Underfunded Pensions: Causes, Cures and Questions

Published: October 20, 2004 in Knowledge@Wharton

Plunging asset values and rising liabilities have led to an estimated $300 billion shortfall in the aggregate level of funding among U.S. corporate pension plans, thrusting an otherwise dry subject — often of interest only to actuaries and accountants — into the headlines. As millions of covered employees and retirees wait for a resolution, experts are debating the scope of the crisis and weighing possible solutions.

At the heart of the controversy lies the difference between the projected liabilities of corporate defined-benefit pension plans and the projected value of the assets that *Fortune 500* and other businesses use to fund them. During the past three years interest rates have fallen and the stock market has stalled, which has meant that companies are earning less on the assets they have invested to fund the plans. At the same time, an aging but longer-lived workforce drives a rise in the actuarially determined liability. This represents a problem that defined-contribution plans such as 401(k)s, which only address the amount of money that will be contributed, generally don't face.

The pension crisis seemed to reach epic proportions on July 23 when the federal Government Accounting Office characterized the Pension Benefit Guaranty Corp. (PBGC), a quasi-government insurer of last resort, as a "high risk" program. Now, the Bush administration is staking its credibility on finding a solution to the crisis that impacts about 43 million workers and retirees in the $1.6 trillion pension funds business.

Olivia S. Mitchell, Wharton professor of insurance and risk management, has extensively researched the costs and benefits of pension risk transfers. Mitchell, who is also the executive director of Wharton's Pension Research Council, says that several factors have combined to batter defined benefit pension plans.

"Interest rates have plummeted, which means that the discounted cash flow of benefits promised by pension plans is expanding," Mitchell says. "This happens because the discount rate appears in the denominator of the ratio of pension benefits owed, so when the denominator goes down, the whole fraction rises. In other words, falling interest rates produce higher pension liabilities."

In addition, equities accounted for 60% to 80% of many pension plans' investment portfolios, so their assets also plummeted when the stock market headed south. "It was a peculiar and unsettling coincidence," says Mitchell. "Even as a poorly performing stock market made the plan assets shrink, low interest rates spurred an increase in liabilities. To top it all off, this came just as the companies sponsoring defined-benefit pension plans were caught in an economic trough, making it difficult to raise contributions to enhance plan funding."

Discount Dilemma

One suggestion, supported by President Bush, would reduce unfunded pension liabilities by discounting (or determining the present investment needed to meet the liabilities) using rates "drawn from a corporate bond yield curve that takes into account the term structure of a pension plan's liabilities."

Under the administration's proposal, pension liabilities would be discounted using a blend of corporate bond rates (as called for in a House proposal) for two years, and a phase-in to an as-yet undetermined "appropriate yield curve discount rate" that would begin in the third year and would be fully applicable by the fifth year.

The discount rate has traditionally been based on 30-year Treasury rates, which are generally lower than those of corporate bonds and consequently require a higher contribution on the part of pension plan sponsors. But in addition to the administration's desire for a new benchmark, the lack of any recent issuance of 30-year T-notes has also frustrated the search for an adequate discount rate.

"Accuracy is essential because too high a rate leads to underfunding, putting retirees and taxpayers at risk," according to a statement from the Treasury office. "Too low a rate causes businesses to contribute more than is needed to meet future obligations, overburdening businesses at this early stage of the recovery."

But Mitchell is unsure that tying the rate to corporate bonds is a good idea. "A defined benefit pension promises annuities for life which must be paid even if the retirees live beyond their life expectancy," she explains. "So the liability has a long tail into the future. When companies estimate the present value of this future benefit cash flow, they must select an appropriate discount rate."

Some firms seek to use a corporate rate, but there isn't just one "right" rate, so Mitchell says there's a question about which is the most appropriate. "Using a corporate yield curve could reduce reported underfunding, as compared to current practice, but it also implies that some companies would be able to pump less money into their pension plans which would exaggerate shortfalls in the event of corporate bankruptcy," she notes. "The result might be to increase the burden imposed on the Pension Benefit Guaranty Corporation, which stands behind and backs these pension promises. It is clear that such decisions cannot be made in a vacuum; instead, the interests of several different stakeholders must be considered."

Unfunded Liabilities
Kent Smetters, a Wharton professor of insurance and risk management, also has some concerns about the estimate of the shortfall. He believes that the $300 billion deficit calculated by the PBGC could be too low. "Without knowing exactly how the PBGC calculated the underfunded liability, I can't say with certainty that the number is accurate," he comments. "The unfunded liability may actually be higher."

Smetters's solution: Consider giving companies the option of using a corporate-based discount rate, but adjust the Pension Benefit Guaranty Corp. premiums to reflect any associated risks. "If the PBGC charged risk-adjusted premiums, it would give the sponsors an incentive to invest in safer instruments," he explains. "So if a company chose a higher discount rate, their PBGC premiums would be likely to rise."

But Smetters notes that although economists have long suggested such a move, political pressure makes it unlikely to occur. "In the past, Treasury rates have been close to the 'correct' number, and the PBGC did not have to adjust premiums for rate risk," he says. "Clearly, in light of what's going on, this approach needs to be modified, but it has not been done. I don't expect it will either, since sponsor companies would strongly lobby against it. I anticipate that ultimately, sponsor companies will be able to use some kind of corporate bond-adjusted rate, without an associated risk-based premium."

In contrast, during the stock market boom of the late 1980s through the 1990s, companies had been eager to fund or even overfund their pension plans, since the investments could grow on a pre-tax basis. But Mitchell explains that pension regulation cracked down on this practice to prevent a drain on Treasury revenues. "You could argue that companies had tried to save for the proverbial rainy day," says Mitchell. "But then the regulators drastically limited this way of saving."

While current rules permit companies to incur a certain level of underfunding without being penalized, regulators are getting nervous about the size of the chasm.

In fact the percentage of employers with fully funded pension plans declined from 84% in 1998 to 37% in 2002, according to a study released in March by the international consulting firm Watson Wyatt. The study noted that the decline in 2002 "would have been even greater if Congress had not passed the *Job Creation and Worker Assistance Act of 2002*, which increased the maximum interest rate companies can use to determine the present value of benefits earned to date under the plan." As Wharton's Mitchell noted, the higher the interest rate, the lower the present value of future benefits.

Cash Contributions
"With almost two-thirds of pension plans falling short, we expect to see many companies struggling in the midst of a very bad economy to make massive cash contributions to improve their funding levels," says Kevin Wagner, a retirement practice director for Watson Wyatt. He adds that under a fully-funded pension plan, the market value of plan assets would be sufficient to cover at least 100% of benefits accrued by employees to date.

General Motors may have indirectly confirmed Wagner's prediction on June 20, when the automaker announced that it would offer approximately $10 billion in debt securities and convertible debentures to partially fund its U.S. pension funds and other retiree benefit obligations. At the end of 2002, the company said, those obligations were underfunded by $19.3 billion.

While GM and other companies say they can handle the shortfall — either with cash on hand or by floating bonds —

some people and politicians see an unsettling resemblance to the steel industry. In that instance, the PBGC took over many defined-contribution plans as companies began to implode under the twin threats of overseas competition that sapped sales and bloated pension liabilities that threatened to burn through available cash.

But that may have been a unique occurrence that won't necessarily repeat in other industries, says Dave Hilko, a principal and practice leader of the Employee Benefits Group in the Chicago office of Deloitte & Touche. He says that the entire outlook on pension liabilities may actually rest upon the time horizon being considered.

"When the PBGC says there are $300 billion of underfunded liabilities, they're measuring on a very conservative basis," he says. "Right now, we're in a slow economy, so the projected returns on investment don't look too good. But if we consider the returns over a longer period, they may look better. A more significant question may be the underlying health of the individual company and its industry. If the company is successful, then the odds are that its pension plan will be relatively secure."

Some analysts say the solution to the pension crisis may call for companies to diversify their pension investments, perhaps reducing the reliance on stocks and rotating into bonds. They may be less volatile, although bonds generally do not offer the dramatic returns that stocks can deliver. While that approach too will be debated, most experts appear to agree that greater funding and investment disclosure should be a component of any solution.

"Greater transparency in the funding process — which is one of the reforms currently under consideration — will help participants, regulators and investors," says Mitchell. "Remember when US Airways Group, which was operating under bankruptcy protection, extinguished a pension plan that covered thousands of active and retired pilots? Right up to the end, the participants had no idea of the health of their plan."

Given the acrimony that still exists over pension liabilities — the Capitol Police had to be called in recently to quell a disturbance when the House Ways & Means Committee debated the issue — that confusion may not be limited to employees.