

Issue Brief

Who Killed the Private Sector DB Plan?

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Executive Summary

In recent decades, defined benefit (DB) pension plans have been in decline in the private sector. For example, and to much public attention, in January 2010 General Electric announced that it would be closing its DB pension plan for all salaried employees hired after December 31, 2010. These employees would be given a defined contribution (DC) account contribution of 3 percent of pay.¹

The closing of GE's traditional pension plan to new employees is the latest example of a trend that has been occurring for some time. Since the early 1980s, the number of private sector DB plans has markedly decreased, as has the number of workers who are covered by a DB plan. For example, in 1975 88% of private sector workers covered in a workplace retirement plan had DB coverage; by 2005, this number dropped to just 33%.² Also, in 1985 there existed over 112,000 single-employer DB plans in the United States, but by 2009, there were just under 27,650.³

Although much attention has been paid to the fact that the private sector has been trending out of traditional pensions, substantially less attention has been given to the specific reasons for such sharp declines in private sector DB sponsorship and coverage. This issue brief addresses the reasons behind the trend, and finds that:

- Traditional DB pension plans are good for both employees, in ensuring a certain modicum of income security in retirement, and for employers, as they remain a cost-efficient and highly effective recruitment and retention tool.
- Despite these positive attributes, private sector employers have been closing their DB plans. This is due to several factors, including:
 - Increased regulation, which has had the unintended consequence of impacting both the cash flow of the firm and volatility of plan funding;
 - Private-sector industry changes, which resulted in fewer unionized jobs, and fewer new industries establishing DB pension plans; and
 - Imperfect knowledge of employee preferences for traditional DB plans.
- Because DB plans still make sense for both employers and employees, several solutions and policy changes could be made to reverse this trend. These include:
 - Creating an avenue for third-party sponsorship of the DB plan,
 - Amending pension law so that funding is less volatile,
 - Finding ways to make it easier for employees to contribute to plan funding, and
 - Designing plans so that they are more portable as workers change jobs.

Traditional DB Plans Make Sense for Employers and Employees

DB Plans Are Good for Employees: They Offer the Best Chance for Retirement Security

Retirement researchers have long acknowledged the importance of the so-called “three-legged” stool—of Social Security benefits, defined benefit (DB) pension income, and supplemental individual savings—in providing Americans the greatest opportunity to achieve financial security in retirement.⁴

Research indicates that very specific characteristics make traditional DB pension plans very effective at supporting retirement security for the middle class. First and foremost, DB pensions provide lifetime income. The default draw-down option for DB plans is a monthly annuity—a series of monthly payments for as long as the retiree lives. The availability of an annuity benefit means that retirees with income from a DB pension have an easier time budgeting for their regular expenses, because the size of their pension check does not fluctuate with interest rates or the stock market.⁵ Also, DB pensions are broad-based and secure sources of retirement income. They are broad-based in the sense that, as long as the employee meets the eligibility requirements of the plan, s/he is automatically included in the plan and will earn benefits without having to actively enroll in the program or make investment or other decisions.⁶ DB plans are secure in that participants cannot borrow or withdraw money from the plan before retirement.⁷

A wide body of research has found that Americans with DB pension income are much more likely to achieve financial security in retirement than those without such pensions. For example, a recent NIRS report found that DB pension income plays a substantial role in ensuring that Americans remain self-sufficient in retirement. Specifically, the study found that DB pension receipt was associated with 1.72 million fewer poor households and 2.97 million fewer near-poor households in 2006. Moreover, 560,000 fewer households experienced a food hardship, 380,000 fewer experienced a shelter hardship, and 320,000 fewer experienced a health care hardship due to their DB pension income.⁸

It seems that employees may intuitively understand the financial security that having a DB pension plan can bring. NIRS opinion research finds that 84% of Americans believe that Americans with traditional pensions are more likely than those without pensions to have a secure retirement.⁹ Towers Watson reports that employees with a DB pension are significantly more confident in having enough resources to live comfortably 25 years into retirement, as compared to employees without a DB plan.¹⁰

DB Plans Are Good for Employers: They Are an Effective Recruitment and Retention Tool

DB pension plans are not just good for employees—they are also extremely valuable to employers, for several reasons. Firstly, substantial evidence exists that employees value DB pension plans highly and are more committed to employers who offer them. A 2008 MetLife survey found that 72% of employees cite retirement benefits as an important factor in their loyalty to their employer.¹¹ NIRS polling has found that a full 79% of Americans believe that pensions “offer more peace of mind,” because they offer guaranteed retirement income that cannot be outlived.¹² Ippolito finds that workers seem to value pensions so highly that they willingly forego higher wages in order to be ensured guaranteed retirement income.¹³

Perhaps as a result of the continued popularity of DB plans, research shows that DB pensions are an important recruitment and retention tool, across industries.¹⁴ As early as 1993, Allen and colleagues found evidence that DB pensions keep workers at jobs longer, and offer evidence that workers with pensions are 17% more likely than workers without pensions to stay at their jobs in a single year, all else equal.¹⁵ Even and MacPherson similarly found that firms with pension coverage saw lower turnover rates than non-pension firms, the effect being greater at large firms than at smaller firms. For example, among firms with 25 employees, quit rates were 10% lower among pension firms than non-pension firms; for firms with 5,000 workers these reduced turnover effects were a full 40% higher.¹⁶

Secondly, DB plans are also economically efficient, making them a relatively inexpensive way for employers to fund retirement benefits for their workers. In a recent analysis of the cost to achieve a target retirement benefit under both a DB and DC structure, NIRS found that the DB plan cost nearly half as much as the DC plan. That is, the cost to deliver the same retirement income to a group of employees is 46% lower in the DB plan than

in the DC plan. According to NIRS calculations, DB plans' longevity risk pooling saves 15%, maintenance of a balanced portfolio diversification saves 5%, and superior investment returns save 26%, as compared with a typical DC plan.¹⁷ A survey by Hewitt Associates implies that employers largely understand these underlying economics: among plan sponsors who were not planning to change their DB plan structure in the near future, the main reason for doing so was "because the plan is an efficient vehicle in the delivery of retirement benefits."¹⁸

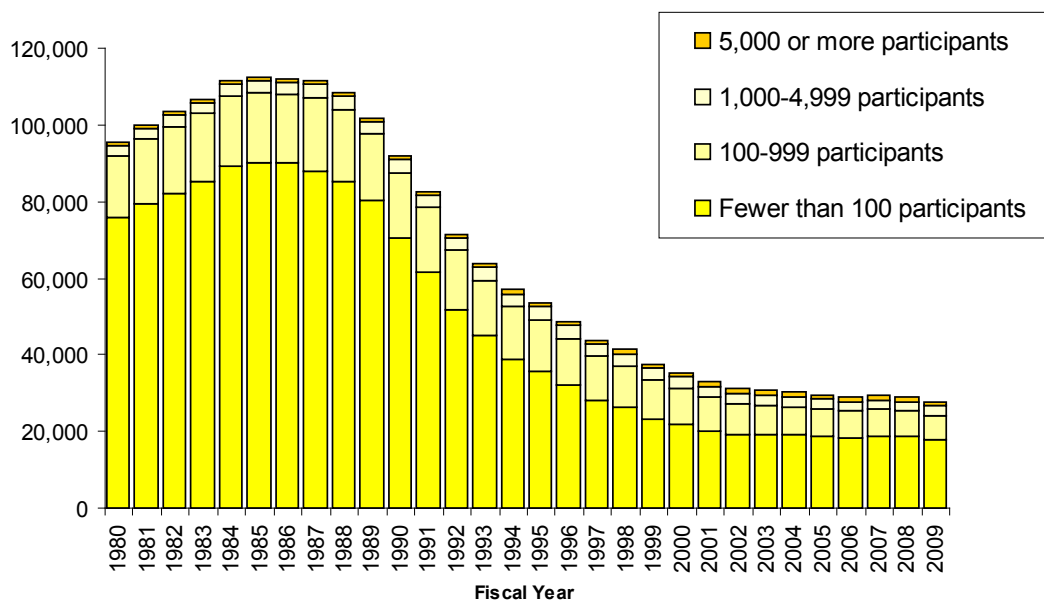
Finally, recent evidence shows that maintaining a DB pension plan can actually boost a company's bottom line. A study from the Financial Analysts Journal finds that between 2003 and 2007, those companies that froze their pension plans had underperformed, compared to their industry peers, in the years leading up to the freeze. Additionally, the study finds that freezing the pension plan had very little effect on the market values of the sponsoring companies; in other words, there was scant evidence that a pension freeze changes a company's stock price—especially in the upward direction.¹⁹ There may be several reasons for this. First, should the company implement or enhance 401(k) plans as a result of the freeze, the company is not likely to save much money on retirement costs. Also, even if the company were to save a bit of money with the freeze, any savings are likely outweighed by negative impacts on recruitment, retention, and employee morale.²⁰ As a result, Watson Wyatt notes that "to the extent that firms are paying competitively, the market isn't likely to reward companies that freeze their plans."²¹

Thus, DB pension plans remain good for employees in terms of retirement security prospects, and good for employers in terms of recruitment, retention, and economic efficiency.

Companies Continue to Freeze DB Pensions, Largely Due to Regulatory and Industry Changes

DB pension plans are thus incredibly beneficial to both employers and employees. Yet the private sector has seen a large shift away from traditional pension plans since at least this mid-1980s. In 1985, for example, the Pension Benefit Guaranty Corporation (PBGC) insured 112,000 single-employer DB plans; by 2009, this number had dwindled to just 27,650.²² Figure 1 displays the number of PBGC-sponsored plans between 1980 and 2009, and clearly shows a large trend away from private-sector DB plan sponsorship in the last three decades.

Figure 1. PBGC Insured Plans, Single Employer Program, 1980-2008



Source: Pension Benefit Guaranty Corporation. 2010. *PBGC Databook 2009*. Washington, DC: PBGC.

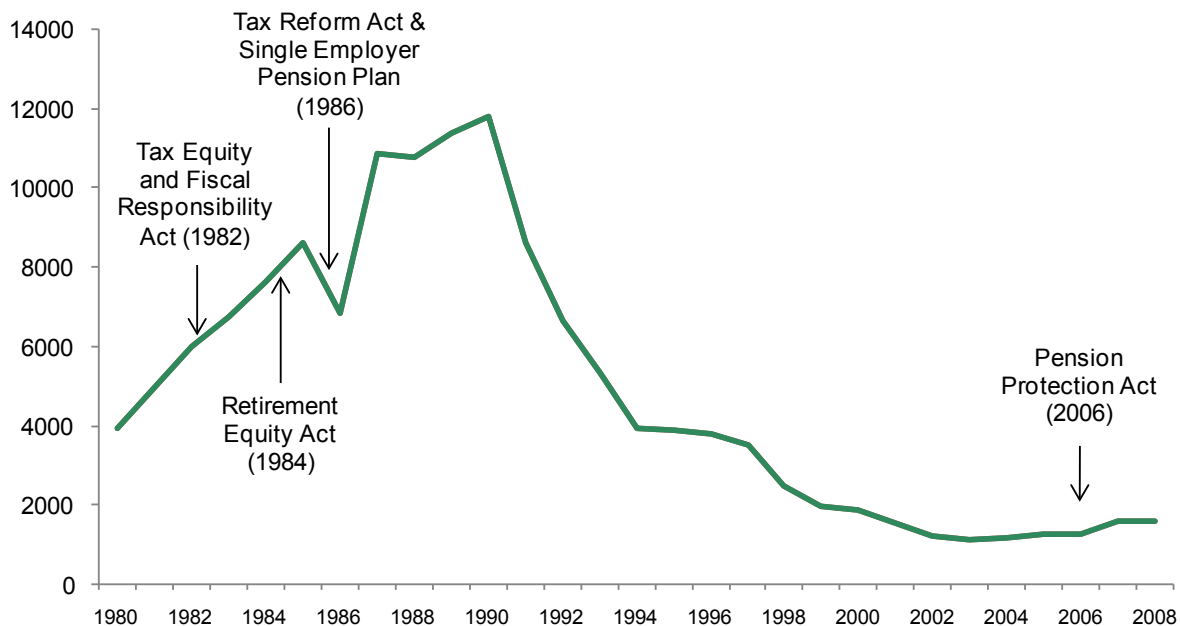
Why has the private sector seen such a large decline in DB plan sponsorship, if traditional pensions still make sense for employees and employers alike? There are several reasons. First, increased regulations have been put in place since the 1970s, which have had the unintended consequences of negatively impacting both the firm's cash flow and the volatility of plan funding. Secondly, the past few decades have seen large industry shifts in the private sector, which resulted in fewer unionized jobs and fewer new industries taking up DB pension plans. Finally, evidence suggests that many employers may have imperfect knowledge of their employee's preferences for DB pensions. It is interesting to note that each of these reasons has little to do with the underlying economics of maintaining DB pension plans.

Increased Regulations Have Impacted Both Firm Cash Flow and Plan Funding Volatility

First, the private sector has seen significant legislative and regulatory changes to single-employer DB plans in the last three decades,²³ which have had the unintended effect of making the DB plan less attractive to many employers.²⁴ For example, Husted finds that DB regulations enacted since the 1970s—from several legislative acts in the 1980s²⁵ to the Pension Protection Act of 2006 (PPA)²⁶—were increasingly complex, and increased the regulatory burden of plan sponsors. Such regulations caused complicated funding rules, accounting rules, and even operational requirements.²⁷ These rules have been onerous to employers who would prefer to have steady, easily estimable costs from year to year.²⁸

Figure 2 displays the number of private pension plan terminations between 1980 and 2008. The figure shows that the trend out of DB pension plans in the private sector began in the early 1980s, and increased rapidly throughout the decade after the passage of the Retirement Equity Act in 1984 and the Tax Reform Act of 1986. In fact, Husted finds that these two pieces of legislation alone created the biggest increase in both absolute and relative costs of defined benefit plans as compared with defined contribution plans.²⁹

Figure 2. PBGC Standard Single Employer Terminations, 1980-2009



Source: Pension Benefit Guaranty Corporation. 2010. *PBGC Databook 2009*. Washington, DC: PBGC. and Pension Benefit Guaranty Corporation. 2001. *PBGC Databook 2001*. Washington, DC: PBGC.

More recently, the PPA of 2006 increased DB plan funding requirements in several ways. The legislation increased the plan funding target to 100% (from 90%), accelerated the amortization of funding shortfalls to just 7 years (from 30 years), required more conservative funding assumptions, and restrained employers ability to average over just 2 years the interest rates used to calculate assets and liabilities (from 4-5 years). Researchers at Boston College have found that the PPA specifically caused pension funding to be much more volatile, and contributions to be much less predictable.³⁰ As a result, many experts believe that the PPA legislation made it even more difficult for plan sponsors to continue their commitment to DBs, as it increased funding volatility just as the economy and interest rates went in negative directions during the stock market downturn of 2008.³¹

Many retirement experts have argued that these additional regulations were both burdensome and costly to DB plan sponsors,³² and have directly—if unintentionally—led to an acceleration of DB plan freezes. The PBGC reports that in 2003, 9.5% of all private-sector plans (representing 2.6% of all participants) underwent a hard freeze. By 2006—the year that PPA was passed—a full 16.8% of all plans, representing 8.3% of all participants, were hard frozen.³³ Similarly, data from Watson Wyatt show that in 2004, just 4 percent of Fortune 1000 plan sponsors had frozen DB plans; yet by 2009—a mere three years after the passage of the PPA—a full 31 percent of these companies had frozen plans.³⁴

In 2008 the Government Accountability Office (GAO) conducted a survey of private plan sponsors who have frozen their DB plans. It found that the two most common reasons for companies to freeze their plans were the impact of annual contributions on the firm's cash flows and the unpredictability of plan funding.³⁵ It is important to note that these plan sponsors did not cite the outright cost of the DB plan as a problem—rather, of concern was the cost's impact on cash flow. A December 2010 Towers Watson survey found comparable results among current DB plan sponsors; the three top concerns of DB plan sponsors over the next five years were impact on cash flow, impact on the income statement, and impact on the balance sheet.³⁶ A 2003 Hewitt survey has similar findings—that employers perceive cost volatility as the single greatest threat to the DB pension system.³⁷

Also, a 2009 GAO study found that some 26% of plan sponsors would consider forming a new DB plan if the plan funding requirements had more predictability and less volatility.³⁸ Finally, a 2009 survey of plan sponsors found that, of those employers who remain committed to their DB plans, a full 70% would reconsider this commitment should accounting rules or other regulations become more burdensome than they already are.³⁹

In other words, the reason companies may be freezing their pensions, or hesitant to start new DB plans, is not due to the inherent cost of administering the plan. In fact, in an analysis of the possible reasons behind pension freezes, researchers have found that firms are not motivated by any short-term cost savings that may come from freezing a plan.⁴⁰

Instead, the issue is tied to very specific accounting regulations and funding requirements.⁴¹ Again, each of these reasons can be attributed to the increasingly complex regulatory environment that private sector DB pensions have seen since the 1970s. Ultimately, as federal regulations have made plan funding much more volatile over the years, DB plans have become less attractive to private sector plan sponsors.

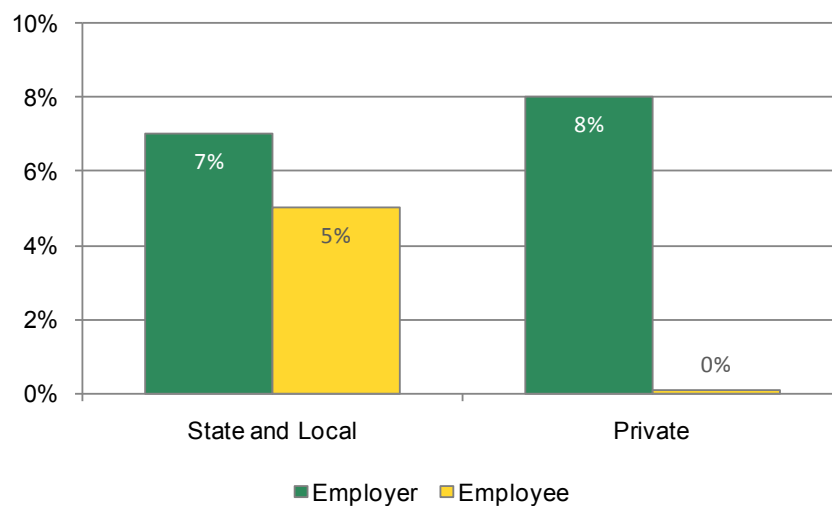
Cash Flow Is Different from Contribution Requirements

Related to the issue of cash flow is the question of contribution rates in general. Many plan sponsors cite contributions' affect on cash flow—but not the cost of the DB plan in general—as an impediment to sponsorship. Of course, all costs, including employee benefit costs, are significant to competitive companies. Interestingly, Ghilarducci and Wei have found that as private-sector firms have frozen or eliminated their DB plan and opened a DC plan for employees, the average retirement plan contribution per employee has dropped at the same time—from \$2,140 in 1981 to \$1,404 in 1998.⁴² In other words, as employers move from one retirement system to

another, they have been cutting the amount of money they contribute to retirement benefits at the same time. This may imply that one of the reasons private-sector employers have been trending away from DB plans is due to the fact that they wish to reduce spending on retirement benefits in general. This is generally likely to be detrimental to employees, who ultimately see a reduction in their retirement benefit. As *The Economist* magazine has put it, “Whatever the arguments about the merits of the new wave of [DC plans], if you put less money in, you will get less money out.”⁴³

Interestingly, public sector pension plans may have more manageable contribution requirements because they incorporate employee contributions alongside the employer contribution. While nearly all private sector plans are entirely funded by the employer, in most state and local pension plans, employees assist with the plan’s financing by contributing to the pension fund out of their own paychecks. (See Figure 3.) Because of this, some researchers believe that the cost to the employer is much more manageable in the public sector.⁴⁴

Figure 3. Employer and Employee Contributions as a Percentage of Payroll, by Sector, 2006



Source: Munnell, A., Aubry, J., and Muldoon, D. 2008. *The Financial Crisis and State/Local Defined Benefit Plans*. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Industry Changes Have Resulted in Fewer Companies Establishing DB Plans

Industry shifts and technological changes that the private sector has seen in the past several decades may have also contributed to the decline in DB coverage. The domestic manufacturing sector, for example, has traditionally been highly unionized and kept employees for long tenures—two characteristics which lend themselves to DB pension participation.⁴⁵ As this industry has declined, sectors such as information technology—with notably nonunionized and shorter-tenured employees—have emerged. Such new industries have not established DB pension plans as much as the older industries once did.⁴⁶ Munnell and Soto find that unionization and, more generally, “the nature of the industry” are both highly relevant to a firm’s decision to freeze its pension plan.⁴⁷

Additionally, Friedberg and Owyang have further found that those industries which have experienced more technological progress in recent years have experienced more of a decline in average job tenure among their workers than have industries that have not experienced as much technological change. In these industries in particular, the relationship between firms and their employees has been weakened somewhat,⁴⁸ which furthers the decline of traditional DB pensions.

Employers Have Imperfect Knowledge of Employee Preferences

Finally, it seems that many employers may have imperfect knowledge of their employees' preferences for pensions. While several surveys show that employees value DB plans quite highly⁴⁹—even higher than they value DC plans⁵⁰—it seems that many employers may be underestimating this preference.

A 2008 MetLife survey, for example, found that a full 72% of employees cited retirement benefits as an important factor in loyalty to the company. However, just 41% of employers agreed with this sentiment.⁵¹ If employers believe that employees do not value DB pensions—however incorrect this notion may be—they may not see a good enough reason, from a human resource perspective, to continue to offer such a plan—especially in light of the regulatory environment having become more onerous over time.

Public Sector Plans Have Endured Due to Differences Between Public and Private Sectors

It should be noted that while DB coverage has been gradually declining over the past decades in the private sector, DB pensions continue to be the dominant type of retirement plan in the public sector. In 2005, among U.S. workers with a workplace retirement plan, 98% of public sector employees had a DB pension, as compared with just 33% of private sector workers.⁵² The reason that the public sector has been able to maintain DB coverage is that each of the reasons for the private sector decline has little relevance to the public sector. First, the public sector has not been subject to the regulations which so drastically changed funding and accounting rules in the private sector.⁵³ Second, industry changes that occur in the private sector have limited bearing on public sector employment, as public sector jobs such as teaching, public safety, and law enforcement will be necessary no matter what changes are brought to bear in the greater economy. Finally, public sector employees are known to value their DB pension plans quite highly,⁵⁴ and some research has found that these workers are even willing to give up higher wages in order to maintain pension coverage.⁵⁵

Several Solutions Exist to Bring Pensions Back to the Private Sector

As mentioned previously, DB plans still make good sense for both employers and employees. Further, the reasons behind the private sector move away from DB plans have little to do with the underlying economics of pension plans themselves. As such, several solutions exist in order to bring pensions back to the private sector.

Create an Avenue for Third-party Sponsorship

Third-party sponsorship of a DB plan may be one way of encouraging participation, as it can significantly reduce employers' responsibility, while still providing a traditional DB plan for employees. For example, multi-employer plans in the private sector—as well as many pooled municipal retirement systems in the public sector—are administered by third-party sponsors, and these plans have been tremendously successful in both providing retirement benefits for employees, maintaining adequate funding levels for the plan, and minimizing the plan sponsorship burden on employers.

One possible way to incorporate third-party sponsorship more broadly has been developed by the ERISA Industry Committee. The New Benefits Platform for Lifetime Security would allow employers to choose between competing Benefit Administrators in order to offer retirement and other fringe benefits. These Benefit Administrators would assume the traditional role of plan sponsors, and would be organized on a geographic basis, with regional exchanges possible. The system would be open to both large and small employers in the public and private sectors, and would be governed by rules set by the Federal government.⁵⁶

Amend Federal Law and Regulations

Since sponsors of frozen DB plans cite volatility of funding and its effect on cash flow as the two the major reasons that the freeze was implemented, one clear solution would involve decreasing the volatility of plan funding. And because funding volatility has increased largely due to Federal regulations that have been implemented over the last several years, one way to decrease volatility would be to ease funding regulations on private plans. For example, if longer smoothing periods were reinstated, plans would have more time in which to make up for losses due to large market downturns. In fact, Weller and Baker find that smoothing asset valuations over a 20-year period would result in lower contributions, less volatility, and higher funding levels.⁵⁷ Longer smoothing periods could help to ensure that plan funding is not quite so subject to market swings, which could in turn encourage more employers to establish DB plans for their employees.

In fact, in June 2010 President Obama signed the Pension Relief Act of 2010, which enables plan sponsors to fill funding gaps more gradually than the requirements set out by the PPA. This legislation was designed to help private sector employers struggling to recover from the financial crisis. Specifically, the measure gave plan sponsors more time to fill funding gaps in the wake of the historic stock market drop.⁵⁸ The legislation received broad support in both houses of Congress,⁵⁹ which reflected a consensus that the current pension funding rules may actually hurt employers who are trying to do the right thing for their employees by continuing to offer traditional pension benefits and protecting their jobs.

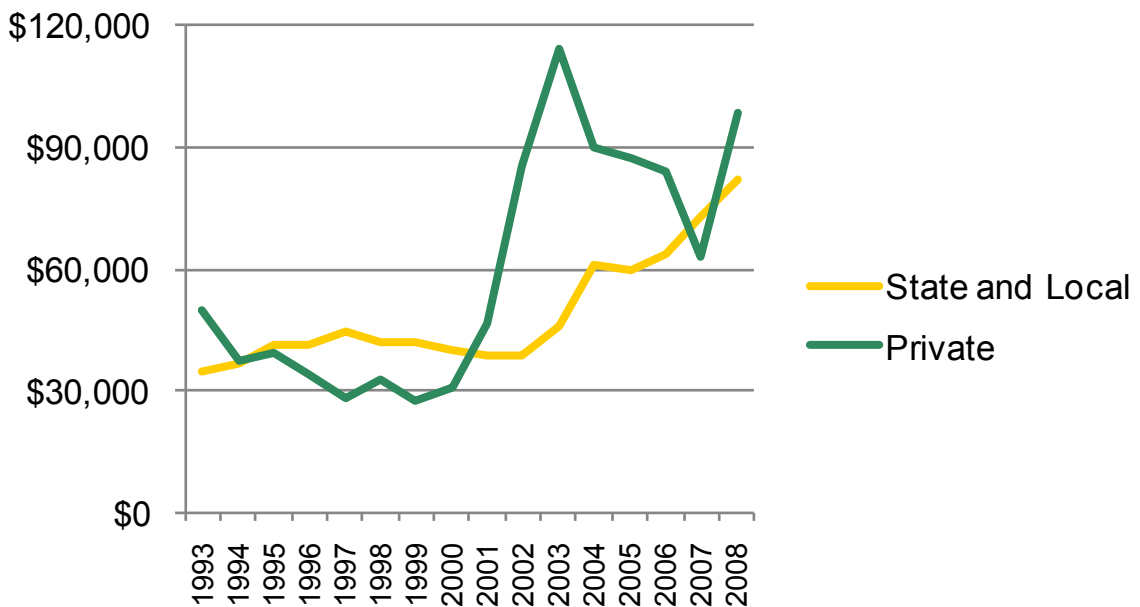
While the pension funding relief was welcome, it is only a temporary measure. Yet it may demonstrate that certain requirements of PPA did not meet their first real-world test. If the goal is public policy that encourages more employers to help employees build a secure retirement, what may be needed is a fundamental re-examination of pension law to encourage more funding predictability for employers.

Incorporate Employee Contributions

Another way to encourage private sector DB participation would be to incorporate employee contributions into these plans. As mentioned previously, most state and local DB plans already are employee contributory, which helps to ease the funding burden on employers somewhat.

Should a similar shared financing model be adopted in the private sector, the cost of the funding plan may become easier for the employer to manage. Figure 4 shows the employer contributions made to public and private sector pension plans between 1993 and 2008. The figure shows that contributions by private sector employers have been much more volatile than those of public sector employers. It also shows that private sector contributions must increase more dramatically during market downturns than public sector contributions. Employee contributions in the public sector may help to enable employers' contribution rates to remain both lower and less volatile than their private sector counterparts.⁶⁰

Figure 4. Employer Contributions to Defined Benefit Plans, By Sector, Billions, 1993-2008



Source: Munnell, A.H., Haverstick, K., and Soto, M. 2007. *Why Have Defined Benefit Plans Survived in the Public Sector?* State and Local Pension Plans Number 2. Chestnut Hill, MA: Center for Retirement Research at Boston College.

DB(k)

One element of the PPA authorized the creation of so-called “DB(k)” plans, beginning in January 2010. The DB(k), as its name implies, is a mixture of a lower-level DB benefit with a DC account, and is available to companies with fewer than 500 employees. The plan includes a DB portion, equal to 1% of final average pay for up to 20 years of each employee’s service, automatic enrollment and a default 4% employee contribution into the DC portion, and an employer match of at least half of the employee contribution, with a maximum required match of 2% of pay.

The DB(k) is seen by many as a way for employers to provide a certain modicum of retirement security through the DB benefit, while also incorporating employee contributions into the DC portion. The plan also enables companies to provide the benefits associated with both DB and DC plans, but without the additional costs and regulations associated with providing two different retirement plans.⁶¹ As Kiplinger put it, the DB(k) was “designed to repair a flaw in the current retirement system.”⁶² As the DB(k) is still relatively new, and the economy continues to stagnate somewhat in the wake of the Great Recession, it remains to be seen how many employers will take-up the DB(k) option.

Increase Portability of Benefits

Public opinion polling shows that while traditional DB plans remain quite popular among Americans, the public

does see the value in having a more portable retirement benefit.⁶³ Designing plans so that they are more portable as workers change jobs, especially within industries, can add to the value that employees—and, as a result, employers—see in these plans.

Multi-Employer and Public Pensions May Provide Workable Models

Two existing models that continue to provide DB coverage to many Americans—private sector multi-employer plans, and public sector DB plans—may shed some light on how best to bring broader pension coverage back to the private sector.

One model worth looking to may be private sector multi-employer plans. The Pension Benefit Guarantee Corporation defines a multi-employer pension plan as “a collectively bargained plan maintained by more than one employer, usually within the same or related industries, and a labor union.” These plans are jointly administered and governed by a board of trustees, which includes equal representation from employees and employers. Multiemployer pension plans currently cover over 10 million Americans.⁶⁴

Perhaps because they are so different in design and structure from single-employer private sector plans, multi-employer plans—though also in the private sector—are not under quite the same regulations as corporate pension plans. These plans are able to incorporate longer smoothing periods,⁶⁵ and as a result, see much less volatility in plan funding. An added benefit is that these plans offer more portability than traditional, single employer DB plans.⁶⁶ Generally, if an employee changes employers but stays within an industry covered by a multi-employer plan, that employee can stay within the same DB plan, with no penalties or lapses in coverage.

A second model may be found in the state and local pension universe. As mentioned previously, state and local workforces have maintained significant DB coverage, largely because the challenges that the private sector has faced are irrelevant to the public sector. Yet some aspects of the public sector DB system can be incorporated into the private sector world in order to expand coverage. For example, like the multi-employer plans, state and local DB plans maintain a much longer smoothing period than single-employer private plans. And again, this makes for much less volatility in plan funding, which is appealing to plan sponsors. Secondly, as mentioned previously, most public DB plans are employee contributory; on average, employees contribute 5% of payroll to the pension fund out of their own paychecks.⁶⁷ Incorporating employee contributions in the private sector could make the DB cost to the employer more manageable.

Conclusion: American Workers Need a Pension Renaissance

Although it may be challenging to implement these or other changes to encourage more DB participation in the private sector, the task is singularly important. The passage of the pension relief legislation was an important first step by the Federal government. But if the public policy goal is to encourage more employers to help employees build a secure retirement, then policymakers need to go beyond temporary measures.

DB pensions—along with Social Security and supplemental savings—still offer middle-class Americans the best chance at achieving a good modicum of retirement security.⁶⁸ For this reason, the United States could use a “Pension Renaissance.” Indeed, recent public opinion polling shows that a whopping 86% of Americans believe the U.S. retirement system is under stress and needs reform, and a full 83% of Americans believe that the government should make it easier for employers to offer traditional pension plans.⁶⁹ Policymakers should look at all available options to bring back DB pension plans to private sector workers.

References

1. Burr, B.B. 2011. GE closes DB plan for salaried employees. *Pensions & Investments*, January 18.
2. Munnell, A.H., Haverstick, K., and Soto, M. 2007. *Why Have Defined Benefit Plans Survived in the Public Sector?* State and Local Pension Plans Number 2. Chestnut Hill, MA: Center for Retirement Research at Boston College.
3. Employee Benefits Research Institute. 2007. *Facts from EBRI: Basics of the Pension Benefit Guaranty Corporation (PBGC)*. Washington, DC: Employee Benefits Research Institute.
4. Munnell, A.H., Soto, M., Webb, A., Golub-Sass, F., and Muldoon, D. 2008. *Health Care Costs Drive up the National Retirement Risk Index*. Issue in Brief No. 8-3. Chestnut Hill, MA: Center for Retirement Research at Boston College. And Munnell, A.H., Webb, A., and Golub-Sass, F. 2007. *Is There Really a Retirement Savings Crisis? An NRRI Analysis*. Issue in Brief No. 7-11. Chestnut Hill, MA: Center for Retirement Research at Boston College.
5. Almeida, B. 2008. *Retirement Readiness: What Difference Does a Pension Make?* Washington, DC: National Institute on Retirement Security.
6. Government Accountability Office. 2009. *Private Pensions: Alternative Approaches Could Address Retirement Risks Faced by Workers but Pose Trade-Offs*. GAO 09-642. Washington, DC: U.S. Government Accountability Office.
7. Almeida, B. 2008. Op Cit.
8. Porell, F., and Almeida, B. 2009. *The Pension Factor: Assessing the Role of Defined Benefit Plans in Reducing Elder Hardships*. Washington, DC: National Institute on Retirement Security.
9. Matthew Greenwald and Associates. 2011. *Pensions and Retirement Security: A Roadmap for Policymakers 2011*. Washington, DC: National Institute on Retirement Security.
10. Towers Watson. 2010. *Retirement Attitudes Part 1: Confidence in Retirement*. New York: Towers Watson.
11. MetLife. 2008. *Sixth Annual Study of Employee Benefits Trends. Findings from the National Survey of Employers and Employees*. MetLife, Inc.
12. Matthew Greenwald and Associates. 2011. Op Cit.
13. Ippolito, R.A. 1997. *Pension Plans and Employee Performance: Evidence, Analysis, and Policy*. Chicago: The University of Chicago Press.
14. Eitelberg, C. 2001. Public pension design and responses to a changing workforce. In: Mitchell, O.S., and Husted, E.C., eds. *Pensions in the Public Sector*. Philadelphia, PA: University of Pennsylvania Press, Pension Research Council, University of Pennsylvania.
15. Allen, S.G., Clark, R.L., and McDermed, A. 1993. Pensions, bonding, and lifetime jobs. *Journal of Human Resources*, 28(3), 463-481.
16. Even, W.E., and MacPherson, D.A. 1996. Employer size and labor turnover: the role of pensions. *Industrial and Labor Relations Review*, 49(4), 707-728.
17. Almeida, B., and Forna, W. 2008. *A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans*. Washington, DC: The National Institute on Retirement Security.
18. Hewitt Associates. 2008. *Survey Findings: Hot Topics in Retirement 2008*. Lincolnshire, IL: Hewitt Associates LLC.
19. McFarland, B., Pang, G., and Warshawsky, M. 2009. Does freezing a defined-benefit pension plan increase company value? Empirical evidence. *Financial Analysts Journal*, 65(4), 47-59.
20. McFarland, B., Pang, G., and Warshawsky, M. 2009. Op Cit.
21. Watson Wyatt. 2006. Marking to market: a second look. *Watson Wyatt Insider*, June.
22. Pension Benefit Guaranty Corporation. 2010. *PBGC Databook 2009*. Washington, DC: PBGC.
23. For a detailed summary of legislative and regulatory changes to private sector pensions and their effects, see Munnell, A.H., and Soto, M. 2007. *Why Are Companies Freezing Their Pensions?* Prepared for the 9th Annual Joint Conference of the Retirement Research Consortium, "Challenges and Solutions for Retirement Security," Washington, DC, August 9-10.
24. Clark, R., and McDermed, A. 1990. *The Choice of Pension Plans in a Changing Regulatory Environment*. Washington, DC: American Enterprise Institute.
25. Husted, E. 1998. Qualified pension plans and the regulatory environment. *Benefits Quarterly*, Fourth Quarter.
26. Towers Perrin HR Services. 2006. *The Pension Protection Act of 2006: Expected Impact on Retirement Plan Financing—and How Employers Are Likely to Respond*. Stamford, CT: Towers Perrin.
27. Kessler, E.K. 2009. *Constructing New Retirement Systems: Choosing Between Insurance and Investment, Choice and Default*. Prepared for presentation at the Pension Research Council Symposium. Schaumburg, IL: Society of Actuaries.
28. See also: Boivie, I., and Almeida, B. 2008. *Look Before You Leap: The Unintended Consequences of Pension Freezes*. Washington, DC: National Institute on Retirement Security.
29. Husted, E. 1998. Qualified pension plans and the regulatory environment. *Benefits Quarterly*, Fourth Quarter.
30. Munnell, A.H., and Soto, M. 2007. Op Cit.

31. National Institute on Retirement Security. 2010. *NIRS Conference Report: Raising the Bar: Policy Solutions for Improving Retirement Security*. Washington, DC: National Institute on Retirement Security.
32. McClendon, J.K. 2007. The death knell of traditional defined benefit plans: Avoiding a race to the 401(k) bottom. *Temple Law Review*, 80, 809-845.
33. Pension Benefit Guaranty Corporation. 2009. *PBGC Databook 2008*. Washington, DC: PBGC
34. Watson Wyatt. 2009. Pension freezes continue among Fortune 1000 companies in 2009. *Watson Wyatt Insider*, July.
35. Government Accountability Office. 2008. *Plan Freezes Affect Millions of Participants and May Pose Retirement Income Challenges*. GAO 08-817. Washington, DC: Government Accountability Office.
36. Towers Watson. 2010. *Towers Watson-Forbes Insights 2010 Pension Risk Survey*. New York: Towers Watson.
37. Hewitt Associates. 2003. *Survey Findings. Current Retirement Plan Challenges: Employer Perspectives 2003*. Lincolnshire, IL: Hewitt Associates LLC.
38. Government Accountability Office. 2009. *Defined Benefit Pensions: Survey Results of the Nation's Largest Private Defined Benefit Plan Sponsors*. GAO 09-291. Washington, DC: Government Accountability Office.
39. CFO Research Services and Towers Perrin. *A Qualified Commitment to DB Plans: Risk Management amid a Steep Downturn*. 2009. Boston, MA: CFO Publishing Corp.
40. Munnell, A.H., and Soto, M. 2007. Op Cit.
41. Government Accountability Office. 2009. Op Cit.
42. Ghilarducci, T., and Sun, W. 2006. How defined contribution plans and 401(k)s affect employer pension costs. *Journal of Pension Economics and Finance*, 5(2), 175-96.
43. *The Economist*. 2008. Falling short: The trouble with pensions. *The Economist*, June 12.
44. Munnell, A.H., Haverstick, K., and Soto, M. 2007. Op Cit.
45. Clark, R., and McDermed, A. 1990. Op Cit.
46. McClendon, J.K. 2007. Op Cit.
47. Munnell, A.H., and Soto, M. 2007. Op Cit.
48. Friedberg, L., and Owyang, M. 2004. *Explaining the Evolution of Pension Structure and Job Tenure*. NBER Working Paper. Cambridge, MA: National Bureau of Economic Research.
49. Ippolito, R.A. 1997. Op Cit.
50. Watson Wyatt. 2005. How do retirement plans affect employee behavior? *Watson Wyatt Insider*, April.
51. MetLife. 2008. Op Cit.
52. Munnell, A.H., Haverstick, K., and Soto, M. 2007. Op Cit.
53. Munnell, A.H., Haverstick, K., and Soto, M. 2007. Op Cit.
54. Peter D. Hart Research Associates. 2005. *Retirement Security Survey*. Washington, DC: Peter D. Hart Research Associates, Inc. And Commissioned by the Society of Actuaries, and conducted by Matthew Greenwald & Associates, Inc. 2004. *Retirement Plan Preferences Survey: Report of Findings*. Schaumburg, IL: Society of Actuaries.
55. Ippolito, R.A. 1997. Op Cit.
56. The ERISA Industry Committee. 2007. *A New Benefits Platform for Life Security*. Washington, DC: The ERISA Industry Committee.
57. Weller, C. and Baker, D. 2005. Smoothing the waves of pension funding: Could changes in funding rules help avoid cyclical underfunding? *The Journal of Policy Reform*, 8(2), 131-151. The authors also recommend averaging the benchmark interest rate over 20 years and requiring plan sponsors to fund pensions up to 120% of current liabilities.
58. Aon Consulting. 2010. *Retirement Insights: President Obama Signs DB Funding Relief into Law*. Washington, DC: Aon Consulting.
59. Halonen, D. 2010. Obama signs DB funding relief bill. *Pensions & Investments*, June 25. And Halonen, D. 2010. Senate approves pension funding relief. *Pensions & Investments*, March 10.
60. Munnell, A.H., Haverstick, K., and Soto, M. 2007. Op Cit.
61. Pitt, D. 2009. Hybrid retirement plan in the works. *The Washington Post*. November 15.
62. Pryde, J. 2009. The DB(k): Pension of the future. *Kiplinger*. August 19.
63. National Institute on Retirement Security. 2009. *Pensions and Retirement Security: A Roadmap for Policymakers*. Washington, DC: National Institute on Retirement Security.
64. Pension Benefit Guaranty Corporation. *Introduction to Multiemployer Plans*. Washington, DC: PBGC.
65. National Coordinating Committee on Multiemployer Plans. *Why 30 Years Is Appropriate*. Washington, DC: NCCMP.
66. Pension Benefit Guaranty Corporation. Op Cit.
67. Munnell, A., Aubry, J., and Muldoon, D. 2008. *The Financial Crisis and State/Local Defined Benefit Plans*. Chestnut Hill, MA: Center for Retirement Research at Boston College.
68. Almeida, B. 2008. Op Cit.
69. Matthew Greenwald and Associates. 2011. Op Cit.

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National Institute on Retirement Security is a nonprofit research institute established to contribute to informed policy making by fostering a deep understanding of the value of retirement security to employees, employers, and the economy as a whole. NIRS works to fulfill this mission through research, education, and outreach programs that are national in scope.



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