professionals of our firm are often general in nature, we recommend that our readers seek the counsel of their attorney and actuary before taking action. The opinions expressed are those of the authors.

Inquiries may be directed to:

### Editor

3 Garret Mountain Plaza, Suite 101  
Woodland Park, NJ 07424  
[pensionrisk.editor@milliman.com](mailto:pensionrisk.editor@milliman.com)