Issue Brief

10 Years After the Pension Protection Act: Effects on DB and DC Plans

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ABOUT NIRS

The National Institute on Retirement Security is a non-profit 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.

I. EXECUTIVE SUMMARY

The Pension Protection Act of 2006 (PPA) became law in 2006 with two goals regarding defined benefit (DB) pension plans: first, to promote better funding of private sector DB pension plans, and second, to help ensure the solvency of the Pension Benefit Guarantee Corporation (PBGC)—the independent government agency that insures private sector DB plans.

The PPA also made several important changes to defined contribution (DC) plans. The law clarified the use of automatic enrollment in DC plans and created several safe harbors for employers in order to encourage increased employee participation and to make it easier for employees to manage their own personal retirement accounts.

Ten years after the passage of the PPA, this paper analyzes the trends in both DB and DC retirement plans, in order to assess what effects the legislation may have had on these plans. We find that:

- For DB pension plans, an unintended consequence has emerged, in that employers are less and less willing to sponsor these plans and more employers have frozen existing plans.
    - Fewer and fewer employees are covered by traditional DB plans, the culmination of a decades-long trend that was accelerated by the PPA's increased funding requirements. The PPA moved to a market basis for funding, which increased both the plans' annual cost and cost volatility.
    - Congress has implemented several "stop gap" measures to address pension cost and volatility, but this temporary relief has not been enough to change the behavior of employers, who continue to freeze and terminate their plans.

- DC plans with automatic enrollment have seen some increased participation, but the overall changes are not enough to ensure adequate retirement security for most workers. Contribution rates are far too low, and perhaps even lower than they would be without auto-enrollment.
    - The share of working age households covered by any retirement plan fell from the high mark of 57.6 percent in 2001 to 51.3 percent in 2013.[1]
    - Contribution rates tend to be low—by design—and perhaps even lower than they would be without auto-enrollment. Even participants who increase their rates over time through auto-escalation features often do not end up saving enough to ensure an adequate retirement income.
    - Target date funds—the most common investment choice for those who are automatically enrolled—are associated with higher fees and a wide variance in risk exposure.
    - Employers who have replaced frozen DB plans with higher contributions to a DC plan contribute less to overall retirement than they did when they maintained the DB plan, which undermines retirement security.[2]

Thus, even with the "improved" automatic features of DC plans promoted by the PPA, DB pension plans still offer the best path to retirement security. It is unfortunate that the PPA had the unintended consequence of causing more and more DB plans to freeze or shutter. One solution would be to permanently ease the funding requirements—rather than continuing with the stop-gap measures that Congress has passed several times since the PPA[3]—to ensure DB plan sponsors more predictability and less volatility in their funding requirements.

II. GOALS AND INTENTIONS OF THE PENSION PROTECTION ACT

A. Defined Benefit (DB) Pension Plans: The Goal Was Better Funding

The Pension Protection Act of 2006 (PPA) was enacted with two goals regarding defined benefit (DB) pension plans: first, to help ensure the financial solvency of private sector DB pension plans, and second, to help ensure the solvency of the Pension Benefit Guarantee Corporation (PBGC), the independent government agency that oversees and insures private sector DB plans.[4]

First, in order to help ensure that plans would remain financially solvent, the PPA made annual funding requirements much stricter—for all plans, no matter their current funding levels—than they had been in the past. The law increased funding requirements in several ways. Namely:

- Plans' funding targets were increased from 90 to 100 percent;
- Amortization of funding shortfalls was cut from 30 years to seven years;
- More conservative funding assumptions were required; and
- The range of years employers may use to average interest rates to calculate the value of assets and liabilities was shortened from four to five years to just two years.[5]

In other words, the PPA moved private sector DB plans to a "market value" approach for the pension funding rules. These new rules were much stricter than they had been before the change in the law. The idea was that if plans calculate their cost based on current market interest rates, then they will be less likely to be underfunded in any given year. The goals were that: 1) should an employer become insolvent it would be less likely that pension plans would be underfunded and need to get taken over by the PBGC, and 2) should the plans need to be taken over by the PBGC, the stricter funding rules would ease the burden on the PBGC, as plans would be better funded than they would have been pre-PPA.

Since the Deficit Reduction Act of 2005 had increased PBGC premium rates for all plans somewhat substantially—from $19 to $30 per participant for single-employer plans, and from $2.60 to $8 per participant for multiemployer plans[6]—the PPA did not directly increase the premium rates that plan sponsors pay to the PBGC. However, in effect, premiums for many plans increased because the stricter rules made virtually all plans look more underfunded overnight,[7] and the PBGC bases its premiums partially on the level of plan underfunding.

Again, all of these changes were intentional, as policymakers thought that increasing funding requirements and premium rates would help ensure both the plans' and the PBGC's overall financial solvency.[8]

What is the PBGC?

The Pension Benefit Guarantee Corporation (PBGC) is the governmental entity that insures and administers terminations of private sector defined benefit (DB) pension plans. If the employer sponsoring the plan goes bankrupt, and the pension plan is too underfunded for the plan sponsor to pay out all of the benefits promised, the PBGC may take over the plan. When this happens, the PBGC takes all the existing assets of the plan, and is responsible to pay out the insured benefits to participants.

The PBGC is entirely self-funded, and does not rely on taxpayer money. All DB plan sponsors must pay the PBGC an insurance premium, based on the number of participants in the plan and whether the plan is currently underfunded. The only sources of income used to fund the PBGC—both in terms of paying out benefits and the administrative costs of operation—are the premiums collected each year and any interest gained on assets from terminated plans held by PBGC trust fund.

B. Defined Contribution (DC) Plans: The Goal Was Increased Participation and Easier Maintenance for Participants

The PPA also made several important changes to defined contribution (DC) plans. Research had shown that many employees intend to enroll in their company's 401(k) plan, but quite often do not do so, largely due to inertia.[9] The PPA sought to make both enrollment in a DC plan, and continued maintenance of the plan—in terms of increasing contribution rates over time and regularly balancing one's asset allocation—much easier for plan participants. This was done in several ways.

First, the PPA made "automatic enrollment" in a DC plan much easier for plan sponsors by clarifying that state wage withholding laws are preempted.[10] Automatic enrollment means that the default option for employees is that they are enrolled in the plan, rather than employees having to actively choose to enroll on their own. Research had shown that automatic enrollment could increase 401(k) plan participation.[11] However, the nature of automatic enrollment also means that the employer—not the employee—must choose default employee contribution rates, and a default initial asset allocation, since employees do not actively fill out paperwork to make their own choices.

In addition to this clarification, the PPA created two "safe harbors" based on using automatic enrollment for meeting nondiscrimination and fiduciary requirements for DC plans. If employers created DC plans offering specified provisions, they would satisfy all legal requirements. Specifically, the PPA created the following safe harbors for meeting the special nondiscrimination testing of employee and employer contributions in DC plans:

- The automatic contribution level for employees must be at least three percent in the first year, four percent in the second year, five percent in the third year, and six percent in all later years, but no more than 10 percent in any year.

- For employer contributions, employers must provide a 100 percent match on the first one percent of the employee's contribution, plus a 50 percent match on the next five percent, with a maximum match of 3.5 percent. Alternatively, if the employee does not elect to make a contribution, an employer can provide a contribution of three percent of an employee's salary.[12]

In terms of asset allocation, the PPA created another safe harbor, for companies to default participants into a "qualified default investment alternative" (QDIA). The final regulations of the law describe four different types of investment products that could qualify as a QDIA, of which the most commonly used is a "target date fund" (TDF), also called a "lifecycle fund."[13] In this type of fund, the asset mix is determined by the participant's age or anticipated retirement date. Most retirement experts would recommend that participants invest more in riskier investments (such as stocks and other equities) when they are younger and move to more conservative investments (such as bonds) as they get older.[14] TDFs are designed to rebalance automatically as the participant gets closer to retirement. In this way, a target date fund is meant to be easier for the participant to manage over time.

Again, these changes were designed to accomplish two goals: 1) Increase employee participation in DC plans, and 2) nudge employees to make "smarter" choices in their contribution and investment decisions in these plans.

III. 10 YEARS LATER: EFFECTS OF THE PENSION PROTECTION ACT

As discussed above, the PPA had several distinct public policy goals in terms of the financial strength and coverage of DB and DC plans. Ten years later, we can begin to assess how effective the law has been on the ground.

A. Outcome for DB Plans : Fewer and Fewer Employers Are Willing to Sponsor Plans

Unfortunately, for DB plans, the fallout from the PPA has not been very positive.[15] While the law may have had the commendable intention to make plans stronger, it ended up having the unintended consequence of pushing employers out of the system by freezing and terminating their pension plans.

a. **Higher underfunding and more volatility in contribution requirements have led to plan freezes.**

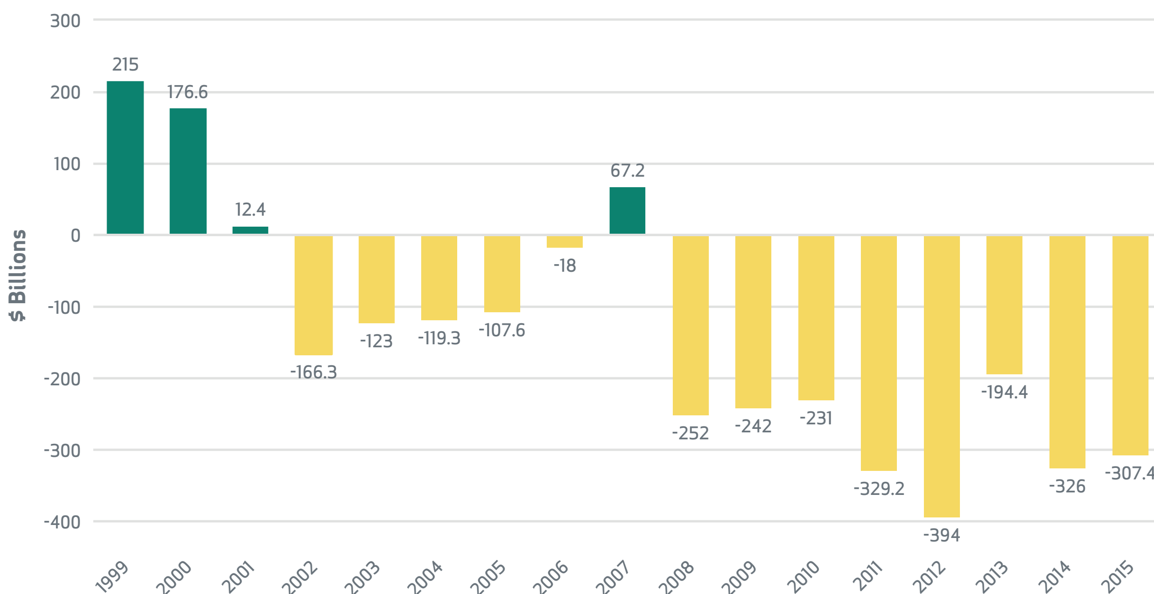
Researchers at Boston College have found that the PPA specifically caused pension funding to be much more volatile and contributions to be much less predictable.[16] Unfortunately, the timing of the law probably could not have been worse—the PPA went into effect just as the economy began to decline with the Great Recession starting in 2008. This immediately and drastically increased funding requirements due to the historical decline in interest rates and market value of DB plan assets.[17]

Yet the increase in liability continued even as the economy began to recover, and plan sponsors are still seeing far higher underfunding than they had in the past. The results are stark. Milliman reports that, since 2002, the only year that the 100 largest U.S. private-sector DB plans have seen an aggregate surplus was 2007; for every other year through 2015, plans have been significantly underfunded.[18] See Figure 1.

Looking at a larger group of employers, Mercer reports similar effects on the S&P 1500 pension plans from 2007 onward.[19] See Figure 2.

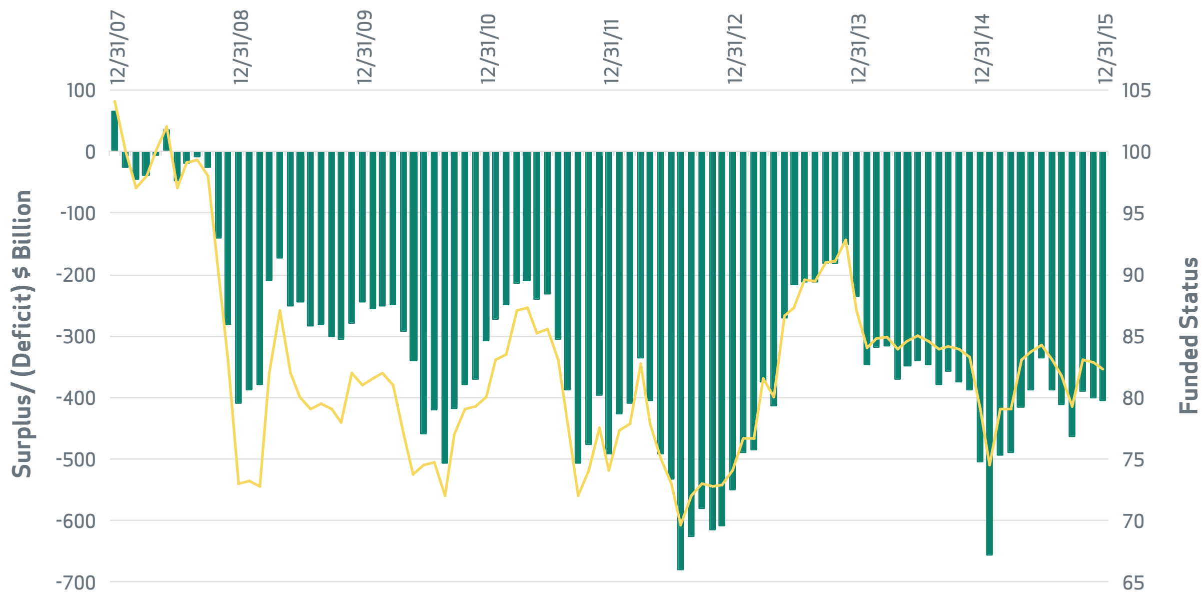
These increases in liability due to lower interest rates drastically increase plan costs across the board—no matter the financial

Figure 1: **Pension Funding Surplus/Deficit of the Milliman 100 Plans, 1999-2015**



Source: Milliman 2016 Corporate Pension Funding Study. http://us.milliman.com/PFS/

Figure 2: **Estimated Aggregate Surplus/Deficit and Funded Status of Plans in the S&P 1500, 2007**

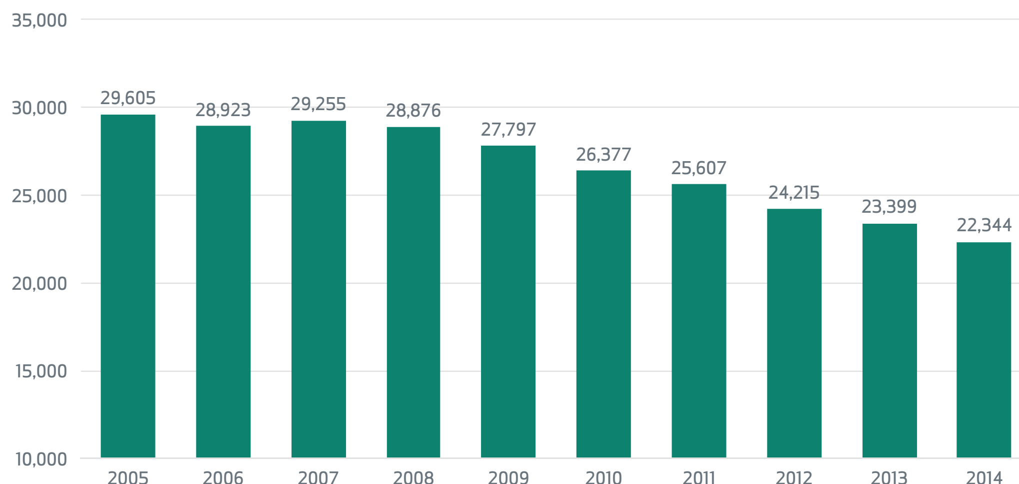


Source: Mercer. 2016. "S&P 1500 Pension Funded Status Increases by only 1 Percent in March Despite Strong Equity Markets Returns."

strength of each individual plan. This made it even more difficult for plan sponsors to continue their commitment to DB plans. Yu finds a distinct correlation between pension freezes and the amount of the plan's projected liabilities under the market-based approach of U.S. Generally Accepted Accounting Principles (GAAP) disclosure rules.[20]

As a result, more and more plan sponsors have decided to freeze and ultimately terminate their plans. While there were close to 29,000 plans in 2006 (the year that PPA passed), by 2014, that number had fallen to just over 22,000. See Figure 3.

Figure 3: **Total PBGC Insured Plans, 2005-2014**



Source: PBGC 2014 Databook.

Even among plans that still exist, more and more are "frozen," meaning that new hires are not able to participate in the plan, and, in other cases, that active participants can no longer accrue additional benefits even as they remain working. Figure 4 shows that the percentage of plan participants who remain "active" in the plan has consistently declined since the passage of the PPA.

Participants in PBGC insured plans as a percentage of the overall workforce has consistently declined as well. While in 1980, some 37 percent of private sector workers were covered by a pension plan, that number declined to 17.2 percent by 2006 and just 13.6 percent in 2014.[21]

Figure 4: **Percent of Active Participants in PBGC Insured Plans, 2005-2013**

Source PBGC 2014 Data Book

Table 1 shows the number of different ways that companies have been freezing their plans and shows that the trend toward freezing has been increasing over time.

b. Congress has implemented "stop gap" measures every year or two since the PPA.

Acknowledging almost immediately that the funding volatility was becoming a problem, Congress implemented "stop gap" measures to ease funding requirements as early as 2008—just as the PPA funding rules were going into effect. Yet each of the six laws that have eased the market value approach to DB pension funding has been temporary. As a result, Congress continues to revisit the rules, making additional temporary changes nearly every year or two and failing to provide employers a predictable, long-term solution.

Here is a summary of legislation enacted since 2006 to amend the PPA's funding formula:

The Worker, Retiree, and Employer Recovery Act of 2008:[22]

- Gave pension plans additional time to get to 100 percent funding, as PPA required.
- Allowed plans to look one year prior in order to determine whether they must comply with PPA's benefit restriction rules.
- Allowed multiemployer plans that were not in critical or endangered status in the previous year to retain this status for an additional year, and thereby avoid the additional plan funding requirements mandated by the PPA.

Table 1: **PBGC-Insured Plans by Status of Benefit Accruals and Participation Freeze, 2008-2013**

Beginning of Plan Year	With Accrual or Participation Freeze Provision					No Accrual or Participation Freeze
	Total With Provision	Hard-Frozen*	Accruals Continue, But Closed to New Entrants	Partially-Frozen and Closed to New Entrants**	Partially-Frozen and Open to New Entrants**	
2008	27.9%	21.0%	3.6%	2.0%	1.2%	72.1%
2009	33.6%	25.7%	4.2%	2.4%	1.4%	66.4%
2010	37.8%	29.3%	4.4%	2.6%	1.5%	62.2%
2011	39.9%	30.2%	5.3%	2.9%	1.5%	60.1%
2012	40.4%	30.5%	5.7%	2.8%	1.4%	59.6%
2013	39.6%	29.7%	5.8%	2.8%	1.4%	60.4%

* Hard-frozen plans are plans where no participants are receiving new benefit accruals for additional service or higher compensation.
**Includes plans where only service is frozen, or pay and/or service is frozen for some participants.

Source: PBGC 2014 Data Book, Chart S-36

- Allowed multiemployer plans in critical or endangered status an additional three years to improve their funding percentage per their funding improvement or rehabilitation plan.

The Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010:[23]

- Allowed plans to elect an extended amortization period of nine or 15 years in order to pay down unfunded liabilities, instead of the seven years required by the PPA.
- Eased minimum required contributions for certain underfunded charity benefit plans.
- Allowed multiemployer plans to elect alternative amortization plans and valuation methods to amortize investment losses incurred between 2008 and 2010.

Moving Ahead for Progress in the 21st Century Act (MAP-21):[24]

- Allowed plans to measure pension liability using the 25-year average of interest rates, plus or minus a corridor.
- Increased pension premium rates for both variable and flat rate premium paid to the PBGC and established a cap on the variable rate premium.

Highway and Transportation Funding Act of 2014 (HATFA):[25]

- Extended the time period for the allowable interest rates to be used under MAP-21 so that the minimum discount rate would not decrease as quickly.

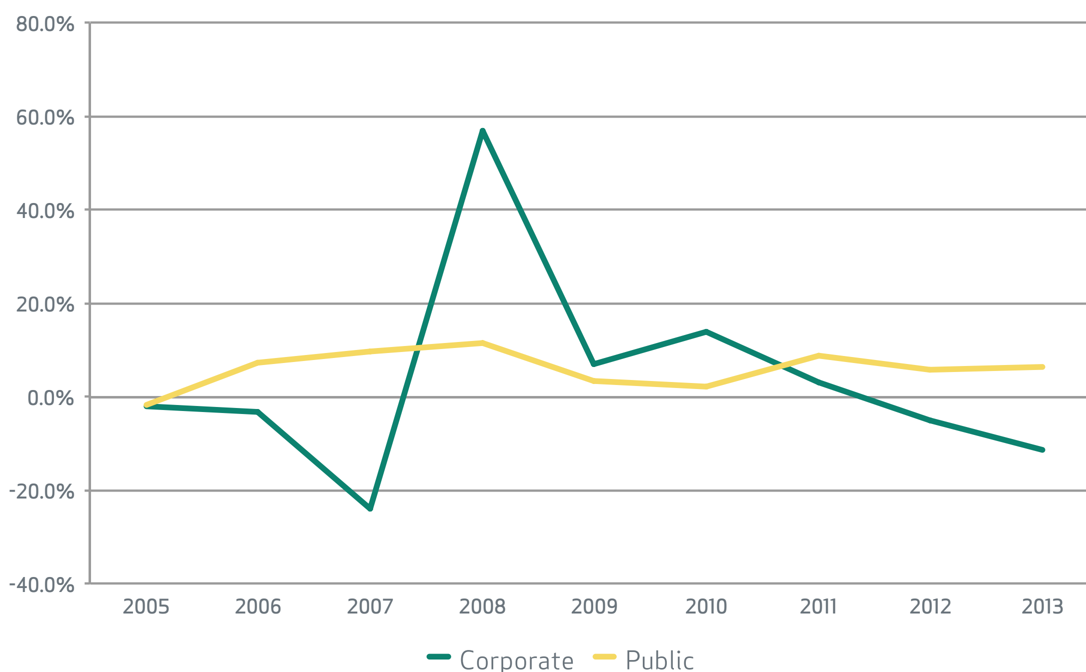
Tax Increase Prevention Act of 2014 (TIPA):[26]

- Extended the automatic extension of amortization periods for multiemployer plans through 2015.
- Extended the multiemployer plan rules relating to funding improvement and rehabilitation plans through 2015.

Bipartisan Budget Act of 2015:[27]

- Adjusted the interest rates used to calculate minimum funding contributions so that they fall within a range based on average interest rates over a 25-year period.
- Increased the PBGC fixed rate premiums for single-employer plans.

Figure 5: **Annual Change from Prior Year in Corporate and Public Sector Pension Contributions, 2005-2013**



Source: Compiled by the National Association of State Retirement Administrators, based on U.S. Department of Labor and U.S. Census Bureau data

Figure 5 illustrates the percent change in the pension contributions from the prior year. For corporate plans, contributions jumped nearly 60 percent in 2008; after that, the temporary fixes to the PPA's funding rules have helped to stabilize and, decrease the volatility of contributions rates. Unfortunately, since all of these laws are temporary in nature—meaning that the funding relief is always time-limited—they have not provided enough permanence or predictability to stop freezes from continuing to occur. Towers Watson, for example, found that the funding relief provided by the Preservation of Access to Care for Medicare beneficiaries and Pension Relief Act of 2010 was "quite modest given the substantial funding obligations ahead."[28]

On the other hand, Figure 5 also shows that public pension contribution rates have remained significantly more stable over this time period, as they were not subject to the same market-based funding rules as private plans.

c. PBGC premiums continue to increase as well.

In addition, since the PPA was passed in 2006, PBGC premiums have continued to increase. See Table 2. Of course, an increase in the premium rate—even if it is small—does increase annual costs to plan sponsors. Unfortunately, PBGC premiums are now often increased to provide a source of offsetting revenue to the federal government when Congress is considering legislation that is entirely unrelated to retirement security. This shifting of budget dollars raises employers' cost to operate a DB plan, but is not directly related to an impending solvency problem for the agency. In addition, PBGC premiums cannot legally be used to fund anything outside of the PBGC itself. The recently introduced bills with the title, The Pension and Budget Integrity Act of 2016[29] seek to change the budget rules to prohibit PBGC premiums from being counted as general revenue.[30]

d. Employers see cost volatility as the biggest barrier to continuing to sponsor DB plans.

There is compelling evidence that employers see cost volatility as the biggest barrier to continuing to sponsor DB plans. In 2008, the Government Accountability Office (GAO) conducted a survey of private plan sponsors who have frozen their DB plans. It

Table 2. **Current and Historical PBGC Premium Rates**

Plan Year	Single Employer Plans			Multi-Employer
		Variable-Rate Premium		
	Flat-Rate Premium	Rate per $1,000 in unfunded benefits	Per participant cap	Flat-Rate Premium
2007	$31	$9	N/A	$8
2008	$33	$9	N/A	$9
2009	$34	$9	N/A	$9
2010	$35	$9	N/A	$9
2011	$35	$9	N/A	$9
2012	$35	$9	N/A	$9
2013	$42	$9	$400	$12
2014	$49	$14	$412	$12
2015	$57	$24	$418	$26
2016	$64	$30	$500	$27

Flat-rate premiums for both single and multi-employer plans are per participant. They are charged to all private sector DB plans, regardless of funding level. Variable rate premiums are only charged to those plans with unfunded benefits.

Source: Pension Benefit Guarantee Corporation.

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.[31] 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.[32]

Also, a 2009 GAO study found that among some 26 percent of plan sponsors who would consider forming a new DB plan, the vast majority said they would do so if the plan funding requirements had more predictability and less volatility.[33] Finally, a 2009 survey of plan sponsors found that, of those employers who remain committed to their DB plans, a full 70 percent would reconsider this commitment should accounting rules or other regulations become more burdensome than they already are.[34]

In analyses of the possible reasons behind pension freezes, researchers have found mixed reactions to cost savings. Munnell and Soto found that firms are not motivated by any short-term cost savings that may come from freezing a plan.[35] Rauh, Stefanescu, and Zeldes found that firms that froze plans faced on average at least 50 percent higher accruals as a share of the firm than plans that did not freeze.[36] Ultimately, as federal regulations—culminating with the PPA—have made plan funding much more volatile over the years, DB plans have become less and less attractive to plan sponsors.

B. Outcome for DC Plans: Increased Participation, But Effects on Overall Retirement Security Are Questionable

In the ten years since the PPA was adopted, the effect on DC plans has been a mixed bag. While many employers have adopted automatic enrollment,[37] and more plans offer "participant friendly" TDFs,[38] these changes may not be strengthening retirement security overall, or even for individual participants.[39] This is especially true for older workers whose DB plan benefits have been frozen or terminated mid-career, as the replacement DC plan offered does not nearly make up for the loss of the traditional pension.

Employers have been increasingly using automatic enrollment in DC plans and automatic escalation of contribution rates, since the passage of the PPA.[40] On its face, this seems like it would

boost retirement security for participants. However, this is not necessarily the case, for several reasons:

- Overall retirement coverage has not increased.
- Most auto-enrollment plans have very low default contribution rates, and employees tend not to change from the default rate.
- Employees that are automatically enrolled tend to be enrolled into TDFs. Some of these funds are associated with relatively higher fees, and they can vary widely in risk exposure, which can reduce long-term returns.
- While auto-escalation features help to increase contribution rates over time, contribution rates overall are still too low to provide adequate retirement security.
- Companies are not necessarily incentivized to increase default contribution rates and auto-escalation rates, because that would often mean an increase in their own matching contributions, which increases overall costs.
- For companies that froze or terminated their DB plans, the increased contribution rates to the DC plan did not nearly compensate for the loss of the pension income.

a. Overall retirement plan participation has not increased.

Since the PPA, far more employers offer automatic enrollment, especially to new hires. The percentage of plans that used automatic enrollment was just 10 percent in 2006, and increased to 41 percent by 2016. Automatic enrollment does seem to increase participation at the individual employer level—more than 75 percent of eligible employees participated in their plan in 2016, on average, as compared to 66 percent in 2006.[41]

However, overall retirement plan coverage has not increased dramatically since the passage of the PPA. In fact, access to a workplace retirement plan reached its highest rate in 1999, at 61.9 percent of working-age private-sector workers (seven years prior to the PPA), but declined slightly every year since then, to 54.5 percent by 2013 (seven years after the PPA's passage).[42] The decline in access to workplace retirement plans is also reflected in the decline in share of working age households covered by any retirement plan, which fell from the high mark of 57.6 percent in 2001 to 51.3 percent in 2013.[43]

This may be partly due to the fact that many companies who adopt automatic enrollment do so only for newly hired employees[44] —which means that existing employees who have not explicitly opted into the plan largely remain uncovered.

b. Most plans have very low default contribution rates.

Most retirement experts recommend that the DC savings rate should be around 15 percent of salary each year to ensure adequate retirement security.[45] However, the most common initial default automatic enrollment employee contribution rate is three percent; some two-thirds of plans have a default rate of three percent or less.[46] The default contribution rate is significant, because most participants tend to stick with the default rate. This is because many participants see the default rate as implicit advice on how much they should be saving, while this of course is not necessarily the case.[47] In fact, some evidence suggests that many participants who accept the default rate would have chosen a higher savings rate if they had made an active choice to participate in the plan.[48] Moreover, a three percent default contribution limits the number of employees who would be eligible for the full employer match, which in most 401(k) plans is reached when an employee contributes 6 percent of salary (at a 50 percent match).

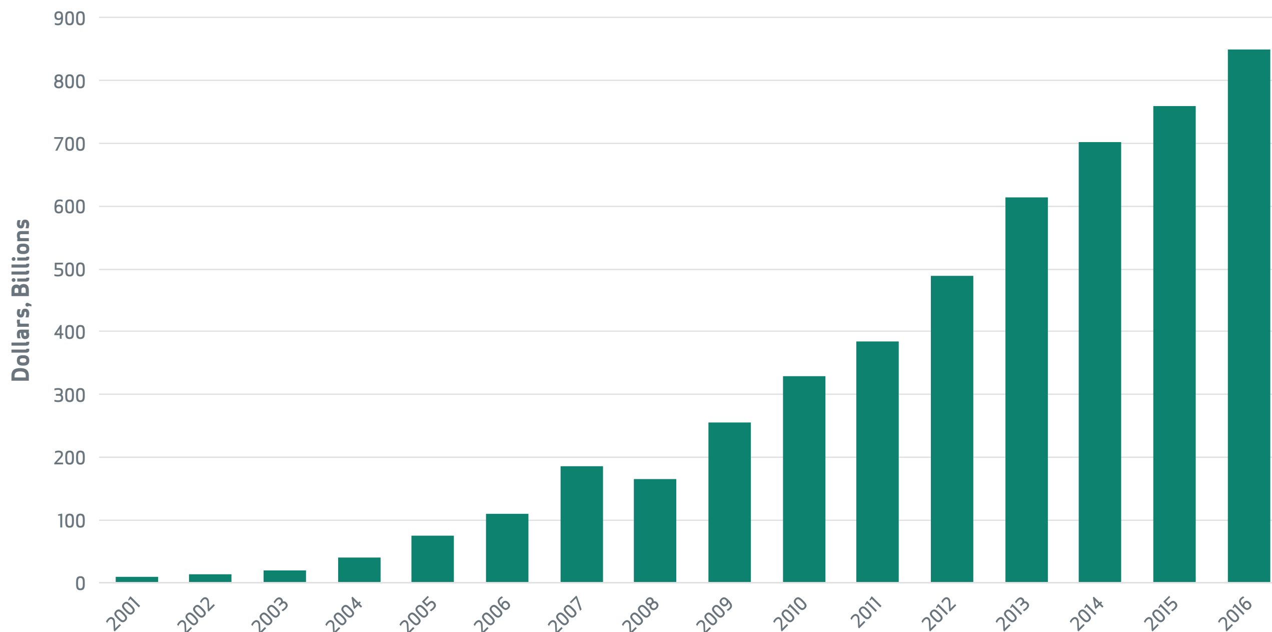
For this reason, some experts are beginning to see automatic enrollment as a "double-edged sword," in the sense that it is effective at getting more people to join the plan but leads to a lower overall average savings rate.[49]

c. Target date funds can limit long-term returns.

Among the several default investment safe harbors (QDIAs) created by the PPA, the most commonly used is a TDF. This type of investment is designed to be diversified in an age-appropriate way—meaning that the younger the participant is, the more they are invested in higher-risk equity funds, and as the participant ages, the fund automatically rebalances towards lower-risk fixed income investments.

In 2016, 73 percent of plans used TDFs, as compared with just 32 percent of plans in 2006.[50] And the vast majority of employees who are automatically enrolled into their retirement plan are invested in a TDF.[51] As mentioned earlier, the default investment is important, because employees tend to stick with the default that they are given.

Figure 6. **Total Assets Under Management in TDFs, 2001-2016**



Source: Morningstar via The Wall Street Journal

Indeed, since the passage of the PPA, the use of TDFs has skyrocketed the value of funds in TDFs from just over $100 billion in 2006 to roughly $850 billion in 2016. See Figure 6.

Yet TDFs are often far from an ideal investment. These funds can be associated with higher fees[52] and can vary widely in risk exposure,[53] which can reduce long-term returns.[54]

Morningstar tracks more than 2,200 TDFs and found that in 2016, the average expense ratio for these funds was 0.903 percent. But fees do not need to be nearly this high—Vanguard, for example, has TDFs with fees of just 0.16 percent.[55]

Fees matter because each additional dollar that is paid out in fees comes out of the participant's plan balance and does not gain compound interest. The Joint Committee on Taxation (JCT) calculates that over the course of 20 years, at a six percent annual return, an employee who contributes $5,000 per year and pays two percent in fees will receive $20,000 less in her retirement account than a participant paying one percent.[56]

Another issue with TDFs is that they can vary widely in risk exposure. As mentioned previously, a fund is chosen based on the participant's age or anticipated retirement date. Presumably, there could be a baseline asset allocation based on the level of risk that is appropriate for that participant at that particular point in their career. But currently, no real baseline exists—so two target date funds can have very different risk exposures for two participants of the same age with the same anticipated retirement date.[57] Therefore, employees defaulted into a TDF may not fully understand the level of investment risk associated with that particular fund.

This is potentially problematic because it can mean that participants far from retirement might be invested more conservatively than they should be, and that participants very close to retirement could be exposed to much higher risk than they should be, or that they are even aware of. For example, when the stock market crashed in 2008, nearly all investments saw a loss, including TDFs. But there was a huge discrepancy in the extent of the losses among TDFs, especially for those close to retirement. TDFs designed for those retiring in 2010 saw losses of anywhere from 3.5 to 41.3 percent.[58] Clearly, these funds had very different risk exposures, which meant very different outcomes for the participants' retirement prospects.

d. Even with auto-escalation, contribution rates are still largely inadequate.

The PPA made it easier for companies to offer auto-escalation of contribution rates in their plan design, and many companies adopted this feature after 2006. T. Rowe Price found that over 90 percent of companies with automatic enrollment, and 75 percent of plans without automatic enrollment, provide an automatic escalation feature. In addition, nearly half of plans that offer an automatic increase automatically enroll participants in the service.[59]

While auto-escalation features help to increase contribution rates over time, contribution rates overall are still too low to provide adequate retirement security for most participants. Nearly all plans that use auto-escalation provide an annual one percent increase in the contribution rate.[60] However, many experts believe that an annual increase of two percent is needed for stronger retirement security, and that a two percent automatic increase could be adopted without disincentivizing participants from continuing in the service.[61]

e. Companies are not incentivized to increase these defaults.

Research shows that participants see the defaults as an implicit employer recommendation of those rates, and are thereby much more likely to stick with them. To that end, companies could strengthen their employees' retirement security by increasing these defaults—both the initial automatic enrollment rate and the rate at which contributions escalate each year. However, most companies have not been doing this, even as more and more research shows that 401(k) contributions are inadequate.

The reason for this may be because companies have no real incentive to increase these defaults. First, employers do not necessarily have a financial interest in ensuring that their employees can fully fund a 20- or 30-year retirement, since once they retire, they are no longer employed by the company. Second, employees do not realize that the default rates are too low, and therefore increasing the rates would not necessarily boost employee morale or company loyalty.

On the other hand, companies could have a significant financial incentive to keep the defaults low—because often, company contributions are tied to the employee contribution rate through a "matching" structure. Under this type of plan design, the more employees that participate in the plan, and the higher their contribution rates are, the more the employer must contribute, so the employer's overall retirement costs increase. The Urban Institute has found that employers with auto-enrollment tend to have lower match rates than employers without auto-enrollment, which they see as a "rational response by profit-maximizing firms" for this reason.[62]

f. Auto-features and even increased contribution rates have not adequately compensated for the decline of DB pensions.

Companies have been freezing and terminating their DB plans for quite some time. Many of these firms have increased contribution rates to their DC plans in order to compensate for the loss of the pension accruals. However, these increased DC contribution rates do not nearly come close to making up for what was lost in pension income.

For example, the Employee Benefits Research Institute (EBRI) has found that firms that froze their DB pension plans between 2005 and 2009 increased their DC contributions by 2.45 percent, and those that closed the plan to new hires increased DC contributions by 3.34 percent.[63] Considering that the average private-sector DB pension contribution had been well above that amount (roughly eight percent of pay in 2006),[64] this is clearly a net loss in terms of overall retirement benefits provided by employers.

Quantifying the reduction in retirement costs private employers have experienced, Ghilarducci and Sun have found that a 10 percent increase in the use of DC plans reduces employer retirement costs per worker by 1.7 to 3.5 percent.[65] When considering the impact of pension plan freezes on employer costs, Rauh, Stefanescu, and Zeldes found that freezing saves firms 3 percent of total payroll in the first year, and the equivalent of 13.5 percent of the long-horizon payroll of current employees, even after adjusting for corresponding increases in contribution DC plans. Specifically, they find that these savings arise in large part because firms renege on implicit contracts to provide older workers the higher pension accruals available under DB pensions later in their careers.[66] Pension freezes hit older and more senior workers especially hard, and their ability to adjust retirement savings levels to compensate for lost benefits can leave a sizeable gap in retirement preparedness.

IV. CONCLUSION: THE PPA'S OVERALL EFFECTS ON RETIREMENT SECURITY ARE NEGATIVE TO MIXED AT BEST; MORE CAN BE DONE TO ENCOURAGE EMPLOYER SPONSORSHIP OF DB PLANS AND MORE ROBUST DC PLANS

Ten years after the passage of the PPA, DB plans still offer the best path to retirement security, even with the "improved" auto features of DC plans. Unfortunately, while the PPA tried to fix some issues in the retirement system, it inadvertently made the problems worse for DB plans without providing a comprehensive solution for DC plans. The end result is a system that is skewed against traditional pensions—which is unfortunate, as these are the only plans that provide real retirement income security.

For example, EBRI finds that the probability of an individual not running out of money in retirement increases by 11.6 percent if they are still able to participate in a DB plan through age 65.[67] In addition, retirees with pensions are nine times less likely to be in poverty than those without DB pension income.[68]

It is extremely unfortunate that more stringent, market value-based DB plan funding rules in the PPA—coupled with the incredibly bad timing of the law going into effect just as the Great Recession hit—fostered the unintended consequence of causing more and more DB plans to freeze and terminate. Meanwhile, the law's best intentions for DC plans have helped to increase enrollment in these plans somewhat, but overall participation in retirement plans by working Americans remains low, and the DC saving rate is significantly less than what is needed to adequately prepare for retirement.[69]

Research by Eriksson concludes that "PPA diverts money away from defined-benefit pension plans and into defined-contribution plans."[70] A number of individuals involved in the crafting of the PPA have even suggested that, in the end, the law may not have struck the correct balance.[71]

Since DB plans are still the best way to achieve retirement security, changes should be made to the PPA and pension funding rules to ensure plan sponsors more predictability and less volatility in their funding costs. These measures should be done permanently—not on a temporary or ad hoc basis, as has been the case since the PPA's passage—so that plan sponsors are able to predict and budget for pension costs on a longer-term basis.

For example, if longer smoothing and amortization periods were reinstated, plans would have more time in which to make up for investment losses due to large market downturns. Weller and Baker find that smoothing asset valuations over a 20-year period would result in lower contributions, less volatility, and higher funding levels.[72]

Indeed, in contrast to the decline of pensions in the private sector, public retirement systems have continued to provide DB pensions for a significant majority of public employees. Because these plans have not been forced to adopt market-value funding parameters like those of the PPA, these systems overall have been able to weather the Great Recession without freezing or terminating their traditional pensions.[73]

Finally, passing The Pension and Budget Integrity Act of 2016 would halt the practice of increasing plan sponsors' pension costs for unrelated reasons, thus eliminating another obstacle in the continuation of private sector pensions.

These measures could help encourage more employers to maintain existing DB plans for their employees, and perhaps even consider establishing new plans.

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