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Pension Plan Analysis

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I'll admit it. I'm biased. I am a participant in a defined benefit pension plan, and take the view that what is best for me is best for all the other participants out there. I am not a practicing pension actuary, nor am I qualified to follow their rules. As a risk management and investment based actuary I feel qualified to talk about the economics of pension plans, and that is what I plan to do in this newsletter. It is a topic I expect to revisit in the future and hope to generate ideas that lead to long-term solutions.

Background

Companies often say that employees don't understand the value their DB plan gives them, but I remember commenting six months after college graduation that if a company was going to cut their pension (as was constantly rumored) that I would rather they do it when I was 21 than when I was 50 as it was an important part of my retirement plan. When I ran the hiring process later in my career I ran into more than one student who was very detailed on their pros and cons for jobs and asked very good questions about the plan.

What interested me back then was that this benefit could be truncated at any time and stop growing. This was a concern because valuation of these plans resulted in back ended growth due to salary increases and compounding.

When the Society of Actuaries decided to expand the work done by Dave Ingram and his Risk Management Task Force, I had just joined the Board of Governors and volunteered to lead the board's ERM Strategy Task Force. Efforts were made at this time to show how ERM impacted each practice area. Emily Kessler, at the time the staff pension actuary, made a presentation (later written up into an article by Andre Choquet in the July 2006 Risk Management newsletter) arguing that the life cycle of a pension plan for a specific company was not synced with the life cycle of the company itself and so ERM tools were needed to ensure plan benefits would be paid. This made sense to me, yet we continued to see valuation methods that were back ended, with unrealistic return assumptions that further reduced current funding requirements.

Cookie Jars

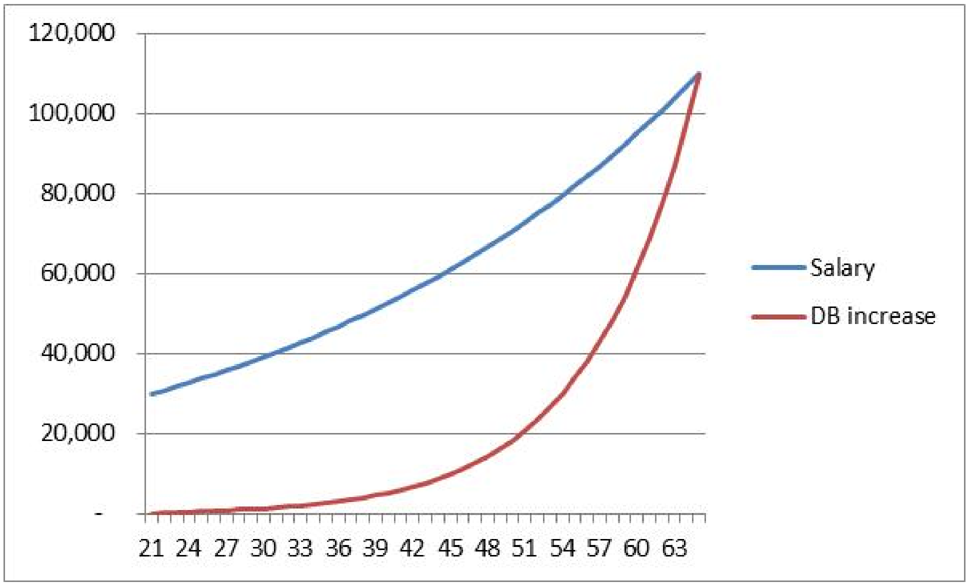
During the bull market of the 1980s and 1990s, high returns led to funding holidays and benefit raises. Executive plans were allowed to commingle with qualified plans, allowing deceptive practices as described by Ellen Schultz in Retirement Heist: How companies plunder and profit from the nest eggs of American workers. Even municipal plans have come under attack as trustees either refused to fund them (Illinois) or managed them as poorly as they did the rest of the government (Detroit – although it appears police/fire plans were managed much better than civil plans, where retirees might receive a 13th monthly check each year as a retiree bonus). So clearly there are operational, strategic, and business risk issues in addition to the financial ones.

Incentives

In theory the trustees of a pension plan are acting in the best interests of the participants, but it is hard to argue that this is true. Most (maybe all) represent the senior management team, not general employees. There is little transparency beyond ERISA requirements, which were designed by lobbyists working for companies offering the plans. Since retiree health plans are never earned by employees they can be cut at any time, or fees increased. Major employers who offered these benefits quietly have lobbied for national health care for years as this would wipe out an economic liability. Trustees should be modeled more like credit unions, where members vote for their board. Today no one is looking out for the employee. Even defined contribution plans like 401(k)s have arrangements with the investment funds where companies receive kickbacks from them for directing employees toward their funds that step up as more dollars are placed.

Design

DB plans accrue benefits based on years of service and compensation level. Generally the highest compensation applies to all years of service. This simplifies the calculation and makes sense if the lifetime service is to a single employer. It also provides an incentive for an employer to cull staff before they get to age 50 and the benefit cost starts to compound. This chart shows a simple example with 3% wage growth, 7% discount rate and 1% per year service credit is illustrative of the relationship. It's no wonder older employees can't carry their weight. The system has been rigged against them.



Design features that could help alleviate this issue would include indexing retirement ages for mortality (thanks to @annarappaport for this idea) or capping the service credits while allowing earnings increases to be recognized.

Valuation

The chart also shows the valuation issue. It is totally back ended. It costs very little to promise a benefit to a young worker, and normal turnover keeps most of those benefits low. For the highly paid on the senior management team these benefits are supplemented by deferred compensation. It is the middle manager or lifetime employee that looks overpaid as they get older, when in reality they were underpaid when young due to the same unrealistic accounting gimmicks. This is where regulations like ERISA should represent the little guy, but that doesn't happen today.

Some tweaks to the process would help a lot. Future growth assumptions should be conservative and be based on current asset allocations. In today's world plans are using liability driven investment strategies (LDI) to supposedly lower their risk, but it is not working. There are too many tiers to this process, and interests are not aligned. The asset manager is told to lower volatility to reduce PBGC contributions and required contributions. The portfolio manager is told to move assets to bonds from equities to "derisk" the plan. But the plan continues to be valued using return assumptions in the 8% range. I have traditionally used 5% in my own retirement planning as a form of conservatism. With investment grade bonds currently earning less than 5%, the non-bond part of the portfolio must earn double digits to meet the goals of the plan. It's not going to happen. Even the bond returns are unrealistic since there is a probability that rates will go up and generate capital losses.

Specific suggestions include lower return assumptions, using segmented assumptions where returns or other funding requirements are steeper in early years to keep from falling behind before the big jumps occur, using return assumptions that are similar to wage growth, and using the lower of an economic value and the regulatory value of the plan.

Are you a stock or a bond?

Moshe Milevsky has written about incorporating job security into your asset allocation decision. For sure you should incorporate any defined benefit pension as a bond in your mix. This includes Social Security payments and should include any COLA adjustments. When you do this your equity allocation of investable assets will increase. You should also think about whether historical data can be used to generate future returns in today's environment. I argue that it cannot, and that investors should perform their own stress testing using deterministic return scenarios. Blind adherence to any rule of thumb will destroy a portfolio. As Charlie Munger has said, you need to destroy one of your key ideas every year in order to succeed.

Best incentive idea

The best idea might be to have the trustees' annual bonuses be negated if defined benefit plans are not fully funded. This solution would be short term and could lead to participants serving as trustees or even more ridiculous assumptions to make it look like the plans are funded at 100%.

Conclusion

Pension plans should be managed in the best interest of the participants, not the companies that created them. Benefits promised to workers should be paid, with unbiased valuations completed by independent third parties.

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