Insuring Pensions: Making the System Work for the Retirees of Today and Tomorrow

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January 23, 2004
INTRODUCTION

Retirement income security has become increasingly more important, especially as our society is getting older, costs for retiree health care are rising, and the risks associated with private retirement savings are making daily headlines. There are corporate scandals that destroy the assets held in 401(k) plans, mutual fund scandals that cost small investors thousands of dollars of their hard-earned money, and corporate bankruptcies that bring down large traditional defined benefit (DB) pension plans.

If there is a bright spot, it may be that most private sector DB plans are insured, meaning that most participants will receive all or most of their pension even after a plan sponsor’s bankruptcy, as long as benefits are below $44,000 for workers retiring at 65. The government’s Pension Benefit Guaranty Corporation (PBGC) acts as the insurance company for DB plans. It is funded by premiums from DB plans, it takes over pension plans of employers in financial distress, and it pays out benefits from taken-over plans.

The PBGC’s important role in securing retirement income has become very clear in recent years. The PBGC had to take over a number of plans amid a stock market crash, lower interest rates and an initial drop in corporate earnings. Although equity prices and interest rates typically decline in a recession, the drops in this recession were more severe than in prior ones. Thus, the financial situation of pension plans eroded more than at other times, leading observers to refer to this crisis as a “perfect storm.” In 2002, the PBGC became the trustee of 144 single employer defined benefit pension plans that covered 187,000 people, and in 2003, of 152 single employer plans that covered 206,000 people. Hence, retirement income was more secure for many families because pension plans were insured at a time of extraordinary financial market losses.

The “perfect storm” has taken a toll on the PBGC. According to its 2003 annual report released on January 15, 2004, its loss for 2003 amounted to $7.6 billion. Despite this loss, the PBGC is still a sound pension insurance program. Its shortfalls are nowhere near the losses incurred by taxpayers during the savings and loan (S&L) debacle of the early 1990s, to which it is sometimes compared. The PBGC has assets totaling $38.5 billion that will be able to cover outgo for a number of years, and thus have allowed the PBGC to weather the “perfect storm” without taxpayer assistance.

PBGC needs a tune-up, not an overhaul. Although PBGC’s losses are not comparable to the S&L crisis of the early 1990s, they are not inconsequential. There are policy options that can improve PBGC’s income or lower the chance of the PBGC taking over failed pension plans. If prudent policy changes are undertaken, pension safety can likely be sustained for millions of America’s workers well into the future.
OVERVIEW OF DEFINED BENEFIT PENSION PLANS – WHAT THEY ARE AND HOW THEY WORK

DB plans used to be the major employer-sponsored retirement savings vehicle. Under these plans, the benefits workers receive upon retirement depend on their earnings history and years of service. Benefits are also guaranteed by the employer. Typically, the employer contributes money into a pension fund to pay for promised benefits, with the employer absorbing most risks. DB pension plans are generally insured by the Pension Benefit Guaranty Corporation (PBGC).

Over the past three decades, the share of private sector workers covered by a DB plan has declined. In 1998 – the last year for which data are available – 21 percent of private sector workers were covered by a DB plan, compared to 37 percent in 1979. Instead, the share of private sector workers with a defined contribution plan, such as a 401(k), as their primary pension plan rose from 7 percent in 1979 to 27 percent in 1998 (EBSA, 2000).

The PBGC insures single employer plans and multiemployer plans. Single employer plans are sponsored by one employer and cover a group of employees of said employer. Multiemployer plans cover groups of employees at several employers. These plans are collectively bargained and participating unions and employers are represented on the plan’s board of trustees. One union may represent workers in one industry or occupation, who work for different employers. In occupations where mobility is high, such as truck drivers, building trades, or car mechanics, workers do not lose retirement benefits when they switch jobs to other employers participating in the plan.

In 2003, single employer DB plans covered by the PBGC had a total of 34.5 million participants, whereas multiemployer DB plans insured by the PBGC had 9.7 million participants (PBGC, 2004). Because single employer plans play a larger role for retirement income security, much of our discussion on funding rules will focus solely on single employer plans. However, the basic arguments also hold for multiemployer plans.

The insurance of DB plans was introduced with the enactment of the Employee Retirement Income Security Act of 1974 (ERISA). Since then, the government has required premium contributions from insured plans and set minimum funding standards.

The funding of a single employer DB plan’s liabilities (promised benefits) is usually the employer’s responsibility (although in a few pension plans, employers require employee contributions). Should a fund become over-funded because the plan’s assets perform better than expected or receive more contributions than needed to fund actual benefits, employers may face tax penalties for additional contributions, effectively discouraging employers from contributing to an over-funded single employer plan.

Benefits can also depend on benefit multipliers in union plans. These generally increase with wage levels.
A single employer DB plan’s funding status is determined by the ratio of its assets to its current liabilities. A pension plan is typically considered underfunded if this ratio falls below 90 percent, in which case the employer must pay a much larger contribution.

To determine a pension plan’s funding status, its current liabilities are determined first. Current liabilities include the present value of payments to current retirees and of benefits that workers have already earned. The value of benefits is determined using current bond rates and reasonable assumptions about life expectancy, retirement ages, and other relevant demographic and economic variables. For the purposes of identifying funds that are underfunded and in need of deficit reduction contributions, life expectancy assumptions and bond rates are prescribed by law with little or no employer discretion. Based on these forecasts, pension plans determine how many assets they need to fund benefits. The corporate bond rate strongly affects the value of these benefits. The higher this interest rate is, the fewer assets are needed, since the difference is covered with more interest earnings.

It is clearly in employers’ interest to assume high interest rates for discounting their liabilities since this would require the least amount of assets today. To avoid abuse, the law sets a narrow range of interest rates that pension plans can choose from. To calculate a plan’s current liability, a plan needs to choose an interest rate that is between 90 percent and 105 percent of the four-year weighted average of the 30-year Treasury bond yield. Since 2000, this benchmark interest rate dropped with serious implications for pension funds. This decline was further exacerbated by the fact that the Treasury stopped auctioning new 30-year bonds in early 2002. A one percentage point decrease in the 30-year Treasury rate results in a 12 percent increase in liabilities for an average pension plan. This could easily double or triple the contribution to a pension plan if it forces a plan into the tougher Deficit Reduction Rules for poorly funded plans. To ease the additional burden in pension funding, the U.S. Congress, as part of the Economic Security and Worker Assistance Act of 2001, granted temporary relief to pension plans by allowing firms to use an interest rate of up to 120 percent of the four-year weighted average of the 30-year Treasury bond yield. This temporary measure expired at the end of 2003, which could result in additional contributions from firms to pension plans in 2004, unless another temporary measure is enacted.

Once current liabilities are determined, they are related to assets to calculate the funding ratio. Many pension plans valued their assets at fair market values (SOA, 2001), which meant that funding ratios quickly dropped when the stock market bubble burst.

Due to lower interest rates and asset prices, DB plans become underfunded. A Merrill Lynch report found that many of the 348 firms in the S&P 500 with a pension plan ended 2002 with an estimated shortfall of $323 billion (Blackburn, 2003; Kansas, 2002). Just because a DB plan is underfunded does not mean it will fail. Most firms will make additional contributions and some may freeze benefits. For instance, GM said that it expects to make additional contributions of $15.5 billion to its pension plan to meet federal minimum required contributions (Clair, 2003). The plans that PBGC has taken
over were generally poorly funded. Since 1975, 94 percent of all insurance claims on the PBGC came from plans whose funding ratio was less than 75 percent (PBGC, 2002).

**IT WAS CALLED A ‘PERFECT STORM’ FOR A REASON**

Many of the current problems of pension plans are the result of the “perfect storm” of declining interest rates, falling asset prices, and low earnings in the middle of a recession. Although these three trends tend to recur in almost every recession, the size of the interest and asset price decline in the most recent recession gave it a new quality.

Typically, interest rates decline when the economy is weak. During the post-war era, the long-term Treasury rate\(^2\) declined during every single recession, except in early 1970s (table 1). On average, the long-term Treasury rate was 0.2 percentage points lower during the 12 months after its business cycle peak than during the 12 months prior to it, excluding the high inflation periods of the early 1970s and 1980s.\(^3\)

However, the interest rate difference in the most recent recession was the largest of any post-war recession. Measured by the interest rate peak closest to the business cycle peak, the long-term interest rate was on average 0.48 percentage points higher in the 12 months before the peak than during the 12 months after the peak. This was the highest differential of any post-war recession (table 1). Moreover, interest rates declined for a longer period after the recession than during prior recessions due to the weak recovery.

Pension plans were also hurt by falling stock prices. Stock prices are generally a leading indicator for the economy. The growth rate of stocks peaks about three quarters before the business cycle peak. For the post-war period, the average capital appreciation rate of stocks during the 12 months before the stock market peaks is about 27 percentage points higher than during the 12 months after the peak.

The stock market decline in the latest recession differed in size from prior ones. In the latest recovery, the stock market peaked – measured by the real rate of return on the S&P 500 – in September 2000. In the following 12 months, the total real rate of return on stocks declined by 32.2 percent, the largest decline in the 12 months after a stock market peak.\(^4\) Measured by the real rate of return on the S&P 500 (http://www.americanprogress.org/AccountTempFiles/cf/\{E9245FE4-9A2B-43C7-A521-5D6FF2E06E03\}/FIGURE1.GIF).

The decline of long-term interest rates and the drop in stock prices preceded the recession, during which corporate earnings also fell. On average, the corporate profit share out of national income was about 1 percentage point lower after a recession than before it began, a significant decline considering that the profit share on average amounted to 11 percent (table 1). The decline in the corporate profit share in this

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\(^2\) Prior to 1977, the 20-year Treasury bond rate is used.

\(^3\) Interest rates and the economy do not peak at the same time, although the time difference between the peak of the economic business cycle and the peak of the Treasury rate is about one month.
recession was in line with those of prior recessions, as the profit share was 0.5 percentage points on average lower during the 12 months after the recession started than before it began.

The recent recession saw the recurrence of a pattern of interest rate and asset price declines amid weaker corporate earnings. However, the combination of an extraordinarily large asset price drop and sustained long-term interest rate declines was unprecedented. Thus, many observers called it a “perfect storm” for pension funds. Because interest rates and stock prices declined so much, though, further declines that could harm pension plans are unlikely and similar decreases are unlikely in the future. That is, much of the rise in under-funding of pension plans and PBGC’s losses most likely qualify as extraordinary events that may not happen for a long time, and may partially turn around. In other words, the rapid switch from well-funded to underfunded plans on a broad scale is less likely in the near term. Already, stock indices had double digit returns in 2003, along with a recovery in corporate earnings.

**COMPARISONS TO THE SAVINGS AND LOAN CRISIS ARE UNFOUNDED**

Because of the size of the estimated under-funding among all pension plans, it is often compared to the savings and loan (S&L) crisis of the early 1990s. This comparison is incorrect for a number of reasons.

The S&L debacle was caused by deregulation of a troubled sector (Curry and Shibut, 1995; Singletary, 1995). In comparison, part of the problem underlying the under-funding of pension plans are counter-cyclical regulations that force firms to contribute more during bad times and less during good times. Specifically, the calculation of current liabilities depends on the four-year weighted average of the 30-year Treasury bond yield. While calculations of this average attempt to incorporate some smoothing into funding rules, this average tends to decline in a recession along with the long-term interest rate. Moreover, when interest rates begin to climb in a recovery it takes longer for the average to increase because the average includes the low interest rates of the past recession.

Second, the nature of the risks associated with assets is quite different. Banking activities include the risk that loans may not be repaid, which can precipitate a run on a bank, resulting in bank failure and large cash outlays due to deposit insurance. In comparison, the primary risk for pension plans is that pension plan assets fall short of liabilities due to asset price declines, benefit improvements, or both. Employers can pay for some of these shortfalls over long time periods. If an employer becomes financially distressed before the shortfalls are fully paid for, the PBGC is stuck with the plan deficiency. Even though the PBGC may have a net loss upon taking over each pension plan, it won’t have a cash shortfall. There can be no “run on the bank” in PBGC’s case. Pensions do not commence until an employee retirees. Also, PBGC does not pay lump sums (except de minimis ones under $5,000), but rather pays benefits gradually over the retiree’s future lifetime. It can be 50 years (or more) before payments are fully paid out for a pension plan. By that time, PBGC will have received billions of dollars more in premiums. In addition, if stock
values are low when the PBGC takes over a plan, there is no requirement to sell them. Eventually, stock values may revert to higher levels, covering part or all of the initial shortfall.

The relevant metric for a banking crisis is whether a bank can cover short-run deposit demands if there is a run on the bank. In the case of the PBGC, the relevant metric is whether the agency has sufficient funds to pay benefits in a given year. In fact, PBGC had assets that were equal to more than 13 times annual benefit payments and expenses in 2003 (http://www.americanprogress.org/AccountTempFiles/cf/{E9245FE4-9A2B-43C7-A521-5D6FF2E06E03}/FIGURE2.GIF). This ratio in 2003 was higher than the comparable ratio for the entire period from 1980 to 1996 – before the stock market began its growth spurt.

Third, the losses among S&Ls mounted due to speculative investments that were exacerbated by mismanagement and fraud (Singletary, 1995). Initially, many S&Ls were facing large financial losses. Deregulation of the industry permitted them to engage in a wider variety of activities (Curry and Shibut, 1995). Because many S&Ls had low or no equity, the incentives to engage in a prudent manner were reduced, and real estate speculation, exacerbated by incompetence and fraudulent behavior, became rampant (Singletary, 1995). In 1995, the Justice Department announced that a total of 3,700 senior thrift executives were sent to prison (Singletary, 1995). In comparison, federal pension plan law (ERISA) establishes explicit standards for fiduciary conduct, including a list of types of transactions that are prohibited. Furthermore, federal pension law is enforced jointly by the Department of Labor and the Internal Revenue Service.

Fourth, the sheer size of the problem is different. The S&L debacle amounted to a $120 billion price tag for taxpayers (Curry and Shibut, 1995). The fact that the total underfunding of all DB plans approaches a similar or even larger size is ultimately irrelevant. Companies cannot unload their unfunded liabilities onto the PBGC, unless they are in severe distress (e.g. going bankrupt). It is unlikely that more than a small percentage of the S&P 500’s companies will enter bankruptcy in the near future. The relevant metrics are the PBGC’s losses of $11.4 billion in 2002 and of $7.6 billion in 2003. These losses occurred as a result of higher levels of bankruptcies, prolonged interest rate declines and extraordinary stock market losses. To approach the size of the S&L debacle, losses of this size would have to continue annually for at least another decade, which would require continued large corporate bankruptcies, along with no improvements in interest rates and the stock market. The PBGC forecast its deficit in 10 years to be close to a net present value of $16 billion, but it projected that there will be 25 percent of a deficit of less than $3.7 billion, or even a surplus. Moreover, the starting position for these projections are asset valuations at the end of 2002, prior to a substantial improvement on the stock market, and low long-term interest rates (PBGC, 2004). Thus, the projections are likely biased towards larger deficits in the future.

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4 The difference between the loss of $7.6 billion and the net position of $11.2 billion in 2003 was a deficit of $3.6 billion carried forward from 2002.
Fifth, the PBGC had built up assets in preparation of a potential funding shortfall. Prior to the crisis, the PBGC held a total of $21 billion in assets at the beginning of 2000, $10 billion more than it needed to cover its then-trusteed plans. The PBGC incurred losses equal to $9.3 billion in 2002 and $5.4 billion in 2003 from plan terminations (PBGC, 2004). At the same time, the PBGC also received premium income to the tune of $0.8 billion in 2002 and $0.9 billion in 2003. Moreover, the PBGC earned interest on its assets and saw some of its assets appreciate. Investment gains amounted to $0.2 billion in 2002 and $3.3 billion in 2003. Further, losses were also incurred due to revaluations of pension liabilities owed by the PBGC due to lower interest rates. These amounted to $1.7 billion in 2002 and to $4.3 billion in 2003. As interest rates will likely rise in the medium-term, some of these losses will likely be reversed. Some loss projections for the PBGC will likely be reversed if interest rates and stock prices rise. Moreover, PBGC’s losses from termination in the near-term will likely be covered by its accumulated assets.

The nature and the size of the problem between the S&L debacle of the early 1990s and the current pension under-funding are qualitatively different. Most importantly, it would take more than a decade of sustained bankruptcies, no improvements in the stock market, no increases in interest rates and the termination of all healthy premium pension plans, to generate a loss to taxpayers that is remotely equal to the S&L crisis.

**PREVENTION THROUGH PUBLIC POLICY**

Just because the size of the PBGC’s losses has not, and in all likelihood, will not approach the losses incurred from the S&L debacle, does not make them inconsequential. In the past, the PBGC could cover its losses from its own income. However, if (1) PBGC experiences large losses for a number of years, and (2) pension legislation continues to push healthy employers into terminating their DB plans or switching to simpler 401(k) plans, PBGC could ultimately need support from the government’s general revenue.

Public policy can act preventively to address this small probability. PBGC’s long-term outlook can be improved if either its income is raised – more participants or higher premiums – or the stability of DB plans is improved.

First, DB plan coverage could be broadened. Because the PBGC assesses premiums per participant, a larger number of participants would help to raise income to the PBGC. Insurance premiums are assessed per participant in a single employer DB plan, currently $19 annually for each participant (PBGC, 2003). A few proposals have advocated steps to broaden the appeal of DB plans, especially of multiemployer plans (Gordon, 2000; Ghilarducci, 2003). Others have proposed an insurance system for DC plans, which would require strict regulations to avoid moral hazard problems (Jefferson, 2002). Additionally, observers have suggested that so-called hybrid plans, especially cash balance plans, may be more attractive to employers, thus slowing the decline in DB plans. However, the conversion from traditional benefit formulas to cash balance formulas has raised concerns over age discrimination that need to be addressed.

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5 There are additional variable premiums for underfunded plans.
Second, premiums could be increased, especially for underfunded plans or for weak sponsors. Currently, pension plans pay a variable premium if their funding status deteriorates. Higher insurance premiums would require larger outlays when times are bad. Since the top priority is to have the PBGC not take over a pension plan, these funds could be better used to shore up plans instead of paying higher premiums to the PBGC.

Third, contributions to pension plans can be smoothed out over the course of a business cycle, thus strengthening pension plan funding. A number of mechanisms exist to accomplish this. The benchmark interest rate, for instance, could be averaged over a period longer than four years (Weller and Baker, 2003). Also, plan sponsors could make up a shortfall in their pension plan over a longer period. Additionally, plan sponsors could be allowed or required to make greater contributions in good years. However, changes to pension funding rules in an attempt to smooth contributions need to be balanced against the interests of participants to have well-funded pension plans.

Fourth, measures that would temporarily alter funding rules to aid DB plans during a funding shortfall are currently being considered in Congress. One measure would allow plans that were well-funded prior to 2001 and that had deficit since then to make less than their full deficit reduction contributions in 2004 and 2005. In addition, the benchmark Treasury yield rate for liability calculations would be replaced with the presumably higher corporate bond rate for 2004 and 2005 to give plan sponsors temporary funding relief. Both measures would protect the retirement income security of beneficiaries in the short-run. They also provide Congress with time to consider prudent permanent changes to funding rules. However, the long-term funding status of pension plans may be adversely impacted by these temporary measures, since employers have to cover less of the shortfall in the next two years. Such a problem would arise if equity prices, interest rates, or earnings declined, among other changes. Also, these temporary measures do not address the counter-cyclicality of the funding rules, which generally require higher contributions in a recession due to lower interest rates and equity prices (Weller and Baker, 2003). Consequently, the chance of a repeat of a funding crisis in a “perfect storm” is not reduced with these temporary measures.

**CONCLUSION**

Retirement income security has eroded. Retirees have to shoulder larger health care costs. The stock market crash has decimated savings in 401(k)s and IRAs. Corporate and mutual fund scandals took another bite out of household savings. And traditional defined benefit pension plans have been terminated or their benefits have been frozen.

One silver lining on the horizon has been the fact that most or all of the benefits promised under traditional defined benefit plans are insured by the governmental Pension Benefit Guaranty Corporation (PBGC). Due to the burden on pension plans from falling stock prices and declining interest rates, the PBGC also incurred large losses.
It is unlikely that these trends will continue in the near future and that they will repeat themselves in the medium-term. Further, the deficits of the PBGC pale in comparison with the savings and loan debacle of the early 1990s, to which they are often compared. Currently, PBGC has more than 13 times its annual benefit payments in assets. It would take years of no substantial stock market gains, interest rate rises or corporate earnings improvements before PBGC deficits totaled the losses accumulated during the S&L crisis. However, in the interest of securing pensions for the future, the chance of future deficits for the PBGC should be reduced as much as possible. Policymakers have enough room to improve the income situation for PBGC by adopting prudent policies that would either raise PBGC’s income, reduce the chance of plan termination, or both.

Retirement income security will become an increasingly important public policy issue as society ages. The goal for public policy should be to ensure that retirement savings are safe, so that they are available when people retire. The insurance of traditional pension plans has worked well for almost 30 years. Current shortfalls of the government’s insurance corporation should not be exaggerated and the chance for future shortfalls should be reduced through prudent changes in pension funding rules.
### Table 1

**Changes in Long-term Interest Rates and Profit Rates during Post-War Recessions**

<table>
<thead>
<tr>
<th>Recession</th>
<th>Interest rate change in recession</th>
<th>Interest rate difference during 12 months before recession and 12 months after recession</th>
<th>Profit share difference during 12 months before recession and 12 months after recession</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Bus. cycle peak</td>
<td>Interest rate peak</td>
<td>Bus. cycle peak</td>
</tr>
<tr>
<td>July 1953 to May 1954</td>
<td>-0.46</td>
<td>0.11</td>
<td>0.02</td>
</tr>
<tr>
<td>August 1957 April 1958</td>
<td>-0.58</td>
<td>0.04</td>
<td>0.11</td>
</tr>
<tr>
<td>April 1960 to February 1961</td>
<td>-0.39</td>
<td>0.30</td>
<td>0.15</td>
</tr>
<tr>
<td>December 1969 to November 1970</td>
<td>-0.33</td>
<td>-0.53</td>
<td>0.28</td>
</tr>
<tr>
<td>November 1973</td>
<td>0.69</td>
<td>-0.99</td>
<td>-0.41</td>
</tr>
<tr>
<td>March 1975</td>
<td>-0.06</td>
<td>-1.98</td>
<td>-1.53</td>
</tr>
<tr>
<td>January 1980 to November 1982</td>
<td>-0.21</td>
<td>-0.14</td>
<td>0.14</td>
</tr>
<tr>
<td>July 1990 to March 1991</td>
<td>-0.33</td>
<td>0.19</td>
<td>0.48</td>
</tr>
<tr>
<td>March 2001 to February 2003</td>
<td></td>
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Notes: Sources are Board of Governors, Federal Reserve System, Release H.15; Board of Governors, Federal Reserve System, Flow of Funds Accounts of the United States; TraderTools.com; Bureau of Economic Analysis, National Income and Product Account Table 1.14. The profit share is defined as profits plus inventory valuation adjustments plus capital consumption allowance relative to national income. Interest rate refers to the long-term Treasury bond yield. The interest rate peaked about one month after the business cycle peaked, and the profit share peaked about three quarters before the business cycle peaked.
Figure 1: Average Year-on-year Change in Total Real Rate of Return during First 12 Months after Stock Market Peak

Making the System Work for the Retirees of Today and Tomorrow

Figure 2: Assets Relative to Benefit Payments and Expenses

REFERENCES


