American Academy of Actuaries

Issue Brief

The Pension Protection Act: Successes, Shortcomings, and Opportunities for Improvement

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KEY POINTS

- In order to be successful, a pension funding system must carefully balance the competing goals of benefit security (represented by the solvency principle) and predictability of contributions to support plan sponsors in managing the short- and long-term financial needs of their businesses.
- Since the passage of the PPA, lower interest rates have driven liability growth, increasing the contributions needed to meet minimum requirements or avoid benefit restrictions. This exposed the limits to the funding flexibility provided by the PPA, which led to changes in the funding rules that have weakened the solvency objective.
- The PPA's greatest success may be in addressing the potential for moral hazard, while lack of simplicity in the way it has been enacted may be its greatest shortcoming.
- Policymakers can better align the post-PPA single-employer funding regime with the seven principles of funding reform by creating incentives for plan sponsors to fund their plans, improving the predictability of contributions, and reducing the regulatory burden on plan administrators by simplifying the regulatory structure.

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Introduction

The American Academy of Actuaries' 2005 analysis of pension reform options[1] provided a principle-based direction for revamping the single-employer pension plan funding rules, with a focus on improving the funding level and benefit security of defined benefit pension plans. The Pension Protection Act of 2006 (PPA) subsequently was signed into law in August 2006, with its provisions taking effect for most single-employer plans in 2008. Since its enactment, the PPA has been amended on several occasions, deferring the increases in minimum funding requirements for private pension plans that resulted from economic conditions in 2008 and later years.

This issue brief analyzes the PPA and its subsequent amendments against the principles underlying funding reform discussed in the 2005 paper. These principles remain relevant for evaluating single-employer pension funding plans and periodic changes made to those plans. This paper also suggests several modifications to the funding rules to bring them into closer alignment with the principles, thereby improving the PPA's effectiveness in promoting pension plan solvency over the long term. Though our analysis primarily focuses on single-employer plans, many of the concepts also could serve as a framework for analyzing potential future changes to the funding of multiemployer[2] and public sector pension plans.

1 *Pension Reform for Single Employer Plans*, published by the Pension Practice Council in February 2005.

2 The American Academy of Actuaries also published an issue brief in January 2005 titled *Principles of Pension Funding Reform for Multiemployer Plans* that outlined principles for reforming pension funding rules for multiemployer pension plans. While many of the concepts outlined for multiemployer plan funding parallel those for single-employer plans, the two Academy documents reflect the differences in the characteristics of these two types of private-sector pension plans.

Executive Summary

The primary objective of pension funding is to ensure benefit security, for which a plan's funding ratio is used as a proxy. However, predictability of contributions is important to employers that must address their financial commitments to pension plans while also managing the short- and long-term financial needs of their businesses. In order to be truly successful, any pension funding system must carefully balance these two potentially competing goals.[3]

The PPA balances the goal of funding toward *solvency*[4] with sponsors' need for funding *flexibility* by setting a plan's target funding level with reference to market conditions and permitting short-term smoothing. This is intended to afford plan sponsors time to budget for upcoming contribution requirements while buffering against the shocks resulting from capital market events. Sponsors are also provided—at least in theory—with the ability to contribute in advance of requirements, thus creating funding cushions that can be utilized when economic downturns or business needs make contributing more difficult.

Since the passage of the PPA, a combination of the economic environment and U.S. budget constraints have created significant challenges. Lower interest rates have driven liability growth that often outpaced asset growth, which increased the contributions needed to meet minimum requirements or avoid benefit restrictions, exposing the limits to the funding flexibility provided by the PPA. These factors have, in turn, led to changes in the funding rules that have weakened the solvency objective.[5]

An effective funding structure will provide *incentives to fund* voluntarily to a level that maintains *solvency* and provides an appropriate cushion against adverse deviation. The PPA funding rules facilitate, to some degree, hedging strategies that would help address contribution *predictability* (for example, in response to capital market events outside the control of the plan sponsor); however, sponsors have been reluctant to take advantage of such strategies at a time when interest rates are perceived to be low.

The PPA attempted to increase *transparency* by requiring targeted disclosures regarding plan funding to plan participants and other key stakeholders. Although these disclosures provide important information regarding plans' financial health, they still are opaque to many participants. Improving the comparability of information from year to year could help participants better understand how a plan's funding levels affect benefit security.

3 Although this issue brief addresses issues specific to single-employer defined benefit plans in the private sector, this same tension among competing objectives also is seen in the public sector. Considerations for funding public-sector pension plans are addressed in the Academy's February 2014 issue brief, *Objectives and Principles for Funding Public Sector Pension Plans*.

4 Throughout this discussion, references to the key principles from the original paper are *italicized*.

5 The Workers Relief and Employer Recovery Act of 2008 (WRERA) was enacted shortly after PPA took effect and phased in the PPA funding target over four years to reduce required contributions for underfunded plans in response to the 2008 capital market losses. The Pension Relief Act of 2010 (PRA) was enacted to provide funding relief to plan sponsors by offering the ability to extend the amortization period of funding shortfalls incurred for plan years 2009 through 2011 (with only two of those years eligible for relief) to as long as 15 years. In July 2012, Congress attempted to further alleviate this situation by including pension provisions in the Moving Ahead for Progress in the 21st Century Act (MAP-21), prescribing use of a higher interest rate for a number of regulatory purposes over the next several years. However, during 2014 interest rates continued to decline. In response, Congress enacted a five-year extension of the MAP-21 provisions with the Highway and Transportation Funding Act of 2014 (HATFA). In late 2015, Congress passed an additional three-year extension of the MAP-21/HATFA interest rate stabilization provisions as part of the Bipartisan Budget Act of 2015 (BBA).

The PPA's benefit restriction provisions have significantly constrained plan sponsors from improving or accelerating the payment of benefits in underfunded plans, while providing mechanisms for those plans to avoid restrictions by improving their plan's funded level. But while addressing the potential for *moral hazard* may be one of the PPA's biggest successes, lack of *simplicity* may be its greatest shortcoming. At a primary level, the liability calculation method, amortization rules, and contribution requirements appear straightforward. But other provisions, such as the at-risk rules and the rules related to funded-status certifications, make valuations and plan administration much more complex. The provisions of subsequent funding relief legislation[6] have added further complexity.

The Academy's Pension Committee has identified three areas of focus for further legislative and regulatory action to better align the post-PPA single-employer funding regime with the seven principles of funding reform:

- create incentives for plan sponsors to fund their plans to a level sufficient to meet all benefit promises to promote *solvency* and reduce the risk of *moral hazard*;
- improve the *predictability* of contributions for plan sponsors to ease what for some employers may be an impediment to plan sponsorship; and
- reduce the regulatory burden on plan administrators by *simplifying* the regulatory structure, without increasing potential *moral hazard*.

Seven Principles of Funding for Single-Employer Plans

In order to assess the PPA against the seven principles described in the Academy's 2005 paper, we first need to understand each of those principles and its intent:

Solvency: The funding rules should move plans to a point where assets cover the market value of accrued benefit liabilities (ABL) within a reasonable time period.

Predictability and hedgeability: Contributions should be more predictable so they can be budgeted in advance. The funding rules should:

- encourage better financial risk management by accommodating plans with risk hedging strategies such as immunized bond portfolios so their contributions are more predictable.
- accommodate business/economic cycle planning by allowing greater contributions in good years, so contributions can be reduced in difficult years.
- moderate contribution volatility so that contributions do not change radically due to small or moderate changes in assets or interest rates.

Incentives to fund; flexibility: Sponsors should be able to fund and deduct the unfunded ABL at year-end or anytime. They should be encouraged to fund their plans better by: 1) allowing them to build up funding margins in good years, without deductions and excise taxes; and 2) allowing them access to "super-surpluses" for other purposes, such as employee health benefits, without incurring the reversion tax.

Avoidance of moral hazards: The rules should not facilitate weak employers to improve benefits (or take large risks) at the expense of another stakeholder (e.g., the Pension Benefit Guaranty Corporation [PBGC], its premium payers, U.S. taxpayers, or current and future employees).

Transparency: Users of the information provided (e.g., employees, employers, investors, and the PBGC) should be able to understand the financial position of the pension plan and its effect on the plan sponsor.

Simplicity: The rules should be easier to follow and understand.

Transition: Sponsors need smooth transitions, including adequate time to implement new rules.

6 WRERA, PRA, MAP-21, HATFA, and BBA, as discussed previously.

We believe that the stated principles remain relevant for considering the decisions made in drafting the PPA and subsequent legislation. The remainder of this issue brief analyzes the experience of single-employer defined benefit plans since its enactment.

PPA Scorecard—How Well Has It Performed?

The PPA represents an ambitious attempt to overhaul an incredibly complex defined benefit funding system. Of course, no change of this magnitude can achieve perfection or satisfy all stakeholders' competing objectives. The challenge is in choosing the best compromise from an array of not-quite-optimal alternatives.

The PPA's provisions advanced each of the seven principles to some extent, with some addressed more effectively than others. In this section, we evaluate the PPA's effectiveness in light of each principle, identifying the PPA's successes as well as areas of weakness where potentially it could be improved.

In making these determinations, we consider:

- How well has the PPA addressed each principle?
- Has the right balance been achieved among the principles?
- What are the PPA's most notable successes and shortcomings?

Solvency

The funding rules should move plans to a point where assets cover the market value of ABLs within a reasonable period of time.

The PPA defines the target funding level in terms of market-based asset and liability measures with (allowable) short-term smoothing. This drives plan sponsors toward funding to solvency while still providing some buffer against market shocks, affording a period of time to budget for upcoming contribution requirements. The annual deduction limit allows for funding to a level that includes a margin to protect against adverse deviation.

Successes
The stated amortization period for unfunded liabilities is seven years for all sources of change (e.g., plan amendments, actuarial assumption and method changes, and gains or losses).
Plan sponsors are permitted to deduct up to 150 percent of the liability target, plus an allowance for future compensation increases with respect to past service of plan participants, so as to remove tax disincentives to advance funding.
Poorly funded plans are restricted from using funding balances in lieu of cash contributions to cover contribution requirements.
The addition of a required expense load to the target normal cost makes funding for plan expenses more transparent, thereby helping prevent the erosion of plan assets.

Shortcomings
The smoothing of asset values and discount rates means that the effective amortization period is actually much longer than seven years (especially after the enactment of MAP-21, HATFA, and BBA).
In the current interest rate environment, the modified interest-rate basis enacted by MAP-21 (based on an expanding corridor around the 25-year average of interest rates) and extended by HATFA and BBA is insufficient to settle a pension plan's benefit obligations as of the valuation date or fund those obligations with a low-risk investment portfolio.
Although the PPA includes special at-risk rules requiring accelerated funding for poorly funded plans, those rules ignore relevant factors beyond the plan's funded status, such as the financial status of the plan sponsor, the size of the plan relative to the plan sponsor, and the investment allocation of plan assets. These other factors can influence the likelihood of an underfunded plan becoming solvent or of a well-funded plan remaining solvent.
Because the ability to use funding balances is based on the prior year's funded status, a plan that is currently poorly funded can still avoid making contributions. (And, vice versa, a plan that is now better funded might be prohibited from using funding balances.) Thus, the use of funding balances by plan sponsors still can contribute to a short-term decline in funding levels.
The amount of plan underfunding, if any, is amortized, while the amount of any plan surplus is immediately applied to offset the cost of current service accruals. In some cases, this discontinuity could complicate long-term planning, resulting in a bias toward plan underfunding.

Predictability and Hedgeability

Contributions should be more predictable so they can be budgeted in advance. The funding rules should:

- encourage better financial risk management by accommodating plans with risk hedging strategies such as immunized bond portfolios so their contributions are more predictable.
- accommodate business/economic cycle planning by allowing greater contributions in good years, so contributions can be reduced in difficult years.
- moderate contribution volatility so that contributions do not change radically due to small or moderate changes in assets or interest rates.

Under the PPA, pension funding is based on a liability target discounted at a very recent average of corporate bond yields and amortization of unfunded liabilities over seven years. Minimum funding requirements are calculated as of the beginning of the year and are not due in full until 20.5 months later, although some underfunded plans may require additional contributions as early as three months into a plan year to avoid triggering funding-based benefit restrictions. More recent changes enacted under MAP-21, HATFA, and BBA moved away from market principles by introducing near-term stability in interest rates.

Successes
Use of a 24-month average of interest rates (with the option to utilize a look-back period) provides at least some advance warning of interest rates changes. The interest rate corridor introduced by MAP-21 (and extended by HATFA/ BBA) is based on a 25-year average of segment rates and adds considerable discount rate certainty for the near term.
Use of the full yield curve (averaged over the month prior to the valuation date) for discounting cash flows enhances plan sponsors' ability to use their investment strategy as a hedge against discount-rate-driven changes in their funding target.
The ability to smooth assets by averaging the beginning- and end-of-month values may further improve hedgeability for plans using the full yield curve to measure plan liabilities.
The timing of contribution calculations and due dates permits budgeting of contribution amounts a year or more in advance.

Shortcomings
Economic conditions since the adoption of the PPA[7] have illustrated the potentially significant variability of contribution requirement outcomes under the PPA's original provisions (such as constraining smoothed asset values to a 10 percent corridor around market value), even when plan sponsors use funding and investment practices meant to hedge interest rate and equity price risks.
Plans that have adopted liability-driven investment policies are not given the option to use an end-of-year spot yield curve to align the discount rate with end-of-year market values. This reduces their ability to fully hedge against changes in interest rates. The closest available hedging option is to average beginning and end-of-month asset values for the month prior to the valuation date.
The PPA funding thresholds (such as the 80 percent required to avoid benefit restrictions) make predicting and budgeting contributions difficult for plans funded close to those thresholds.
The PPA rules for calculating funding target liability can create a disconnect between the behavior of a plan's assets and liabilities, e.g., when a plan uses a variable annuity design or has embedded options (such as a cash balance plan with a variable interest credit rate) or for plans implementing a buy-in annuity purchase.

7 The appendix to this paper reviews the economic landscape both leading up to, and subsequent to, the adoption of the PPA.

Incentives to Fund; Flexibility

Sponsors should be able to fund and deduct the unfunded ABL at year-end or anytime. They should be encouraged to better fund their plans by: 1) allowing them to buildup funding margins in good years, without deductions and excise taxes; and 2) allowing them access to "super-surpluses" for other purposes, such as employee health benefits, without incurring the reversion tax.

In theory, the PPA provides significant flexibility for sponsors to contribute additional amounts in good years to create a funding balance that can be accessed in future periods when a business downturn could make large cash contributions undesirable. However, poor stock market returns in 2007–2009 and falling interest rates in recent years have effectively reduced this flexibility by eliminating previous cushions for many plans (in some cases as the result of mandatory or voluntary funding balance waivers to avoid benefit restrictions) and increasing contribution requirements for minimum funding or to avoid benefit restrictions.

Successes
The significant increase in maximum tax-deductible contributions under the PPA (preserved under MAP-21, HATFA, and BBA) allows plan sponsors significant flexibility to contribute more in good years to serve as a cushion against increases in future years when access to cash may be limited or needed for other business purposes.
Funding balances provide contribution flexibility for plans maintaining an 80 percent funded status.
The PPA created numerous funding bases and thresholds for different purposes, including levels needed to avoid benefit restrictions or at-risk status, to preserve the ability to use funding balances, or for determining PBGC variable-rate premiums. These thresholds provide powerful incentives for plan sponsors to accelerate funding.

Shortcomings
Excise taxes on asset reversions (generally 50 percent of the reversion amount) discourage plan sponsors from contributing to create a surplus due to the potential of that surplus becoming "trapped."
Restrictions on the use of funding balances and mandatory waivers—as well as essentially forced voluntary waivers to avoid funding-based benefit restrictions—may discourage prefunding.
Instead of providing an incentive to fund, recent increases in PBGC premiums may provide an incentive for plan sponsors to reduce participant headcount (or even to exit the defined benefit system entirely).

Avoidance of Moral Hazards

The rules should not facilitate weak employers to improve benefits (or take large risks) at the expense of another stakeholder (e.g., PBGC, its premium payers, U.S. taxpayers, or current and future employees).

The benefit restriction provisions in the PPA significantly restrict the ability of plan sponsors to improve or accelerate the payment of benefits in underfunded plans, while providing mechanisms for those plans to avoid restrictions by contributing to improve a plan's funding level.

Successes
Shorter amortization periods and funding-based benefit restrictions ensure past service amendments are funded more quickly.
Limiting the payment of accelerated distributions from poorly funded plans helps to maintain benefit security for the remaining plan participants (especially the restriction on payments for benefits in excess of the PBGC guarantee level).
Restricting very poorly funded plans from providing additional benefit accruals or paying unpredictable contingent event benefits inhibits the growth of funding deficits.
Eliminating the "guaranteed" return on funding balances in favor of realized rates of return on plan assets prevents plans from maintaining artificially inflated funding balances based on book value accumulations of prior excess contributions.
The HATFA provision specifically exempting the use of the 25-year average rate for determining the applicability of the accelerated payment restriction during a bankruptcy period preserves protections for PBGC and other participants in the situation of a bankrupt employer during a low-interest period.

Shortcomings
A plan sponsor's ability to dictate when the plan actuary issues a funded-status certification introduces significant discretion into plan operations that may delay or extend the application of benefit restrictions.
Current benefit restrictions may limit the payment of some accelerated distribution forms that do not pose a significant risk to a plan, such as the Social Security Level Income Option, certain death benefits, and periodic benefits payable at a retroactive annuity starting date.
The PPA benefit restrictions could induce some plan sponsors to intentionally underfund their plans to avoid paying benefits negotiated in good faith through a collective bargaining process.
MAP-21 changes have diluted the effectiveness of some of the PPA's protections against moral hazard by overstating a plan's funded status relative to current market conditions, permitting a plan to avoid restrictions on accelerated distributions, and allowing the payment of lump-sum benefits determined at historically low market interest rates (which are more advantageous to participants). The eight-year extension of the corridor phase-out under HATFA/BBA delays the return to a market-based measure of the plan's funded status and increases the risk exposure to the PBGC. Ultimately, this will lead to a more rapid deterioration of a plan's funded status as assets paid out as a lump sum will exceed the liability released as a result of the distribution unless the plan is funded on a basis that takes into account these lump-sum distributions.
Highly complicated rules provide incentives for plan sponsors to seek loopholes.

Transparency

Users of the information provided (e.g., employees, employers, investors, and the PBGC) should be able to understand the financial position of the pension plan and its effect on their sponsor.

Plan participants and other key stakeholders are provided with more frequent disclosure of information intended to improve their understanding of a plan's financial health. However, the confusing nature of much of the information presented in the disclosures may compromise their effectiveness.

Successes
The PPA prescribes a single funding method, with limited variations available for the selection of interest rate and asset valuation method. This makes contribution information more comparable across plans.
The required PPA annual funding notice (AFN) includes more detail on plan assets, liabilities, and funding levels than the pre-PPA notices (Summary Annual Report and Notice of Plan Underfunding), indicating how a plan's funded status changes year over year.
The Department of Labor posts Form 5500 Schedule SB filings on its website, and plan sponsors also are required to post Schedule SB on a company-sponsored intranet site (if their intranet is used for providing benefits-related information).

Shortcomings
Using a 24-month average of segment rates and asset values decreases transparency compared to the (monthly basis) yield curve and market value of assets. MAP-21 creates the potential for greater distortion compared to market rates for liability calculations over the near-term, and the extension of the MAP-21 relief via HATFA and BBA perpetuates this distortion for an additional eight years.
The PPA defines an array of funded-status measures for various purposes, making it difficult for stakeholders to understand the plan's financial condition.
The use of different bases for calculating beginning and end-of-year funded status in the AFN creates confusion for plan participants and employers.

Simplicity

The rules should be easier to use and understand.

Lack of simplicity may be the PPA's largest failure. Taken at face value, the liability method, amortization rules, and contribution requirements appear straightforward but other provisions, such as the at-risk rules and the rules around funded-status certifications, make valuations and plan administration much more complex. Subsequent funding-relief provisions (provided via WRERA, PRA, MAP-21, HATFA and BBA) add further complexity.

Successes
Plans all use the same actuarial liability method with limited variations available for the selection of interest rate and mortality tables. Investment and demographic gains and losses, assumption changes, changes in plan provisions, and changes in asset valuation method are combined and amortized based on a single amortization period.

Shortcomings
Extremely complicated rules related to funding balance elections, deemed reductions to funding balances, and offsets to plan assets for various funded status measurements greatly complicate plan management while adding little or no value in terms of benefit security.
Benefit restriction rules, including the presumption rules in effect prior to the issuance of the plan's funded-status certification, complicate the benefit administration process for sponsors and participants without demonstrating a beneficial result.
As noted in the Transparency section, having multiple measures of plan funded status for different purposes can be difficult for participants and sponsors to understand. The introduction of MAP-21's 25-year average segment rates for some—but not all—measurement purposes adds another set of funded-status measures and introduces even more complexity.
At-risk rules complicate the valuation process considerably without adding commensurate value.
Requiring that plan contributions be discounted to reflect the actual date paid adds unnecessary complexity.

Transition

Sponsors need smooth transitions, including adequate time to implement new rules.

Although the PPA included numerous provisions to aid plan sponsors during the transition period, those special rules proved to be of limited effect in the difficult economic environment that followed.

Successes
The PPA included a number of temporary provisions and phase-in rules relating to funding segment interest rates, at-risk percentages, and funding shortfall amortizations.
Subsequent funding-relief legislation has helped sponsors cope with economic and capital market downturns in recent years, providing additional time to fund unanticipated funding shortfalls.

Shortcomings
The PPA's increase in the target funding level from 90 percent to 100 percent affected plan sponsors at a particularly bad time—at the onset of an extreme period of economic and capital market dislocation.
Delays in the regulatory approval process have left plan sponsors without guidance on several critical issues, such as corporate transactions. The timing of guidance that has been released often has given sponsors little time to act before the rules are effective.
Even when funding-relief provisions have been enacted, the last-minute timing put significant pressure on plan sponsors to react quickly and make decisions with little time to consider longer-term consequences.

Possible Approaches to Improve PPA Funding Requirements

The PPA's existing structure can be modified to better meet overall objectives, i.e., to make the rules more effective and support the sustainability of the system. We do not believe that a major system overhaul is necessary.

As noted in the PPA Scorecard section, many of the temporary fixes and funding-relief provisions, particularly the MAP-21, HATFA, and BBA changes, did not seek to balance the long-term principles of funding reform. However, the effects of these laws will gradually diminish over the next several years. Allowing that to happen naturally is consistent with the smooth transition principle and may be a reasonable approach if reform efforts are focused instead on permanent, long-term solutions that better balance the key principles.

The Academy's Pension Committee has identified significant opportunities for improvement in three general areas. While each proposal, if implemented, individually could improve a particular aspect of the current PPA rules, we acknowledge that it may be impractical, and even undesirable, to implement the full set of proposals as outlined. Funding rules represent a complex system, with many interacting parts; changes to one aspect of the rules often will affect the operation in other areas. Finding an appropriate balance should be a primary consideration.

We further suggest that any changes include *voluntary* transition provisions to provide plan sponsors time to adjust to new requirements. Other sponsors may be permitted to adopt rule changes more quickly if desired.

Proposal 1: Increase Incentives to Fund

The overriding goal of pension-funding legislation is to establish a minimum level of required funding. Nevertheless, plans that are well funded today often achieved that status as a result of past contributions made in excess of minimum requirements. Although plan sponsors should not be permitted to funnel unlimited amounts into their pension plans on a tax-advantaged basis, a reasonable amount of prefunding should be encouraged.

Possible ways to encourage prefunding include:

- *Ease funding balance forfeitures:* Some inequities result from the current framework in regard to mandatory funding balance waivers. For example, a pension plan that pays lump sums is required to waive funding balances to the level necessary to avoid restrictions on accelerated payments, if possible. But there is no connection between the amount of balance waived and the amount of lump sums that will be paid, so a plan might be required to waive $10 million of funding balance to protect a lump-sum feature that will pay only $1 million in lump sums. As an alternative, a plan could be required to waive funding balances equal to the amount of lump sums that will be paid or a plan sponsor could be permitted to add contributions equal to the lump-sum amounts.
- *Reduce the excise tax imposed on super-surpluses:*[8] The excise tax rules on asset reversion could be relaxed to allow plan sponsors access to super-surpluses, while including restrictions on the use of funds for non-benefit purposes. For instance, a sponsor could be permitted to withdraw a portion of surplus each year (e.g., 5 percent of the value of assets or obligations). There also could be an additional restriction on reversions within a specified period of time following a change in corporate ownership where accessing a super-surplus may be adverse to the interests of plan participants or restrictions on the uses of withdrawn surplus (e.g., require withdrawn excess to be used for other deductible employee benefit plan costs).
- *Determine Adjusted Funding Target Attainment Percentage (AFTAP) without a reduction for funding balances:* Funded status for purposes of the funding-based benefit restrictions could be measured using plan assets unreduced by funding balances. There is no strong rationale for penalizing a well-funded plan sponsor because funds were contributed earlier than required (i.e., because the sponsor has the ability to employ those balances to reduce future required contribution amounts). Should the plan sponsor elect to use those balances in the future and the funded percentage then falls below 80 percent as a result, benefit restrictions would more reasonably be applied at that time.
- *Revising rules that create illogical outcomes:* Complex rules and restrictions regarding the establishment of funding shortfall amortization bases sometimes give rise to situations where having a lesser funded position results in a lower required contribution. For example:
    - A plan whose assets exceed the funding target by $1 may be prohibited from setting up a (negative) amortization base such that the minimum required contribution could be larger than the amount that would have been required if the plan was instead $1 underfunded.
    - The sponsor of a plan that falls below 80 percent funded by $1 more than the plan's existing funding balances (such that a deemed waiver would not return the plan to 80 percent funded) will likely be required to contribute significantly less than if the plan first falls below 80 percent by $1 less than

8 A super-surplus occurs when a plan's assets exceeds the value of benefits plus an appropriate cushion for adverse deviation. "Appropriate" in this case depends on a number of factors that are beyond the scope of this discussion, but which would have to be identified and refined as part of the legislative process.

the amount of available funding balances—and is thus forced to waive to avoid benefit restrictions.

- *PBGC premium incentives to prefund:* PBGC premiums (both the flat-rate premium paid by all plans and the variable-rate premium paid only by underfunded plans) have increased significantly since the PPA was enacted.[9] The recent increases in the variable premium rate will result in many plans paying the maximum variable-rate premium, which creates more of an incentive to reduce headcount through voluntary cashouts and annuity purchases than it does to increase funding levels.[10] A reduction in PBGC premiums for plans that take voluntary action to progress toward solvency would provide sponsors an increased return on contribution dollars and might provide a compelling rationale for prefunding. For example, a tiered premium structure could allow sponsors paying more than the minimum to pay a lower variable-rate premium than those who pay only the minimum required amount.

These changes would support *solvency* by providing employers with new *incentives to fund* in advance of minimum requirements. Eliminating highly complex rules that are often counterintuitive in their effects *simplifies* the system and reduces *moral hazard* by making the underlying restriction rule set more manageable, thereby reducing the future need for temporary relief that has the result of weakening the effectiveness of the rules.

Proposal 2: Enhance Contribution Predictability

For plan sponsors choosing a minimum contribution strategy, large year-to-year increases in contribution requirements were a critical problem in the initial years under the PPA funding regime. The Great Recession of 2008–2009[11] and the decline in interest rates since then led to substantial increases in minimum required contributions and the adoption of special funding relief that deferred to later years a portion of the minimum contributions otherwise required under the PPA. These funding-relief measures provided plan sponsors with an opportunity to plan for the higher contribution requirements that eventually would come due. However, the cost of this increased contribution flexibility was an acceptance of decreased solvency and benefit security for plan participants.

Employers have the ability under existing rules to create more stable contribution patterns by funding at a level in excess of the minimum required. Additional changes may further support those sponsors not able to, or choosing not to, fund in excess of the minimum required. To achieve more stable contribution patterns, either or both of the first two of the following features could be added to the funding rules as options. The second option removes an inconsistency between the valuation of plan assets and liabilities for plan sponsors that implement an investment strategy to hedge against interest rate changes that affect the determination of the funding target liability.

- *Output (rather than input) smoothing:* The funding rules could be reworked to employ strict market-based inputs for asset values and interest rates; the resulting calculated minimum contribution and benefit restriction percentage could then be smoothed/averaged over a period of years. Amortization of the funding shortfall is one example of output smoothing with which many people are familiar. Another form of output smoothing would limit the change in the minimum required contribution or AFTAP to a specified corridor around

9 Flat-rate premiums have increased by 94 percent from 2008 to 2016 ($33 in 2008 to $64 in 2016). With the changes enacted by BBA, by 2019 the flat-rate premium will increase to $80 (a cumulative 142 percent increase since 2008). Variable-rate premiums also have increased significantly, from 0.9 percent of unfunded vested benefits in 2008 to 3.8 percent in 2018—a 422 percent increase. Further expected increases in the variable-rate premium for 2019 will cause the rate to reach at least 4.2 percent of unfunded vested benefits.

10 MAP-21 implemented a cap on the variable-rate premium that is determined based on a fixed annual rate times the participant count. The cap started at $400 in 2013, indexed for inflation, and was increased to $500 in 2016, with inflation indexing applied for 2017 and later.

11 The Great Recession in the U.S. lasted from December 2007 to June 2009.

the prior year's value, which would be particularly helpful for sponsors that fund to avoid the benefit restriction "cliffs." With output smoothing, minimum contributions would not increase as much immediately following "bad" years and would not decrease as much immediately following "good" years. It should be noted that significant elements of this approach easily could be implemented on a sponsor-by-sponsor basis by plan sponsors that want to contribute according to a funding policy that exceeds the minimum requirement.

- *End-of-year yield curve:* For plan sponsors that decide to pursue a hedging investment strategy, the inability to use interest rates as of the valuation date is an obstacle. Permitting the use of spot yield-curve rates based on information as of the last day of the plan year aligns the discount rate with interest rates implicit in fixed income pricing.

Output smoothing would allow the minimum funding requirements to accommodate a desired level of contribution *predictability* without impairing the *transparency* of the fundamental liability and asset measurements that occurs when interest rates or asset values are smoothed (input smoothing). Input smoothing methods can accomplish a similar result in terms of contribution predictability, but they tend to obscure the measure of solvency and may result in decision-making that is adverse to the ultimate goal of ensuring benefit security. Allowing the use of the end-of-year yield curve facilitates *hedgeability* and contribution predictability for those plans that hedge by matching the point in time of the interest rates that are used to measure the liability with the point in time measure of plan assets.

Care must be taken to ensure an appropriate balance between predictability and solvency, as changes to improve one of these principles are often a trade-off with the other. To the extent that contribution predictability is enhanced by methods other than hedging the liabilities or contributions in excess of the minimum required amount, there is increased risk to plan participants and the PBGC.

If output smoothing is not deemed appropriate by policymakers, more input smoothing may be needed to improve contribution predictability. One potential change that provides additional input smoothing, particularly in the most volatile market conditions, is to broaden the asset corridor from 10 percent to 20 percent. While the shortened smoothing period of two years implemented under the PPA improved solvency, the 20 percent corridor allowed under prior law was more effective at smoothing the effect of extreme capital market fluctuations than the current 10 percent corridor. In the event of extreme market events, an additional moderate amount of asset smoothing may provide a brief reprieve for a sponsor to recover and plan for the higher contribution requirements needed to return the plan to its prior funded status. However, it might also mean that an already financially distressed employer would be permitted to further delay funding.

Proposal 3: Reduce Regulatory Burden

Defined benefit plans are complex structures by their nature. However, in the years since the PPA was enacted, the degree of difficulty in administration and compliance has grown substantially, placing greater burden on plan sponsors and making defined benefit plans less appealing. *Simplifying* the funding and regulatory structure would reduce a substantial disincentive to plan sponsorship.

Some specific areas where regulatory simplification might be possible include:

- *Discontinue current at-risk rules:* Consideration should be given to discontinuing the burdensome at-risk calculations. These add substantially to administrative cost and complexity while seemingly adding little value in terms of promoting plan solvency.

- *Facilitate risk-mitigating plan designs:* Many plan sponsors seek ways to reduce the funded-status volatility of their plans. Certain plan designs (such as variable annuity plans) can partially accomplish this objective. Funding rules should not pose a barrier to the effectiveness of these approaches by imposing liability measurement techniques that create a problematic and artificial mismatch between the valuation basis for plan liabilities and assets.
- *Ease benefit restrictions:* Certain payment forms subject to benefit restrictions, such as the Social Security Level Income Option, retroactive annuity starting dates, and certain death benefits, pose minimal risks to plans and could be exempted from accelerated payment limitations. Permitting plan sponsors to avoid restrictions on lump-sum distributions by directly contributing the lump-sum amounts—with limitations to avoid discriminatory practices—might promote additional cash funding and thereby reduce overall risk.
- *Simplify funded-status certification rules:* Rules relating to the certification of a plan's funded status (including those for establishing a presumptive funding status absent or prior to a certification for a plan year) are extremely complex, creating difficulties in applying the benefit restriction rules. Simplifying the regulations in this area would not substantially jeopardize benefit security but would considerably improve the ability of plan sponsors and administrators to comply.
- *Permit use of a single discount rate:* Use of a single level discount rate instead of three segment rates would reduce the complexity of determining funding liabilities, lump-sum payments, and plan administration (for example, determining interest adjustments for retroactive payments in situations when a plan requires use of the Section 417(e) segment rates). The single discount rate could be adjusted to reflect the duration of plan liabilities, similar to the methodology used in pension accounting (as specified under Financial Accounting Standards Board Accounting Standards Codification Section 715-30).
- *Generally eliminate non-critical "busywork":* Striking a better balance between the desire for sponsor involvement and the activities performed by enrolled actuaries on their behalf could reduce the time demands on plan sponsors without creating additional risks. Specific sponsor elections should be limited to those that are truly significant. Simplifying complex election procedures for creating and using funding balances would eliminate essentially irrelevant tasks on the part of the sponsor and the enrolled actuary. Simplification of the funding balance, quarterly contribution, interest crediting, and election processes would similarly reduce the time plan sponsors and actuaries spend on paperwork. Recent changes in Section 430 regulations that allow standing elections to cover quarterlies, while helpful, are still unnecessarily complex.
- *Align compliance penalties with risk to system:* The more stringent the rules, the more difficulty plan sponsors face staying in compliance. Reducing the complexity of the rules and providing more self-correction options (and also reducing the penalties for self-corrections) could reduce substantially administrative burdens and encourage compliance. In particular, small issues that do not significantly increase PBGC or participant risk should not create disproportionately large compliance burdens.
- *Modify the AFN:* Many participants are confused by the information provided to them on the AFN. Modifying the disclosures to include items such as the historical market value of assets and more closely connecting the funding notice with AFTAP certification might enhance understanding and participant engagement.

Making at least some of the suggested modifications would help to enhance *simplicity* and make compliance easier by encouraging plan sponsors to comply and addressing instances of substantial noncompliance.

Conclusion

The Academy's 2005 analysis of pension reform options noted that there is one major objective that pervades all discussions affecting retirement security, including funding reform—meeting the financial needs of retirees—and the defined benefit system is uniquely effective in doing this.

As defined benefit plans become underfunded, the amount of benefits paid to participants is not changed, but the security of promised benefits may be reduced. Funding rules should encourage a healthy defined benefit system and one that employers will find appealing in which to participate. But sponsors faced with sometimes unnecessary financial and administrative burdens will choose to move away from defined benefit plans.

The PPA represented a significant step forward in a number of ways, but issues that have arisen with its implementation indicate that further progress is needed. As it exists today, the single-employer defined benefit funding system (including the funding-based benefit restrictions) is far too complex. Simplification of the rules is essential to creating and maintaining a system in which plan sponsors are willing to participate.

Removing obstacles to the creation of new plan designs that better correlate the behavior of funding liabilities and the assets used to finance those liabilities or that provide for a greater sharing of risk between sponsors and participants will encourage continued defined benefit plan sponsorship. The funding rules should support plan sponsors in structuring their investment and funding strategies to effectively manage defined benefit plan risks.

The Academy Pension Committee has proposed specific legislative and regulatory modifications that we believe will help support a robust defined benefit system by:

- creating incentives for plan sponsors to fund their plans toward solvency;
- rewarding sponsors that fund in excess of the minimum;
- increasing participant engagement; and
- appropriately reducing the administrative burdens of compliance.

We encourage the legislative and regulatory communities to consider these suggestions with an eye toward achieving a better balance among the seven key principles of single-employer pension funding: solvency, predictability, flexibility, avoidance of moral hazards, transparency, simplicity, and smooth transitions. Defined benefit plans can effectively support the objectives of both plan sponsors and participants when operated within a reasonable regulatory framework—one that discourages detrimental practices while limiting unnecessarily complex administrative requirements.

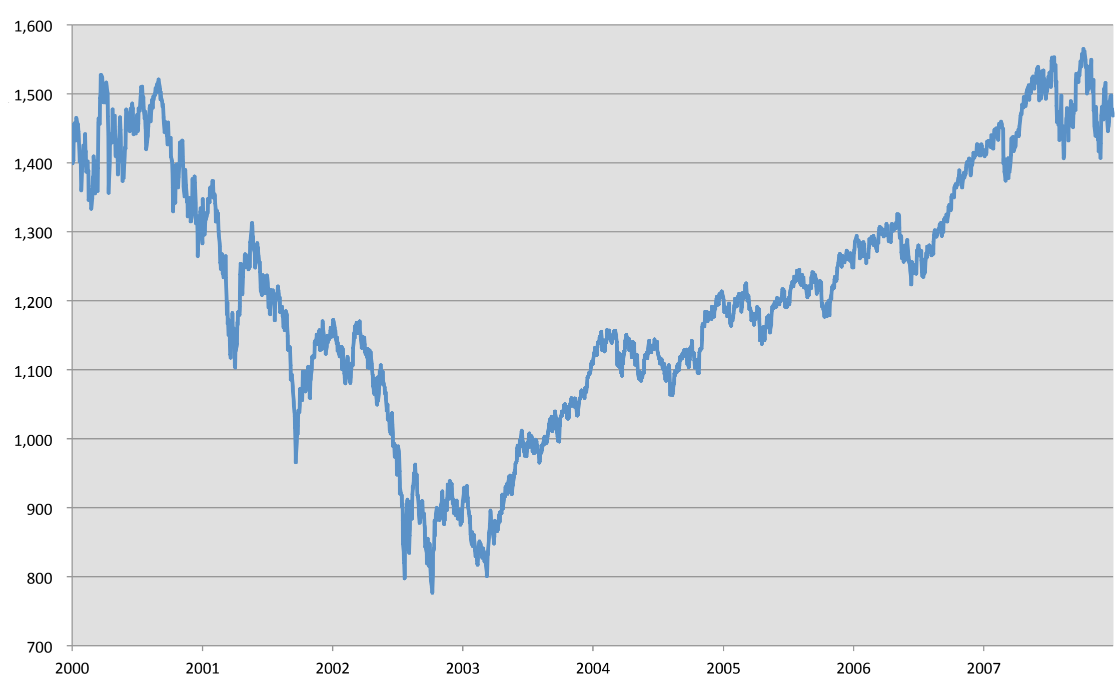
Appendix:

The Post-PPA Years: Has the Landscape Changed?

This issue brief presents an analysis of the PPA's performance measured in the context of the principles underlying funding reform laid out in the Academy's 2005 paper. It is not possible to provide that analysis without a meaningful acknowledgement that the decade from 2000 to 2010 presented challenging economic circumstances. The combination of very volatile equity markets and declining interest rates represents an extremely difficult environment for any set of pension funding rules. Although equity markets overall have performed well since 2010, with occasional retrenchment followed by a push to new all-time highs, the effects of the economic conditions prior to 2010, along with a continued downward trend in bond yields, are still being felt by many sponsors. The following appendix reviews the key economic factors affecting pension plans since the turn of the millennium.

Prior to the Pension Committee's release of its 2005 issue analysis, the U.S. single-employer pension system was tested by a period of extreme economic volatility. Interest rates steadily declined, with the four-year weighted average of 30-year Treasury rates dropping from 6.6 percent in January 2000 to 4.7 percent in January 2005. While this drove up the value of fixed-income investments, it also caused a steep rise in current liability for pension plans, while significant declines in the equity markets negated any increases in fixed-income holdings. The roughly 50 percent drop in the U.S. equity market from March 2001 to October 2002 (spanning two plan years) created substantial investment losses that most plans were required to fund over a five-year (or shorter) period under the funding rules in effect at the time.

Chart I
S&P 500 Daily Closing Values



SOURCE: Federal Reserve Bank of St. Louis

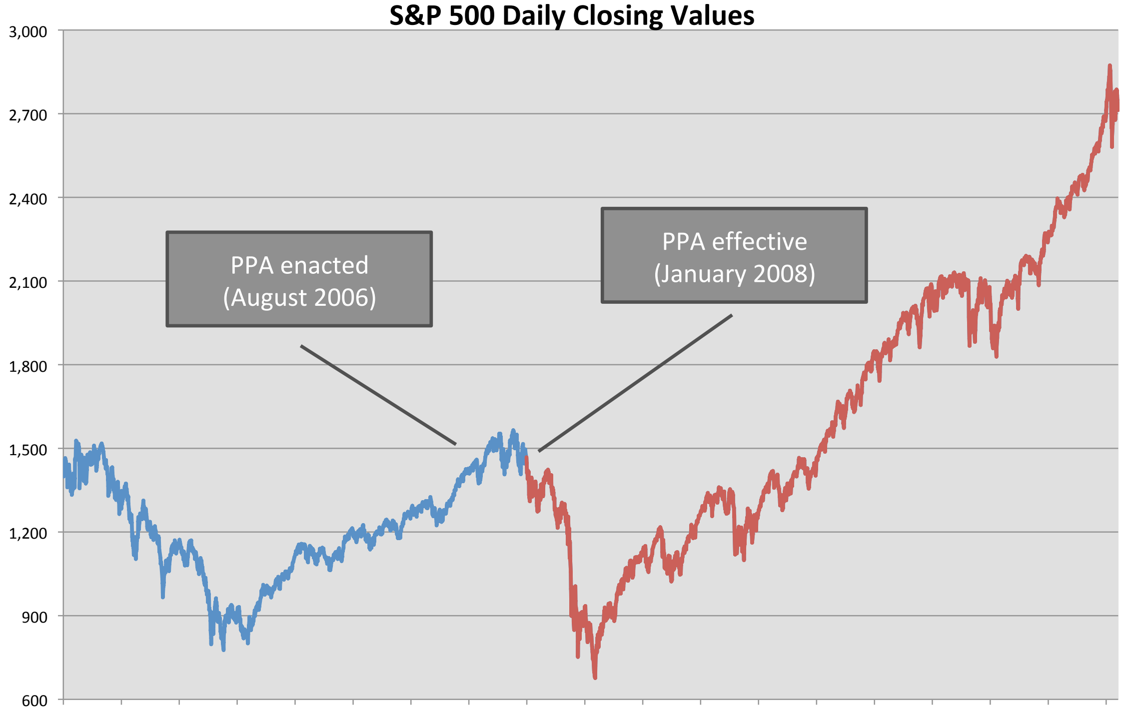
The cumulative 80 percent return in the U.S. equity markets from 2003 to 2007 helped return plans to a funded status similar to their pre-2000 level but not before creating a significant short-term contribution increase for many sponsors. Pension funding ratios were reduced by more than one-third from 2000 to 2003, and sponsors were faced with very extreme levels of year-over-year contribution increases. Further, many plan sponsors anticipated positive investment returns would occur during this period, and generally plan assets did not recover to the level they were expected to have reached absent the 2000–2003 equity market decline.

Participants at bankrupt companies learned their pensions were not as secure as they thought. Employers, many of which mistakenly had assumed their pension plans might be essentially endowed, came to realize an abrupt end to their contribution holidays and found themselves struggling to meet unpredictable and volatile minimum funding requirements that ran counter to their business cycles. At the same time, many equity shareholders realized that they didn't fully understand the risk a defined benefit plan could pose to a company's financial health. And the PBGC faced a dramatically increased deficit as a result of the funding rules permitting plan sponsors to make benefit promises they couldn't afford to keep, defer contributions, and avoid paying PBGC premiums even though the agency's financial position was deteriorating. The situation was unsustainable, and key stakeholders explored possibilities for change.

Since the PPA was enacted, the single-employer funding system has faced a similarly difficult environment. In the last 10 years, sponsors have seen:

- A greater than 40 percent drop in the U.S. equity market from September 2008 through February 2009 that reduced economic funding ratios by roughly 25 percentage points from 2008 to 2009,[12] although relief provided by WRERA and regulatory guidance from the IRS softened the blow on PPA funding calculations.

Chart II
S&P 500 Daily Closing Values

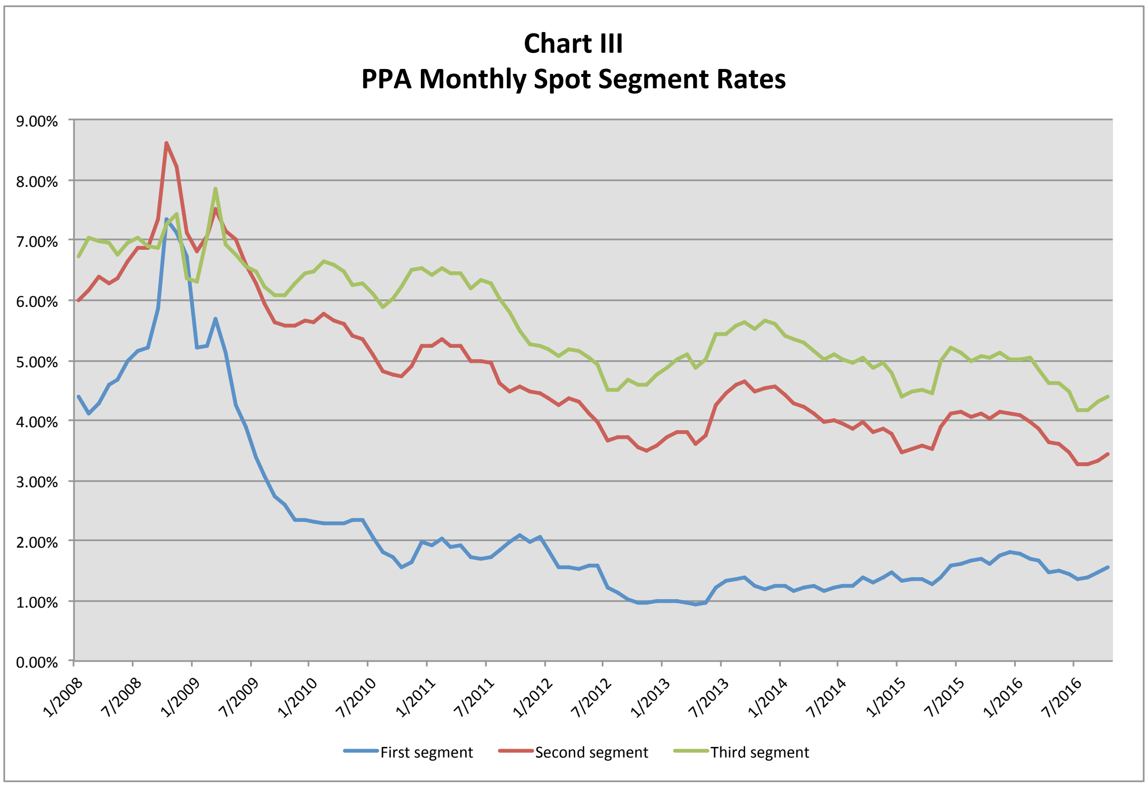


SOURCE: Federal Reserve Bank of St. Louis

12 While the 72 percent cumulative U.S. equity market return realized from 2009 through the enactment of MAP-21 in 2012, like the recovery from 2003 to 2007, ultimately returned the equity markets to near their pre-crash levels, many sponsors experienced a significant increase in contributions in the interim. Since 2012, U.S. equity markets have continued to perform well, reaching all-time highs during 2015 before falling back somewhat later in the year and into 2016, then again rallying to new all-time highs during 2017 and 2018.

- A 50-basis-point or more drop in effective interest rates for funding liability determination during the four-year period from January 2008 to January 2012, which resulted in an effective interest rate of 5.5 percent or lower for most plans in 2012 (absent MAP-21 relief).
- From January 2012 through December 2017, funding interest rates dropped another 125 (or more) basis points for a typical plan, resulting in an effective interest rate below 5.0 percent for most plans for 2013–2015 and for all plans for years 2016 through 2018 disregarding funding relief.

Although asset values generally have recovered to, and presently exceed, the pre-PPA values, many plans funded-status measures on a consistent basis (i.e., without reflecting the funding stabilization amendments to the PPA) have struggled to reach their pre-PPA level due to a decline in interest rates.[13] The persistence of historically low interest rates since the PPA was enacted has continued to strain the single-employer funding system, prompting some key stakeholders to seek a "fix" to the system. So far, Congress has granted temporary relief through patches such as MAP-21 (in 2012), HATFA (in 2014), and BBA (in 2015) but has not offered any longer-term solutions. This leaves open the possibility that there will be a continuing pattern of contribution crises with every economic downturn. In fact, the HATFA and BBA changes occurred during times of relative economic stability and appeared to be motivated primarily by the revenue generated, rather than for reasons of sound retirement policy.



SOURCE: [Internal Revenue Service minimum present value segment rate tables]

13 Most plans that have reached similar pre-PPA funding levels in recent years have done so primarily through accelerated contributions or plan design changes that limited the growth of plan liabilities.