The Demise of Defined Benefit Plans for Private Employers

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This is the third report in a trilogy, which began in 2005, in which the author examines the change in pension rules set forth in both ERISA and the Internal Revenue Code, applicable to defined benefit plans maintained by private employers. (See “Pension Funding Reform: It’s Time to Get the Rules Right,” Tax Notes, Aug. 22, 2005, p. 907 (Part 1) and Aug. 29, 2005, p. 1039 (Part 2).) The original title was in the hope that Congress would revisit ERISA’s and the code’s pension funding rules in order to restore the viability of single-employer defined benefit pension plans. Unfortunately the new rules promulgated by the Pension Protection Act of 2006 (PPA ’06) do not foster the growth of existing or new defined benefit pension plans, except for those of small employers.

In this third report, the author analyzes the new minimum pension funding rules and the new restricted benefit rules (which also affect a defined benefit plan’s qualification status) enacted by PPA ’06, effective beginning in 2008. As noted in a recent report by the Government Accountability Office, many employers are responding to these rules by freezing benefit accruals for existing and/or new entrants under the plan. Coupled with these new rules, the Financial Accounting Standards Board has introduced a new accounting reporting requirement that will have important financial effects for plan sponsors of underfunded single-employer defined benefit plans. Attorneys and actuaries alike are responding to these challenges by offering a variety of strategies for plan sponsors. These requirements and the responding strategies have been summarized at the end of this article.

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I. Introduction

This is the third in a trilogy of reports addressing the minimum funding rules and the benefit restrictions applicable to single-employer defined benefit plans.
covered under ERISA and the Internal Revenue Code. The first two reports were published in August of 2005 and focused on the pre-2008 minimum funding rules and the legislative proposals that surfaced during 2005. The decline in the stock market in the early 2000s, along with the depressed value of interest rates used to value plan liabilities, produced the perfect storm — leaving defined benefit plans that had been fully funded in the 1990s now underfunded. By 2002, almost 25 percent of the largest 100 plans were less than 90 percent funded. By 2004, the Pension Benefit Guaranty Corporation estimated that plans of financially weak companies with a reasonable chance of termination had an estimated underfunding of about $96 billion. Congress reacted with the passage of the Pension Protection Act of 2006 (PPA ‘06) to dramatically increase the funding of defined benefit plans. Although the law was passed during 2006, it delayed the effective date of many of the minimum funding rule changes until 2008. While there were already some limitations on an employer’s ability to increase benefits or accelerate the timing of benefits if the plan was underfunded, PPA ‘06 expanded those restrictions. This article analyzes the new rules in light of IRS regulatory guidance issued during 2007 and 2008.

The new PPA ‘06 minimum funding rules drastically accelerate the prefunding of pension costs for single-employer plans that maintain defined benefit plans (new code section 430 and new ERISA section 303) and impose greater benefit restrictions for underfunded plans (new code section 436 and new ERISA section 206(g)). Due to the accelerated minimum funding requirements, the code’s deduction limits were modified accordingly. The new rules are exceedingly complex and oftentimes counterintuitive. While attorneys may discount these rules as being within the actuary’s purview, it is imperative to understand how the new rules affect plan sponsors and their ability to modify benefits under the plan.

As a matter of the code’s qualification rules, the plan sponsor must satisfy these new benefit restrictions or risk disqualifying the plan. In addition to the legislative changes, new accounting standards were introduced during 2006 for plan sponsors of pension plans. The Financial Accounting Standards Board issued a new statement (SFAS 158) that has already had a significant impact on the reporting of an employer’s balance sheet if the employer maintains an underfunded defined benefit plan. For employers with defined benefit plans, the difference between the plan’s projected benefit obligation and the fair market value of the plan assets must now be recognized as an asset or liability on the employer’s balance sheet. Any shortfall caused by an underfunded plan will clearly have a negative impact on the future profitability of the company and its ability to attract new investors.

Due to the new funding and accounting rules, it’s no surprise that the growth of new defined benefit plans has declined, except for those of small employers that may relish the increased deduction limit to fund fixed benefits. For medium-size and large employers that simply do not want the volatility in costs associated with the new minimum funding rules and the restrictions imposed on benefits if the plan is deemed to be “at risk,” fully funded plans have been terminated and been replaced by defined contribution plans, and for those that maintained underfunded plans, many have decided to freeze future benefit accruals and continue to maintain the plan until it is fully funded. The long-term consequences of moving away from a defined benefit system to a defined contribution system won’t be seen for decades.

To cope with these challenges, employers have reviewed a number of strategies to manage the risk of maintaining a defined benefit plan — fully funding plan liabilities to terminate the plan using either cash or the issuance of special purpose corporate bonds; benefit freezes for current and/or future participants; liability-driven investing whereby future assets are invested in long-term bonds that match the liability values, with possible hedging strategies; and a pension transfer strategy whereby some or all of the pension liability is transferred to an independent plan management firm, along with all or a portion of plan assets plus a premium for managing the shortfall. The discussion of pension

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2. ERISA added parallel provisions to section 412 of the Internal Revenue Code. See section 1013(a) of P.L. 93-406, 88 Stat. 829 (1974). All references in this article will be to the code.
5. Id.
7. Id. at section 112(a).
8. Id. at section 113(a)(1)(B).
9. See infra notes 44 through 49.
10. Section 404(a).
13. The IRS recently issued guidance on this last strategy. See Rev. Rul. 2008-45, 2008-34 IRB 403, Doc 2008-17148, 2008 TNT 153-8 (Aug. 6, 2008), available at http://www.irs.gov/pub/irs-irsb/irb08-34.pdf (last visited Sept. 11, 2008), holding that the exclusive benefit rule of section 401(a) would be violated if the sponsorship of a qualified retirement plan is transferred from an employer to an unrelated taxpayer and the transfer is not in connection with a transfer of business assets or operations from the employer to an unrelated taxpayer.
strategies to cope with the requirements of PPA '06 will be discussed at the end of this article.

Due to the extreme paradigm shift underlying the new minimum funding rules, it's important to contrast the new rules with the old rules in understanding their significance and why the changes were made. For those familiar with the pre-PPA '06 minimum funding rules, please skip Part II and go directly to the new rules that are summarized in Part III and detailed in Part IV.

II. Background Information

This report addresses the rules now applicable to single-employer defined benefit plans covered under ERISA and the Internal Revenue Code, as a result of the changes made by PPA '06. Those rules are generally effective for plan years beginning on or after January 1, 2008. While the minimum funding rules for multiemployer defined benefit plans were also altered by PPA '06, those changes are not the subject of this article. Due to the dramatic change in the rules, there were transitional rules applicable for 2006 and 2007, which also will not be addressed in this article. Due to the various regulatory proposals issued during 2007 and 2008, there have been public hearings discussing the proposals — those issues will not be addressed in this article.

The new funding rules represent a radical departure from the prior funding rules regarding the increase in the amount now required under the minimum funding standards and how that amount is determined. Other significant changes include the impact on the ability of participants to accrue or increase future benefits under the plan, the ability to pay plant shutdown or other unpredictable contingent benefits distributions, and the ability to make full or partial lump sum distributions. Due to the drastic changes, sections 430 and 436 were added to the code, along with new ERISA sections 303 and 206(g). While former code section 412 and former ERISA section 302 are no longer applicable beginning in 2008, some of the concepts used under those provisions continue to be relevant. While the prior law imposed limitations on benefits accrals and distributions, PPA '06 imposed a host of new limitations — now contained in section 436 of the code, with parallel provisions in section 206(g) of ERISA.

ERISA's and the code's original minimum funding rules took a long-range approach to the funding of defined benefit plans, similar to that used by homeowners who are accustomed to with the funding of long-term home mortgages. While interest rates may fluctuate monthly, quarterly, or annually, a homeowner with a fixed interest mortgage relies on a uniform monthly mortgage payment. Merely lies protection from the volatility of the marketplace, not only regarding interest rates but also as to the market value of real estate. Similarly, an employer establishing a defined benefit plan envisioned maintaining the plan for the indefinite future, and therefore, wished to be protected from major changes in the assumptions used to value plan assets and liabilities, particularly the interest rate used in determining liabilities. Likewise, to prevent plan sponsors of large underfunded plans from further increasing plan liabilities through the adoption of new and/or increased benefits, the code and ERISA were amended and required the posting of a security (for example, bond, cash, and certificate of deposit) before benefits could be increased or added.14

While subjecting employers to ERISA's and the code's original minimum funding rules, Title IV of ERISA also extended protection to employees; if an underfunded defined benefit plan were terminated, sufficient benefits would be protected and paid for by the PBGC.15 After decades of being hit with liabilities from underfunded terminating defined benefit plans, the PBGC launched an effort to improve the funding of defined benefit plans to reduce its ultimate liability. It wished to move away from a long-term funding approach for pension plans to a plan termination approach. During the 1980s, it was successful in requiring the funding of past service credits to be accelerated to an 18-year schedule from a 30-year/40-year schedule.16 It also provided that financially healthy employers could not terminate underfunded pension plans. Hence, plans would have to continue to be maintained until all liabilities had been funded.17

The PBGC's efforts culminated in the passage of the PPA '06. As described by one commentator, PPA '06 accomplishes this intent through the "stick and carrot" approach — "the stick is the benefit restrictions" and "the carrot is the greatly increased ability to deduct contributions up front."18 However, given the mass exodus by employers from defined benefit plans into defined contribution plans (especially cash or deferred arrangements under code section 401(k)), it's unlikely that the carrot will have its intended effect. The only nonunion single-employer defined benefit plans that remain appear to be those that are underfunded and therefore, under the rules of Title IV of ERISA, cannot be terminated under the standard termination rules. The new minimum funding rules will be of interest to those employers unable to terminate their pension plans through the standard termination rules who are therefore required to continue to fund the plans.

A. Summary of Pre-PPA '06 Funding Rules

While the pre-PPA '06 minimum funding rules were discussed in the first of the trilogy of articles on funding, there are a few concepts that are worth reviewing in order to appreciate the changes made by the new rules. The code and ERISA initially viewed defined benefit plans as long-range promises made on the part of the employer and thus subject to long-range funding models:

14Former code section 401(a)(29) and former ERISA section 307, former 29 U.S.C. section 1087.
17P.L. 99-272, 100 Stat. 222 (1985), section 11077(a), altering ERISA section 4041(a), (b), and (c), 29 U.S.C. section 1341(a), (b), and (c).
• The valuation date used to determine a plan’s assets and liabilities could be determined anytime during the plan year with an appropriate adjustment of interest relating to the expected timing of the required minimum contribution.19

• Plan costs consisted of both current plan year credits (that is, accrued during the plan year), and an amortization of past service credits (that is, accrued during prior plan years but amortized over a given period of time).20 There were a variety of methods (referred to as actuarial cost methods) for determining how the allocation of costs should be distributed over various plan years.21 Actuarial discretion was permitted regarding the choice of acceptable cost methods.22 Plans with final average pay formulas had a variety of actuarial cost methods to allocate increases in prior years’ accruals that were due to the use of a final-average pay formula for benefits.

• Past service credits were encouraged and, if offered, could be funded over an extended period of time that could even go beyond the expected normal duration assumed under the plan’s normal cost method.23

• Actuarial assumptions (particularly the interest rate and mortality table) could be set at the actuary’s discretion, depending on the demographics and investment policy of the plan sponsor.24

• Plan liabilities were originally valued as “actuarial accrued liabilities,” which valued accrued benefits as a long-term commitment as opposed to valuing those benefits as payable immediately.25 Over time, plan liabilities were revalued and relabeled for a variety of purposes — actuarial accrued liabilities for valuation purposes; current liabilities for increased funding requirements; and PBGC liabilities in ascertaining whether a plan could be terminated and computing the variable portion of the PBGC premium.26 Those liabilities were more in line with a “plan termination” type of value. If that value was higher than the actuarial accrued liability, the minimum required contribution (MRC) would be determined using the current liability figure.27 Another value of liabilities evolved for purposes of PBGC disclosure rules.28

• The original funding rules used a bookkeeping T account (known as the funding standard account) to keep track, on a cumulative basis, regarding the required minimum charges assessed against the plan versus the actual credits received based on actual contributions made and other acceptable credits (for example, actuarial gains for a given year, amortized over time).29 Hence if an employer contributed more in a given plan year than required under the charge column, a positive credit balance would be created.30 That balance could be used in subsequent plan years to offset what would otherwise be required by the employer. Any credit balance was carried forward to the next year at the actuarial assumed rate of interest.31

The minimum funding rules initially took a long-range view to the funding of defined benefit plans to encourage their establishment and the crediting of past service liability. While those goals were laudable in theory, the voluntary nature of terminating an underfunded defined benefit plan left the PBGC particularly vulnerable. That led to the strengthening not only of the minimum funding rules, but also the limitation on an employer’s ability to voluntarily terminate an underfunded defined benefit plan.32 As a result, the minimum funding rules developed the use of current liability (that is, liability determined on a plan termination basis instead of an ongoing actuarial basis) in determining current costs. Congress also added the use of funding targets (for example, comparing plan assets to a given percentage of current liabilities) to encourage underfunded plans to accelerate contributions.33

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19 Former code section 412(c)(9)(B)(i), and former ERISA section 302(c)(9)(B)(i), former U.S.C. section 1082(c)(9)(B)(i).
20 Former code section 412(c)(2)(A) and (B) and former ERISA section 302(b)(2)(A) and (B), former U.S.C. section 1082(b)(2)(A) and (B).
21 Former code section 412(c)(1) and former ERISA section 302(c)(1), former U.S.C. section 1082(c)(1).
22 Former reg. section 1.412(c)(1)-1. Under section 101 of Reorganization Plan No. 4 of 1978, the secretary of the Treasury has the sole interpretive authority over the subject matter of minimum funding requirements. See Exec. Order No. 12, 108, 1979-1 C.B. 480. Accordingly, most references in this article are to the code’s minimum funding requirements and the IRS’s interpretation of those rules; however, the rules apply to the parallel provisions of ERISA.
24 Former code section 412(c)(3) and former ERISA section 302(c)(3), former U.S.C. section 1082(c)(3).
25 Former prop. reg. section 1.412(b)-1(b)(9)(i), (ii), and (iii) and 11(ii).
26 Former code section 412(l)(7) and former ERISA section 302(l)(7), former U.S.C. section 1082(l)(7).
27 Former code 412(l)(2) and former ERISA section 302(l)(2), former U.S.C. section 1082(l)(2).
28 Former ERISA section 4010, former U.S.C. section 1310.
29 Former code section 412(b) and former ERISA section 302(b), former U.S.C. section 1082(b).
30 Former code section 412(b)(3) and former ERISA section 302(b)(3), former U.S.C. section 1082(b)(3).
31 Former code section 412(b)(5) and former ERISA section 302(b)(5), former U.S.C. section 1082(b)(5).
32 ERISA section 4041(b), U.S.C. section 1341(b), allowing employers to voluntarily terminate a defined benefit plan if plan assets were sufficient to cover all plan liabilities.
33 Former code section 412(m)(1) and former ERISA section 302(e)(1), former U.S.C. section 1082(e)(1) (requiring funding of at least 100 percent of current liabilities to avoid quarterly employer contribution requirements); former code section 412(l)(9)(B) and former ERISA section 101(d)(1), former U.S.C. section 1021(d)(1) (requiring funding of at least 80 percent of current liability to avoid required additional funding charges and alternative participant notification); and former code section 412(l)(11) (requiring funding of at least 60 percent of current liability to avoid restrictions on plan amendment improvements).
During the 1980s, while interest rates were high and the stock market was booming, current liabilities (which were discounted using an interest rate that was high compared with today’s standards) were reduced and the fair market value of assets were high, thereby reducing the amount of unfunded liability and lowering the level of the required minimum contribution. If an employer had made larger than required contributions in prior years, a credit balance was generated and provided the employer with a “contribution holiday” in future years. Although Congress created this concept of a T account and a credit balance, it became less enamored with the concept, especially during the early 2000s when interest rates plummeted (causing current liabilities to increase) and plan assets invested in the stock market took a turn for the worse. Had the employers been forced to make prior year contributions even though there was a positive credit balance, the amount of the underfunding would not have been as significant as was the case during the early 2000s.

B. Summary of Pre-PPA ’06 Benefit Restrictions

As discussed in the first article of this three-part series, ERISA’s minimum funding rules evolved over time so that by the end of the 1990s the funding of defined benefit plans could be described in terms of the following funding targets:

- attainment of a level of 110 percent of current liabilities in order to avoid the top 25 lump sum restrictions (relevant in the small-employer context when one of the highly compensated individuals wished to procure a lump sum distribution from the plan),
- attainment of a level of 100 percent of current liabilities to avoid quarterly employer contribution requirements,
- attainment of a level of 90 percent of current liabilities to avoid additional funding charges (subject to a volatility test) and participant notification;
- attainment of a level of 80 percent of current liabilities to avoid required additional funding charges and alternative participant notification; and
- attainment of a level of 60 percent of current liability to avoid restrictions on plan amendment improvements.

The condition in the last bullet above restricts the ability of a plan sponsor whose plan’s funded current liability percentage for the plan year fell below 60 percent from increasing benefits through a plan amendment. For purposes of computing the funded current liability percentage, the increase in benefits attributable to the plan amendment had to be factored into the calculation. The plan sponsor (or a member of the controlled group) had to provide security (such as bond, cash, or U.S. security of three years or less in duration) to the plan before the amendment. The latter requirement was applicable only when the plan amendment would effectively increase the current liability in excess of $10 million.

C. Transition From Pre-PPA ’06 to Post-PPA ’06

As discussed in the second article of this trilogy, the proposals to change the minimum funding rules ranged from minor adjustments to the current rules to a mark-to-market approach to funding pension plans (valuing plan assets and liabilities as of a given date in the plan year and requiring minimum contribution levels based on the shortfall). Obviously a mark-to-market approach subjects the employer to volatility regarding the stock markets (as plan assets will vary depending on the date of valuation), as well as current interest rates (as plan liabilities determined using those rates will vary depending on the interest rate as of the valuation date). The use of a true mark-to-market approach would negate the continuation of the prior flexible spending account credit balance as the current year’s minimum funding contributions would be based on the current shortfall between current market values of assets and liabilities. Hence, most of the legislative proposals were moving away from a long-term focus regarding the funding of defined benefit plans and closer to a short-term focus for funding purposes.

Congress ended up with a hybrid — features of the prior minimum funding rules (including credit balances) would continue as it slowly moved to a mark-to-market approach for determining yearly plan shortfalls and minimum contributions. Congress also decided to take away more discretion from the plan actuary by fixing the interest rate and mortality table for each employer regardless of the individual demographics and experience. There is an exception for large employers that can use mortality tables that fit their demographics. The

35See reg. sections 1.401(a)(4)-5(b)(3)(iv)(A), (B), and (C). Those limitations continue after the enactment of PPA ’06.
36Code section 412(m)(1) and ERISA section 302(e)(1), 29 U.S.C. section 1082(e)(1).
38See code section 412(l)(9)(B) and ERISA section 101(d)(1), 29 U.S.C. section 1021(d)(1).
40Id.
41Id.
42Code section 430(h)(2) and (3) and ERISA section 303(h)(2) and (3), 29 U.S.C. section 1083(h)(2) and (3).
44Code section 412(m)(1) and ERISA section 302(e)(1), 29 U.S.C. section 1082(e)(1).
result affords the PBGC greater latitude in monitoring its degree of potential liability; however, it subjects employers to more volatility in required annual contribution levels and less discretion as to the funding of promised benefits.

As PPA '06 eliminated the deficit reduction contribution (DRC) requirement, which required increased contributions for some underfunded plans, it replaced it with new funding rules for plans determined to be at risk. Those plans have alternative actuarial assumptions used to value liabilities that presumably will increase the plan liabilities and normal costs.

PPA '06 substantially added to the list of restrictions for defined benefits that were substantially underfunded. Similar to the pre-PPA '06 approach of using funding targets, a new funding target is defined, and failure to meet those targets can result in: restriction of lump sum distributions (and not just to the top 25 highly paid employees), limits on the ability to increase benefits, cessation of future benefit accruals, and the ability to pay shutdown benefits. There are transition rules applicable for plan years beginning in 2008 and 2009.

III. PPA '06 Funding and Benefit Restrictions

The following is a summary of the new funding rules for single-employer defined benefit plans. As of the publication of this article, the IRS has issued several regulatory pieces on the minimum funding and benefit restriction rules, which will be discussed in this article:

- proposed and final regs that provided mortality tables to be used in the determination of present value or other minimum funding requirements;
- proposed regs relating to benefit restrictions for underfunded pension plans;
- proposed regs to measure plan assets and liabilities for pension funding purposes;
- proposed regs regarding the determination of minimum required pension contributions under PPA '06;
- Notice 2007-81 providing guidance on the corporate bond yield curve and segment rates used to compute the funding target and other items under code section 430; and
- Notice 2008-69 providing updated guidance on weighted-average interest rates, yield curves, segment rates, and interest rates on 30-year Treasury securities for funding purposes and for purposes of calculating present values under code section 417(e).

While the final regulations relating to the mortality tables are effective during 2008, the proposed regulations for the other provisions are generally effective for plan years beginning on or after January 1, 2009. Despite the delay in the proposed regulations, the code’s and ERISA’s new funding rules and benefit restriction rules are still effective for 2008. According to the IRS, compliance with the proposed rules during 2008 is not required, but reliance on them will demonstrate compliance with the law. There are some rules that are available only under methods published by the Service. Thus reliance on those rules must be accomplished during 2008 through compliance with the proposed regulations.

This part of the article provides a summarized view of the rules; readers interested in a further elaboration of the rules should view Part IV of the article.

A. Valuation Date

Under the prior minimum funding rules, the value of plan assets and liabilities could be determined any time during the applicable plan year. In most cases, plan actuaries use of the plan’s year-end values as required minimum funding contributions were not required until 8 1⁄2 months after the end of the applicable tax year. Accelerated or estimated valuations may have been necessary if the appropriate funding target was not attained and therefore quarterly employer contributions would be required during the plan year.

PPA '06 now requires annual valuations as of the first day of the plan year — thereby fixing plan assets and plan liabilities as of a given fixed date. Depending on the fair market value of assets and the interest rate applicable to plan liabilities as of such date, a significant change in assets and/or liabilities could result.

B. Plan Assets

Before PPA '06, plan assets were required to be valued at market value as of the plan’s valuation date; however, reasonable smoothing methods were permitted provided the resulting plan asset value was within a corridor of 80 percent to 120 percent of fair market value. Employer contributions were permitted as late as 8 1⁄2 months after the plan year, but could be credited to the T account...
retroactively. Plan assets were valued for different purposes: determination of the required minimum contribution, determination of the deficit required contribution, and the requirement for quarterly employer contribution amounts.

PPA ’06 continues to require plan assets to be valued at market value as of a new valuation date, which is the first day of the plan year. However, averaging methods permit prior values to be used that are no more than 24 month values before the valuation date, provided that the resulting plan asset value is within a narrower corridor of 90 percent to 110 percent of fair market value. Plan assets will now be used for a variety of purposes: to determine the 80 percent funding target for purposes of using the credit balance for contribution purposes, to determine the level of the required minimum contribution, to determine whether a new shortfall amortization base is created, and to determine whether a new shortfall amortization base is created. Also, employer contributions made after the close of the plan year must now be discounted to the end of the plan year as of the plan’s actuarial interest rate.

C. Funding Targets

As noted earlier, ERISA did not initially use annual funding targets, as they were not consistent with a long-term view for funding pension plans. Due to the lobbying efforts of the PBGC, the concept of funding targets slowly arrived during the 1980s. Before PPA ’06, the funding target required a 90 percent minimum comparison of plan assets to plan liabilities — the consequences for plans that were not at least 90 percent funded (referred to as deficit reduction plans) included increased amortization of past service credits (an 18-year amortization period in lieu of a 30- or 40-year period), and quarterly, as opposed to annual, employer minimum contributions.

PPA ’06 would not only increase the funding target to 100 percent (instead of 90 percent) of plan liabilities with special transition rules for 2008-2010) compared with the target for plan assets, it would redefine how plan liabilities and plan assets would be determined for purposes of the comparison and set forth additional consequences for plans that fell below the funding target. Additional funding targets were created — plans with funded target percentages between 60 percent and 80 percent and plans with funded target percentages below 60 percent — for purposes of new consequences for those plans. The PPA ’06 created a new term of art, the plan’s “funding target attainment percentage” (FTAP), which consists of 100 percent of plan liabilities reduced by plan assets (reduced by pre- and post-PPA ’06 credit balances). This term will be used for purposes of various funding and benefit restriction targets.

D. Use of Actuarial Cost Methods

The code and ERISA initially permitted discretion to the plan actuary to select among one of six actuarial cost methods for determining the annual minimum funding amounts — methods that allocated different costs to different plan years — similar to the variety of home mortgage arrangements that permit a variety of prepayments for accelerated payments and/or balloon payments. Over the years, Congress grew weary of the variety of cost methods, viewing them not as effective accounting schemes for assignment costs to appropriate plan years, but more as manipulation to forestall proper funding of the plan.

Under the PPA ’06, a single actuarial cost method, the unit credit cost method, is now prescribed, whereby the minimum employer contributions must fund the cost of the current year accruals, as well as prior years’ accruals increased as a result of any current year’s increase in compensation (of most relevance for final pay formula plans). The result is referred to as the target normal cost (TNC).

E. Actuarial Assumptions

Critical in any discussion of plan assets and liabilities and the determination of current year costs is the determination of the appropriate actuarial assumptions used to value plan assets and liabilities. If the pension plan was regarded as a long-term commitment, a single snapshot of plan assets and liabilities on the plan’s valuation date could skew the results. Hence, the use of fair market value asset values and market interest rates for plan liabilities was not initially required.

As the funding rules evolved, they moved closer to a fair market value approach, but allowed plan asset smoothing rules. In determining current liabilities (applicable for DRC calculations), the interest rate and mortality table were set forth by statute (with the use of required contribution in 2007, there is no transitional relief and the target becomes 100 percent of liabilities beginning in 2008. See code section 430(c)(5)(B)(ii) and (iv) and ERISA section 303(c)(5)(B)(ii) and (iv), 29 U.S.C. section 1083(c)(5)(B)(ii) and (iv).

Codes 430(c)(2) and ERISA section 303(d)(2), 29 U.S.C. section 1083(d)(2).

15Code section 430(b) and ERISA section 303(b), 29 U.S.C. section 1083(b).
corridors for interest rate). By 2005, the interest rate was based on investment-grade corporate bonds.⁶⁴

PPA '06 eliminates actuarial discretion regarding interest rates and mortality tables by requiring that those assumptions be mandated by statute for all purposes. The required interest rate is now defined by a modified yield curve determined using investment-grade corporate bonds.⁶⁵ The three different interest rates under the yield curve correspond to three different time horizons for distribution of benefits: benefits anticipated to be distributed within 5 years of valuation date, those expected to be distributed between 5 and 15 years of valuation date, and those expected to be distributed later.⁶⁶ A new mortality table is also required and to be specified by Treasury.⁶⁷

F. Amortization Charges

As discussed earlier, Congress initially encouraged the granting of past service credits (that is, retroactive credit for service earned by an employee before the creation of the plan; retroactive credit for past service if the plan formula were later increased; retroactive increases in past service accruals as salary increased if the benefit formula was tied to final average pay) by allowing extended amortization of those credits. Unfortunately, the PBGC bore the brunt of that decision when employers in compliance with the minimum funding rules began to terminate underfunded plans in the 1980s and 1990s. That led to legislative initiatives during the 1980s to prevent financially healthy employers from voluntarily terminating underfunded plans.

By the 1980s, a plan termination model was added to the minimum funding rules by valuing the plan’s “current liabilities” — all plan liabilities (including unpredictable contingent event benefits valued at statutory interest and mortality rates). If plan assets failed to meet the target of 90 percent of current liabilities, an additional DRC contribution would be added to the FSA, effectively accelerating the amortization of the past service credits to 18 years instead of the 30/40-year period. In determining the minimum required contribution, the plan’s normal cost was added to the required amortization portion of the past service liability. If there was an outstanding credit balance, it could be used to reduce the required minimum contribution level. However, the credit balance was subtracted from the plan asset value to avoid double counting. For example, let’s say CL was $100 and plan assets were $80, with a cumulative credit balance of $20. Plan assets were reduced by the credit balance of $20, resulting in plan assets valued at $60. Because plan assets of $60 failed to meet the 90 percent CL target of $90, the balance would be amortized over 18 years. However, the resulting minimum required contribution produced by the normal cost and the 18-year amortization piece could be offset by the credit balance of $20.

At the other end of the spectrum, employers with surplus assets (assets in excess of the value of plan liabilities on a plan termination basis) were discouraged from terminating those plans as Congress imposed a 50 percent excise penalty on the recuperation of the excess.⁶⁸ As a result, employers “used up” their surpluses by not making additional contributions in order to avoid or minimize the excise tax in the future, or by using the surplus to fund retiree health costs. That result might have been acceptable, until plan assets or plan liabilities took a sudden and unexpected turn for the worse, which is exactly what happened during the early 2000s. Due to the sudden gap between plan assets and plan liabilities, large deficits were created, exposing employers to extremely volatile minimum funding requirements. Thus, it’s no surprise the employee benefits community experienced a decline in the maintenance of defined benefit plans and the establishment of newly created defined contribution plans.

PPA '06 now uses the plan’s FTAP to determine if there is any shortfall between plan liabilities and plan assets; if so, the gap must be amortized over seven years.⁶⁹

G. Funding Standard T Account & Credit Balances

The code and ERISA introduced the use of the simple bookkeeping FSA T account to keep track of required versus actual contributions. The T account kept track of required annual “charges” to the account (representing the actuarial cost method’s normal cost for the year plus the required minimum amortization charge of unfunded past service costs), as well as annual “credits” to the account (for the employer actual contributions). The T account was cumulative in nature so that failure to make the required annual charges to the account would carry forward to subsequent plan years. Conversely, charges in a given plan year in excess of the minimum required charged amount could be carried forward to subsequent years. Since all numbers used in the valuation were based on long-range actuarial assumptions, any carryforwards of excess charges or credits would be credited at the plan’s assumed actuarial interest rate. The value of the plan assets were determined under a reasonable actuarial method that took into account fair market value and was permitted under IRS regulations.

As the PBGC began to undertake more liabilities for underfunded plans, President Bush’s administration launched a major offensive on the issue of credit balances.⁷⁰ They were attacked on the theory that employers were permitted to make reduced or zero contributions in

⁶⁴ Former code section 412(l)(7)(c)(i)(IV) and former ERISA section 302(d)(7)(c)(i)(IV), former 29 U.S.C. section 1082(d)(7)(c)(i)(IV), as amended by section 301(b)(2)(A) and (B) of P.L. 109-280.

⁶⁵ Code section 430(h)(2)(C) and ERISA section 303(h)(2)(C), 29 U.S.C. section 1083(h)(2)(C).

⁶⁶ Code section 430(h)(2)(C), (ii), and (iii) and ERISA section 303(h)(2)(C), 29 U.S.C. section 1083(h)(2)(C)(i) and (ii).


⁶⁸ Code section 4980.

⁶⁹ Code section 430(c)(2)(B) and ERISA section 303(c)(2)(B), 29 U.S.C. section 1083(c)(2)(B).

⁷⁰ For a description of the Bush proposal, see Kathryn J. Kennedy, “Pension Funding Reform: It’s Time to Get the Rules Right (Part 2),” supra note 3.
given years by relying on prior years’ large credit balances, thereby promoting the underfunding of pension plans. This led to “contribution holidays” despite the overall unfunded status of the plan. Also the credit balances might not reflect “real money” (the value of assets could have dropped due to market conditions and the credit balance was not adjusted accordingly).

Actually, credit balances don’t result in the underfunded status of pension plans — the use of a 30-year or 40-year amortization schedule for past service credits (or the revised 18-year amortization schedule) is what permitted a pension plan to remain underfunded. If Congress wanted to move solely to a mark-to-market approach for valuing plan assets and plan liabilities, there’s simply no need to have a credit balance — the plan asset figure will automatically keep track of accelerated contributions made in prior years. Thus, when Congress eliminated the use of the T account under PPA ’06, it certainly could have eliminated the concept of a credit balance.

However, Congress decided to retain the plan’s pre-2008 credit balance (referred to as the funding standard carryover balance) and to create a post-2008 credit balance (referred to now as prefunding balances). However, the use of the two credit balances varies not only for determining the minimum required contribution but also for determining the value of plan assets, which is used for a variety of different purposes. Also, a plan sponsor may waive the use of credit balances in order to avoid application of the new rules. Subtracting the credit balances from plan assets for purposes other than determining the minimum required contribution has certainly been criticized by practitioners, as it eliminates the employer’s incentive to prefund more than is presently required, and it has an unfair retroactive effect on employers. Nevertheless, Congress has chosen to take a schizophrenic approach to the use of credit balances beginning in 2008 — one that requires plan actuaries to keep track of the various approaches through multiple charts! The results do not provide employers with clear guidance as to whether it is advantageous to keep, use up, or disregard pre- and post-PPA ’06 credit balances.

H. Benefit Restrictions

Before the passage of PPA ’06, there were a variety of limitations on benefits depending on whether the plan failed to meet funding targets. However, how liabilities and assets were determined for purposes of those funding targets was not uniform. If plan assets fell below 60 percent of plan liabilities, the plan sponsor was limited in its ability to amend the plan in order to increase benefits. If plan assets fell between 80 percent and 90 percent of current liabilities, an additional funding charge was assessed and participant notice was required. Also, only some surplus defined benefit plans could transfer a portion of the surplus from the defined benefit plans into a retiree welfare plan.

PPA ’06 now imposes different benefit restrictions, using the funding target determined as of the valuation date (which is the first day of the plan year) and plan assets (that may or may not be reduced by credit balances). To avoid any restrictions on benefits, the plan must meet one of two hurdles:

- the funding target is at least 80 percent of plan assets (which are reduced by credit balances); or
- the funding target is at least 100 percent (or at the transitional levels of 92 percent to 96 percent before 2010) of plan assets (not reduced by credit balances).

Employers whose plans fail to meet either one of these hurdles are prohibited from making plan amendments that would increase benefits, provide new benefits, or alter the benefit accrual rate. They also cannot accelerate the vesting schedule.

For plans for which the funding target falls between 60 percent and 80 percent of plan assets, there are limitations on the ability to make full lump sum distributions. For plans for which the funding target falls below 60 percent of plan assets, benefit accruals and any shutdown or unpredictable contingent events benefits become frozen and lump sum distributions are not allowed. In addition, if the funding target is less than 100 percent of the plan assets and the employer sponsor is bankrupt, no lump sum distributions may be made.

PPA ’06 makes certain presumptions regarding the plan’s funding status based on the prior year’s funding status. Those presumptions can be negated by the plan’s actuary if he certifies the current year’s funding status before the beginning of the fourth month of the plan year. Failure to make any certification before the

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74 Former code section 412(l) and former ERISA section 302(d), former 29 U.S.C. section 1082(d).
75 Former ERISA section 4011, former 29 U.S.C. section 1311.
76 Former code section 420(e)(2), requiring the plan assets to be at least 125 percent of current liabilities.
77 Code section 436(c) and ERISA section 206(g)(9), 29 U.S.C. section 1056(g)(9). Note this restriction does not apply to plans that are frozen, and remain frozen, as of Sept. 1, 2005. See code section 436(d)(4) and ERISA section 206(g)(3)(D), 29 U.S.C. section 1056(g)(3)(D).
78 Code section 436(c)(1) and ERISA section 206(g)(2), 29 U.S.C. section 1056(g)(2).
79 Code section 436(d)(3) and ERISA section 206(g)(3)(C), 29 U.S.C. section 1056(g)(3)(C).
80 Code section 436(b)(1) and (e) and ERISA section 206(g)(1) and (g)(4)(A), 29 U.S.C. section 1056(g)(1)(A) and (g)(4)(A).
82 Code section 436(h)(1) and ERISA section 206(g)(7)(A), 29 U.S.C. section 1056(g)(7)(A).
83 Code section 436(h)(3) and ERISA section 206(g)(7)(C), 29 U.S.C. section 1056(g)(7)(C).
beginning of the 10th month of the plan results in the presumption that the plan is less than 60 percent funded.\textsuperscript{\textsuperscript{84}}

IV. Detailed PPA ’06 Minimum Funding Rules

The author does not find the statute’s approach to the minimum funding rules particularly helpful, as it begins with the determination of the minimum required contribution, including target normal cost and shortfall amortization charge, amortization of funding waivers, and use of credit balances (pre- and post-PPA ’06 balances) to offset minimum required contributions, and then discusses how to value plan assets and liabilities. Hence, this article will start with the basics — what’s the valuation date, how plan benefits are to be valued, how plan liabilities and plan assets are determined — before it discusses the rules as to the minimum required contribution levels, shortfall amortization charges and waivers, and the use of credit balances.

Due to the complexity of the new minimum funding rules, a sample defined benefit plan will be used to demonstrate how the rules are applied. Let’s assume the employer maintains a defined benefit plan for salaried employees, with a calendar year plan year, with an accrued benefit and normal retirement benefit formula of 1 percent of final average pay (last highest three-year average) times years of participation, payable at the normal retirement age of 65, with a normal form of life only (for unmarried participants) and a joint and 50 percent survivor annuity for married participants. Early retirement is available once a participant attains age 60, with a 0.5 percent per month reduction in benefits for early commencement. Lump sum distributions are available (and subsidized) and automatic for terminated participants with deferred vested accrued benefits less than $5,000. Let’s look at two sample participants: A, an age 60 married participant with 30 years of service and earning final average earnings during 2007 of $52,000 ($47,000 in 2005, $50,000 in 2006, and $52,000 in 2007). A’s actual salary as of the end of 2007 was $54,000; and B, a retiree, age 72 (male) earning a $100 monthly life annuity. To simplify the example, the actuary uses a 0 percent salary assumption and therefore predicts no change in salaries for the 2008 plan year.

A. Valuation Date

The valuation date is critical under the pre- and post-PPA ’06 rules as it is used to determine when plan liabilities and plan assets are to be valued. Except for small employers, PPA ’06 now defines the valuation date as the first day of the current plan year.\textsuperscript{\textsuperscript{85}} As the PPA ’06 funding rules move closer to a mark-to-market approach, the date used for the valuation becomes a critical piece. Hence, the value of plan liabilities will now be determined using the interest rate applicable as of that date (with a four-month lookback rule option) and the value of plan assets will also be determined as of that date.

In our example, January 1, 2008, will be the first valuation date applicable under the PPA ’06 funding rules. While this becomes a snapshot in determining plan liabilities and plan assets, it will be important to take a prospective look at the 2008 plan year in order to ascertain the level of benefits expected to be accrued during the year in order to determine liabilities.

B. Plan Benefits

To value plan liabilities, the plan actuary must first determine what benefits are available under the plan and thus to be valued. Similar to the determination of current liabilities under prior law, the new normal cost and plan liabilities must include all benefits earned or accrued under the plan, including ancillary benefits (such as death or disability benefits), potential early retirement or termination benefits, and normal retirement benefits. While the statute does not use categories for determining benefits, the IRS’s proposed regulations segment benefits into three different categories for purposes of the funding rules:

- “Benefits that are based on accrued benefits” — These are benefits that are expected to be paid and are a function of the current year’s accrued benefits.\textsuperscript{\textsuperscript{86}} The easiest example would be early retirement subsidies that a participant is entitled to during the valuation year. Those benefits must be included in the valuation of plan liabilities and the determination of the current year’s target normal cost, which equals the present value of benefits accrued or expected to be accrued during the valuation year.\textsuperscript{\textsuperscript{87}} In addition, for final pay plans, any increase in past service liabilities due to an increase in current year’s salary must be reflected in current accrued benefits.\textsuperscript{\textsuperscript{88}} In our example, A’s expected benefit as of January 1, 2007, was 1 percent of FAE [$47,000 + $50,000 + $52,000 = $149,000] divided by 5 for 12 years of service (multiplied by 12), or $5,960. A’s expected benefit as of January 1, 2008, is 1 percent of FAE [$50,000 + $52,000 + $54,000 = $156,000] divided by 3 for 13 years of service (multiplied by 13), or $6,760. Thus A’s accrued benefit for 2008 is $6,760 minus $5,960 equals $800. As A is eligible for early retirement, the annual accrual of the early retirement, at age 60, is $560 ($800 expected benefit reduced by 0.5 percent for 60 months of early commencement), which must be factored into the current normal cost.

- “Benefits that are based on service” — These are benefits that are expected to be paid but are not a...
function of the current year’s accrued benefits. The example used in the proposed regulations is a postretirement death benefit equal to $500 per year of service. The plan’s normal target cost would then include the additional $500 in death benefits expected to be earned during the valuation year for this year of service.

- “Other benefits” — These are benefits that do not fall within the first two categories. Under the proposed regulations, the portion of the benefit to be included in the normal target cost would be based on a pro rata division of costs — costs for the current year of service relative to the expected service the participant will have when he attains the age/service eligibility requirements for the benefit.

For example, the cost of the plan’s Social Security supplement that is available to a participant who retires with 30 years of service would be determined using a pro rata approach based on the participant’s current service for the plan year divided by the expected 30 years of accrual.

According to the proposed regulations, plan expenses may not be included in the required minimum contribution. Benefits that are presently funded through insurance contracts may also be excluded from plan liabilities.

If the employer sponsor is contemplating a plan amendment during the valuation year to increase benefit accruals, the proposed regulations state that plan liabilities do not include benefits adopted through plan amendments adopted after the valuation date even though effective for the plan year. The proposed regulations even address the plan population pool to be considered for valuation purposes — certainly benefits for current participants, retirees, and deferred vested participants are to be considered. However, former participants excluded due to the “rule of parity” need not be included. Also if the employer is contemplating a merger/acquisition during the upcoming valuation year, that affiliation need not be considered in the valuation of plan liabilities.

Due to the new benefit restrictions applicable under code section 436 and ERISA section 208(g), the issue arises as to whether those restrictions may be taken into account in calculating normal costs and benefit liabilities. For example, if a plan permits lump sum distributions as of the valuation date that are later restricted during the plan year, should the value of the lump sum be factored into the normal cost and plan liabilities? The proposed regulations state that the plan actuary is not to anticipate that a benefit restriction will become applicable during the year for valuation of normal costs and plan liabilities, even if those restriction may actually occur during the year.

C. Plan Liabilities

Once benefits have been determined for the applicable participant/retiree pool, plan liabilities can then be assessed. That value is critical in determining the minimum required contribution that — for plans that are not at risk — is a function of current normal costs and an amortization of past service liabilities. Liabilities are then segmented into two divisions — benefits accrued or expected to be accrued during the current valuation year and therefore expensed through the target normal cost versus unfunded benefits accrued before the current valuation year and therefore expensed through the shortfall amortization installment. Those liabilities are to be determined using the applicable interest rate (under the modified yield curve) as of the valuation date (in our example, January 1, 2008). Funding target is defined as the present value of all plan liabilities as of the valuation date.

D. Plan Assets

Under prior rules, plan assets were required to be valued at the fair market value; however, the regulations permitted some smoothing of the values by allowing averaging of the fair market values over a period of time not more than four years before the valuation date. The intent of the smoothing was to reflect the appreciation or depreciation in the fair market value of assets to be recognized gradually over the plan years, similar to the smoothing effect that resulted from the prior amortization of experienced gains and losses allowed under code section 412(b)(2)(B)(iv) and (3)(B)(ii). However, the resulting plan asset value had to fall within an 80 percent to 120 percent corridor of the actual fair market value of assets.

The method used to determine the resulting “smoothed” value of plan assets was considered part of the plan’s funding method and required to be disclosed in the plan’s actuarial report. PPA ’06 narrows the averaging period from 4 years to 24 months and the corridor of 80 percent to 120 percent to a corridor of 90 percent to 110 percent, thus producing a value of plan assets that is closer to true fair market value. In determining the average value, plan assets are equal to the average of the fair market value of assets on the valuation date and the adjusted fair market value of

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assets valued under one or more earlier determination dates (not more than 24 months before the valuation date). However, in its proposed regulations under section 430, the IRS takes a literal approach to “averaging” — prior asset values may be adjusted for cash flow items that occurred during the intervening period of time (such as employer contributions, benefit payments, and administrative expenses), but not expected earnings (interest and dividends) that were allowed under the prior averaging rules. That approach is less favorable than allowed under prior law. Employer contributions made for the prior plan year after the current valuation date are also to be included in plan assets, but must be discounted to the valuation date using the prior year’s effective interest rate. That makes the value of plan assets neutral to the timing of contributions made after the end of the prior plan year.

Thus, if the value of plan assets increases over time, the use of averaging will tend to result in a lower value of plan assets than the current fair market value; conversely, if assets decline in value, the use of the averaging will result in a higher value of plan assets, protecting the employer from volatility in expected minimum contribution amounts. Hence, due to the more favorable market over the past four years, many plans will elect not to use the averaging method, but instead simply use a fair market value. However, for employers with a negative return on assets for the year, the averaging method would be preferable.

E. Actuarial Assumptions

1. Mortality table. Just as was required before PPA ’06, the statute dictates that the IRS will set forth the mortality table used in the calculation of liabilities. Pre-PPA ’06 set forth the standard that the mortality table should be “based upon the actual experience of pension plans and projected trends in such experience” and should take into account “results of available independent studies of mortality of individuals covered by pension plans.” The standard also required the IRS to periodically review and update the mortality table to reflect actual experience and projected trends. In 2005, the IRS issued proposed regulations and required plans with 500 or more participants (including active and inactive participants) to use gender-distinct separate mortality tables for nonannuitant and annuitant periods, based on the RP-2000 Mortality Tables Report. Small plans (those with fewer than 500 participants) could use a combined table that applied the same mortality rates to both annuitants and nonannuitants. However, due to the numerous changes imposed by PPA ’06 and the time needed to adjust actuarial valuation systems, the final regulations backed off from the use of separate tables and allowed all plans to use a blended table for 2007.

As PPA ’06 affirmed the IRS’s determination of the mortality table to be used in valuing plan liabilities and used the same standard applicable under prior law, it was no surprise that the IRS’s proposed regulations under PPA ’06 that were issued in 2007, and the final regulations issued in 2008, require the use of separate mortality rates for annuitants and nonannuitants. Those tables are based on the RP-2000 Mortality Tables Report, which provide separate tables for males and females and projection factors to reflect expected improvements in mortality. However, for plans with fewer than 500 participants, the proposed and final

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105Prop. reg. section 1.430(g)-1(c)(2).
106Id., former reg. section 1.412(c)(2)-1(b)(7).
107Because 2007 is a pre-PPA ’06 year, employer contributions for the 2007 plan year made after the 2008 valuation date are not required to be discounted. See prop. reg. section 1.430(g)-1(d)(1)(ii).
11070 Fed. Reg. 72,260 (Dec. 2, 2005). The RP-2000 Mortality Table was prepared by the Society of Actuaries. See the RP-2000 Mortality Table Report, released in July 2000, available at http://www.soa.org/files/pdf/rp00_mortalitytables.pdf (last accessed Oct. 6, 2008). Annuity mortality tables are derived from the mortality experience of participants and beneficiaries who actually received benefits from the plan, whereas nonannuitant mortality tables are derived from the mortality experience of currently employed participants. As the number of health-induced early retirements generally results in higher mortality experience that is applicable to the population of currently employed individuals, the use of two different tables is a more accurate measure in determining plan liabilities.
115See supra notes 110 and 111. The annuitant tables are used to determine present value of benefits for existing annuitants. For nonannuitants (active employees and terminated vested participants), the nonannuitant table is used for valuing benefits for the period of time those benefits are expected to commence, but then the annuitant table is used for valuing benefits during the period of time in which the benefits are expected to be paid. See prop. reg. section 1.430(h)(3)-1(b)(1)(i) and reg. section 1.430(b)(3)-1(b)(1)(i).
116Prop. reg. section 1.430(h)(3)-1(a)(1). A plan’s liabilities are more accurate if the likelihood of future mortality improvement is considered in the mortality assumptions. The regulations reflect the fact that expected mortality improvements can be recognized in one of two ways; a static projection in which one table is used for all participants but the table is updated annually or a fully generational projection in which the base table is projected to all future years for each participant. For sponsors using the static method for the 2008 valuation the regulations projected from 2000 (the base year of the RP-2000 table) to 2015 (7 years after the 2008 valuation date) for annuitants and 2023 (15 years after the 2008 valuation date) for nonannuitants. For sponsors using the generational method, the regulations include base mortality tables along with projection factors (Scale AA) in order to determine the generational tables. Use of the generational tables eliminated the recognition of mortality losses if there was mortality improvement.
regulations permit the use of a blended table for all participants, as opposed to separate tables for annuitants and nonannuitants, to simplify the actuarial valuation for those plans.\textsuperscript{117}

For plans with sufficient credible mortality experience of their own, PPA ‘06 permits the plan sponsor to use substitute mortality tables with the approval of the IRS.\textsuperscript{118} In determining if a separate population within a gender has “credible mortality experience,” the final regulations require that there be at least 1,000 deaths within that gender over the period covered by the applicable experience study.\textsuperscript{119} Under the proposed and final regulations, the plan sponsor must request use of substitute tables at least seven months before the first day of the plan year and those tables, if approved, must be applicable for the entire controlled group.\textsuperscript{120}

As allowed under prior law, a separate mortality table can be used to value disability benefits.\textsuperscript{121}

As continues to be the case from prior law, section 417(e) imposes restrictions on the ability of the plan to force a lump sum distribution of benefits (referred to as the cash out restriction). However, under prior law, the valuation of the present value of benefits was to be determined using a mortality table, determined by the IRS, that was to be “based on the prevailing commissioners’ standard table for valuing reserves for group annuity contracts.”\textsuperscript{122} That mortality table, therefore, was not necessarily comparable to the mortality table used under the minimum funding rules of code section 412. PPA ‘06 amended code section 417(e)(3) to provide that the determination of present value of benefits for the cash out restrictions be based on same mortality table specified under the new funding rules of code section 430, with appropriate modification for use under the cash out rules.\textsuperscript{123} However, this table is required to be used without regard to the option provided under the statute for substitute mortality table or separate mortality tables for disabled individuals. The IRS invites comments as to how the mortality tables set forth under the proposed regulations should be modified in applying the minimum present values rules of section 417(e)(3).\textsuperscript{124}

2. Interest rates. Under prior law, the interest rate used to value current liabilities was determined using an interest that was between 90 percent to 100 percent of the average of the prescribed interest for the previous four years, weighted 40 percent, 30 percent, 20 percent, and 10 percent for each of the prior years (with the 40 percent applying to the most recent year).\textsuperscript{125} The new law rejects the use of a single interest rate to determine liabilities and opts instead for three different interest rates determined under a modified yield curve that changes every six months.\textsuperscript{126} This yield curve is determined based on three different segment rates which in turn are determined on 24-month averages of high-quality corporate bond yields (for example, single-A, double-A, and triple-A bonds) with maturity rates that fall within the appropriate segment periods.\textsuperscript{127} The first segment rate is based on an averaged yield determined over a period from 0 to 5 years; the second segment rate is based on an averaged yield determined over the next 15 years beginning after the end of the first segment; and the third segment rate is based on an averaged yield determined over any time after the end of the second segment.\textsuperscript{128}

The plan may use the segment rates for the month containing the valuation date or any of the four months immediately preceding the valuation month (a four-month lookback).\textsuperscript{129} PPA ‘06 also provides the option of using a full yield curve in lieu of a three-segmented yield

\textsuperscript{117}See the preamble to prop. reg. 1.430(h)(3)-1.
\textsuperscript{118}Under former code section 412(b)(5)(B) and former ERISA 302(b)(5)(B), 29 U.S.C. section 1082(b)(5)(B), the interest rate set forth by statute varied. Through 2001, it was the 30-year Treasury bond rate. From 2002 through 2003, a rate up to 120 percent of the 30-year Treasury rate was allowed. As a result of the discontinuance of the 30-year Treasury rate, the statute was amended for 2004 and 2005 and provided a composite rate of long-term, high-quality corporate bonds. For 2006, the law reverted back to the 30-year Treasury bond rate.
\textsuperscript{119}See prop. reg. section 430(h)(2)-1(c).
\textsuperscript{121}Prop. reg. section 1.430(h)(3)-2(c)(ii). According to the IRS, the 1,000 death threshold was set at this level “so that there is a high degree of confidence that the plan’s past mortality experience will be predictive of its future mortality, and is consistent with relevant actuarial literature.” See the preamble to reg. section 1.430(h)-1.
\textsuperscript{122}Prop. reg. section 1.430(h)(3)-2(b)(1)(ii) and 1.430(h)(3)-2(d)(1)(i) and reg. section 1.430(h)(3)-2(b)(1)(ii) and 1.430(h)(3)-2(d)(1)(ii).
\textsuperscript{123}Code section 430(h)(3)(C) and ERISA section 303(h)(3)(C), 29 U.S.C. section 1083(h)(3)(C) and 26 U.S.C. section 1083(h)(3)(D).
\textsuperscript{124}Prop. reg. section 1.430(h)(3)-1(b)(2).
\textsuperscript{125}Prop. reg. section 1.430(h)(3)-1(b)(2) and reg. section 1.430(h)(3)-1(b)(2).
\textsuperscript{126}Code section 430(h)(2)(E) and ERISA section 303(h)(2)(E), 29 U.S.C. section 1083(h)(2). There is a transitional rule for years 2008 through 2010 that is optional and provides a blending of the prior rates with the current rates.
\textsuperscript{127}Code section 430(h)(2)(D)(1) and ERISA section 303(h)(2)(D)(1), 29 U.S.C. section 1083(h)(2)(D)(1). For example, for September 2008, the first segment rate was 5.07, the second segment rate was 6.93, and the third segment rate was 6.64. See IRS Notice 2008-75, 2008-38 IRB 1, Doc 2008-19020, 2008 TNT 174-6, available at http://www.irs.gov/pub/irs-drop/n-08-75.pdf (last visited Sept. 11, 2008). Those rates will be averaged over one month instead of a single specific day during the month. See prop. reg. section 430(h)(2)(c).
\textsuperscript{128}Prop. reg. section 430(h)(2)(D)(1) and reg. section 1.430(h)(3)-2(b)(1)(ii) and 1.430(h)(3)-2(d)(1)(ii).
\textsuperscript{129}Code section 430(h)(2)(B) and ERISA section 303(h)(2)(B), 29 U.S.C. section 1083(h)(2)(B).
The valuation of the expected form of payment is now explicitly required to be taken into account. For example, if the actuary assumes that the benefit will be paid in the form of a lump sum amount, it must be valued as such, to the extent that amount materially affects the calculation of the funding target. Hence, the issue arises as to how to value a lump sum amount for the funding rules, if the code permits a lump sum distribution provided the present value of a participant’s benefits is equal or less than $5,000, as valued under code section 417(e). The proposed regulations assume that the lump sum amount is a proxy for a deferred annuity and thus the present value of the future annuity payments is determined using the current yield curve, but substituting the code section 417(e) mortality table for that table used under the funding rules.

F. Funding Methods

Before PPA ’06, there were six acceptable actuarial cost methods that could be used to allocate normal costs and the amortization of past service liabilities to current year costs. As PPA ’06 now requires normal costs to be funded based solely on the present value of expected and accrued current costs, that value is indicative of the unit credit cost method. Any required amortization of a funding shortfall (plan liabilities compared to plan assets) is over a straight seven-year amortization schedule, with no separate amortization of actuarial gains/losses. However, the proposed regulations regard the following options as part of the plan’s funding method and therefore any changes are subject to IRS preapproval: use of averaging in the valuation of plan assets; use of the segmented vs. full yield curve and the applicable month.
for valuation; estimation of benefits accruing during the year; and for small plans, the selection of the valuation date during the plan year.

The target normal cost is the present value of benefits that accrued during the plan year, including increases in past service costs attributable to current year increases in compensation.\footnote{144}

G. Credit Balances

As noted earlier, Congress created the use of a plan’s funding standard account to keep track of cumulative charges vs. cumulative credits assessed against the account. If cumulative credits in a given valuation year exceeded cumulative charges, the plan had a positive credit balance that could be used to offset against the required minimum funding contribution.\footnote{143} If the excess credit balance was not used in full to offset current year required contribution, the balance was carried forward using the plan’s actuarial interest rate.\footnote{144} As mentioned earlier, those excess balances led to contribution holidays during the 1980s that resulted in funding shortfalls during the 1990s when interest rates declined (causing plan liabilities to rise) and market values declined (causing plan assets to also decline).

While Congress’s creation, credit balances fell out of favor during the legislative proposals that surfaced before the 1996 PPA. The result was not only a bifurcation between the credit balance that existed before PPA ’06 and the credit balance that resulted after PPA ’06, but the varying approaches as to when plan assets would reflect or not reflect those balances for a variety of purposes under the new law. The PSA carryover produced under the prior rules and existing as of the last day of the valuation date before 2008 is renamed the “carried over balance” (COB). Any future excesses of employer contributions over required minimum contributions beginning in 2008 will be treated as an increase in the plan assets unless the employer elects to add it to the prefunding balances (PFB).\footnote{145} Both amounts are still available to reduce annual minimum required contributions (in some circumstances). However, the COB must be used first in reducing the minimum required contribution.\footnote{146} This election to use part or all of the credit balances to reduce contributions must be made on or before the due date for filing the plan’s annual report (Form 5500) for the plan year to which the election relates.\footnote{147} Unlike the rules under the prior law, COB and PFB must be adjusted annually to reflect actual investment performance of the plan assets, not an actuarial assumed interest rate.\footnote{148}

Congress did provide plan sponsors with the ability to waive all or a portion of the credit balances all together, before determining the value of plan assets for the year. However, once that election is made, it is irrevocable and thus those balances are eliminated forever.\footnote{149} The COB must be reduced to zero before the plan sponsor may elect to reduce all or a portion of the PFB.\footnote{150}

Under prior law, the function of the credit balance was to reduce future required employer contributions. While that function continues under PPA ’06, the use of COB and PFB is also relevant in the determination of plan assets for a variety of purposes. Generally, COB and PFB reduce plan assets for purposes of determining:

- the determination of the funding shortfall, used to determine the shortfall amortization charge that is assessed against the minimum required contribution for the year;\footnote{151}
- the determination of whether a plan is at risk (discussed below);\footnote{152}
- the determination as to whether any of the benefit restrictions of section 436 and ERISA section 206(g) apply.\footnote{153}

The author characterizes Congress’s approach to when COB and/or PFB are subtracted from plan assets as schizophrenic such that plan actuaries use a chart (see the chart in Appendix A of this article) to determine when it should happen. From a policy point of view, it makes no sense to penalize plan sponsors with a positive credit

\footnote{142} Code section 430(b) and ERISA section 303(b), 29 U.S.C. section 1083(b).
\footnote{143} Former code section 412(a)(2) and former ERISA section 302(a)(2), former 29 U.S.C. section 1082(a)(2).
\footnote{144} Former code section 412(b)(5)(A) and former ERISA section 302(b)(5)(A), former 29 U.S.C. section 1082(b)(5)(A).
\footnote{145} Code section 430(f)(4)(A) and ERISA section 303(f)(4)(A), 29 U.S.C. section 1083(f)(4)(A). Once future excesses of employer contributions are deemed to be part of the plan’s assets, those excesses are not available to offset future minimum required contributions, but do increase the value of plan assets for purposes of the FTAP calculation and the determination of the shortfall.
balance either pre- or post-PPA '06 — however, the new law doesn’t reflect that policy point of view.

Shortfall amortization charge. PPA '06 eliminates amortization bases that were created before January 1, 2008, (with the exception of any outstanding funding waiver amortization bases).154 Beginning on January 1, 2008, the funding shortfall is defined as the excess (if any) of the funding target for the plan year minus the value of plan assets (reduced by COB and PFB).155 Any funding shortfall will then be amortized over seven years with payments assumed to be due at the beginning of 2008 and each year until 2014.156 This resulting amount is referred to as the shortfall amortization charge (SAC).

For the 2009 and subsequent plan years, the statute could have taken a simplified approach of redetermining the funding shortfall each year and amortizing the shortfall over the next seven years; prior year SACs could have been eliminated prospectively and substituted with a new SAC. This is the approach used if the funding shortfall is zero — prior year shortfall amortization bases (SABs) are eliminated, as well as the SACs associated with those bases.157 However, if the funding shortfall is not zero for a given plan year, the statute does not take this simplified approach. Instead, for the 2009 and later plan year, the funding shortfall is redetermined using the current value of the funding target for the applicable year minus the value of the plan assets (reduced by COB and PFB) for the applicable year. However, an SAB is now created equal to the funding shortfall for the year minus the present value (using the modified yield curve applicable to the valuation year) of any outstanding shortfall amortization installments.158 As the modified yield curve changes each year, the present value of the outstanding SACs will change over time. However, because the SAC created in a prior year still has to be paid for the current year, those installments must be deducted from the funding shortfall; otherwise they would be double counted in both the required minimum contribution and this year’s SAB.

The proposed regulations have a simple example illustrating these rules:

**Example for January 1, 2008:** On January 1, 2008, the Plan’s Funding Shortfall = Funding Target of $2.5 million - Plan Assets of $1.8 million = 2008 Shortfall Amortization Base = $700,000. Assuming a 2008 modified yield curve with an interest of 5.26 percent for the first five years of the amortization period (from the first segment of the yield curve) and an interest rate of 5.82 percent for the sixth and seventh years of the amortization period (from the second segment of the yield curve), the seven Shortfall Amortization Installments are each equal to $116,852.159 These level installments are due January 1, 2008, through January 1, 2014.

**Example for January 1, 2009:** On January 1, 2009, the Plan’s Funding Shortfall = Funding Target of $2.75 million - Plan Assets of $1.9 million = $850,000. The 2009 Shortfall Amortization Base of $850,000 must be reduced by the present value of the six remaining 2008 Shortfall Amortization Installments of $116,852, now valued using the 2009 modified yield curve. Assuming a 2009 modified yield curve with an interest of 5.5 percent for the first five years of the remaining amortization period (the first segment rate of the 2009 yield curve) and 6 percent for the sixth year of the amortization period (the second segment rate of the 2009 yield curve), the present value equals $613,952.160 Hence, the 2009 Shortfall Amortization Base is $850,000 - $613,952 = $236,048. This new 2009 Shortfall Amortization Base needs to be amortized over seven years using the 2009 yield curve, producing Shortfall Amortization Charges as of January 1 for 2009 through 2015 of $39,653.161

Similarly, if a funding waiver is granted during a plan year, it must be amortized over a five-year period, with the resulting amount referred to as the funding waiver amortization charge (FWAC).162 In the next five years, the present value of the remaining FWACs must be revalued (using the then-current modified yield curve) and deducted from the difference between the funding target and plan assets in order to determine that year’s shortfall amortization base.163 The example used in the IRS proposed regulations reflecting a 2006 and 2008 funding waiver is analyzed in Appendix B of this article.

**H. Minimum Required Contribution**

Under the new rules, there are several components to determining the minimum required contribution for each plan year:

- TNC equals the present value of accrued benefits earned or accrued during the plan year, determined according to the actuarial assumptions discussed above.
- If the 2008 funding target less plan assets produces a positive shortfall amortization base, the balance is to be amortized over a seven-year period, determined using the modified yield curve (or full yield curve if elected). The amortized amount (the SAC) is

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154 Code section 430(c)(5)(A) and ERISA section 303(c)(5)(A), 29 U.S.C. section 1083(c)(5)(A).
155 Code section 430(c)(4) and ERISA section 404(c)(4), 29 U.S.C. section 1104(c)(4).
156 Code section 430(c)(2)(A) and ERISA section 430(c)(2)(A), 29 U.S.C. section 1083(c)(2)(A).
157 Code section 430(c)(6) and ERISA section 303(c)(6), 29 U.S.C. section 1083(c)(6).
158 Code section 430(c)(3) and ERISA section 303(c)(3), 29 U.S.C. section 1083(c)(3). See prop. reg. section 1.430(d)-1.
159 The calculation is as follows: $700,000 divided by [1 + 1.0526 + 1.0526(2) + 1.0526(3) + 1.0526(4) + 1.0582(5) + 1.0582(6)] = $116,852, as the shortfall amortization installment is due at the beginning of each plan year.
160 The calculation is as follows: $116,852 x [1 + 1.055 + 1.055(2) + 1.055(3) + 1.055(4) + 1.06(5)] = $613,952.
161 The calculation is as follows: $236,048 divided by [1 + 1.055 + 1.055(2) + 1.055(3) + 1.055(4) + 1.06(5)] = $39,653.
162 Code section 430(e)(1) and ERISA section 303(e)(1), 29 U.S.C. section 1083(e)(1).
due on January 1, 2008, and each January 1 thereafter until 2014. Beginning on January 1, 2009, if the 2009 funding target less plan assets produces a positive SAB, that 2009 base is reduced by the present value (using the 2009 modified yield curve) of the remaining six SACs created from the 2008 SAB.\(^\text{164}\)

- As was the case under prior law, an employer can apply to the IRS for a funding waiver for all or a portion of the minimum required contribution.\(^\text{165}\) That funding waiver would then be amortized over the next five years and added to the minimum required contribution for each of the next five years.\(^\text{166}\) The example from the IRS’s proposed regulations analyzed in Appendix B of the article illustrates the difference in determining the FWAC for funding waivers granted pre- and post-PPA ’06. Once determined, the present value of the remaining FWAC must be determined for each subsequent year using the then-applicable modified yield curve and used to offset that year’s SAB.

- While credit balances could be used freely to offset annual minimum employer contribution requirements, PFB and COB credit balances may only be used to offset the minimum required employer contribution if the plan’s funding target is at least 80 percent.\(^\text{167}\) The statute also mandates an ordering requirement such that COB must be used first to reduce the minimum required contribution, before PFB can be used.\(^\text{168}\)

Funding target, plan assets, target normal costs, prior year shortfall amortization charges, and prior year funding waiver amortization charges are the key elements in determining the minimum required contribution for the plan.

Step 1: The current year’s funding shortfall is determined by taking the funding target and subtracting plan assets as of the valuation date.\(^\text{169}\) If this funding shortfall is zero, all prior SABs and all funding waiver amortization bases are reduced to zero as well.\(^\text{170}\)

Step 2: If the current year’s funding shortfall is positive, it is reduced by the present value (using the current year’s modified yield curve) of prior year’s outstanding SACs and prior year’s outstanding FWACs. The balance is then amortized using the current year’s modified yield curve to determine the seven years’ amortization installments. Those amounts will be due as of the first of the current year and the first of each of the next succeeding years.\(^\text{171}\)

Step 3: Minimum Required Contribution equals the current year’s target normal cost + this year’s shortfall amortization charge created in a prior year (provided it’s still due under its seven-year schedule) + this year’s funding waiver amortization charge created in a prior year (provided it’s still due under its five-year schedule) + shortfall amortization charge created for the current year (determined by the difference between the funding target and plan assets, reduced by the present value of outstanding shortfall amortization charges and funding waiver amortization charges).

Step 4: Provided the plan is at least 80 percent funded, COB (first) and PFB (second) can be used to offset the minimum required contribution computed above.

\[ MRC = TNC + SAC + AFW; \]

where if the Funding Target is at least 80 percent, COB and/or PFB may be used to offset MRC.

Using the same example above:

**For the 2008 Plan Year** (assuming no outstanding funding waivers):

If the target normal cost for the 2008 plan year is $100,000, the 2008 MRC = 2008 TNC + 2008 shortfall amortization installment = $100,000 + $16,852 = $116,852.

**For the 2009 Plan Year** (assuming no outstanding funding waivers):

If the TNC for the 2009 plan year is $110,000, the 2009 MRC = 2009 TNC + 2009 shortfall amortization installment + 2009 shortfall amortization installment = $110,000 + $116,852 + $39,653 = $266,505.

For subsequent plan years, the current TNC is determined, to be added to all outstanding shortfall amortization installments and to, if any, waiver amortization installment, as well as the current year’s shortfall amortization installment. Certainly, without the use of Excel spreadsheets, keeping track of the outstanding amortization installments could be a nightmare!

### I. Funding Target Attainment Percentage

There is a new computation under PPA ’06 that is used for a variety of purposes. It is defined as the difference between plan assets (reduced by all credit balances, COB, and PFB) and plan liabilities, expressed as a fraction:

\[ FTAP = \frac{Assets \ - \ COB \ - \ PFB}{Funding \ Target} \]

### J. At-Risk Plans

Pre-PPA ’06, pension plans that did not meet the funding target of 90 percent of current liabilities were subject to the deficit reduction contribution minimum funding rules. Those rules accelerated the amortization of

\[ Code \ section \ 430(c)(2) \ and \ ERISA \ section \ 303(c)(2), \ 29 \ U.S.C. \ section \ 1083(c)(2). \]

\[ Code \ section \ 430(e) \ and \ ERISA \ section \ 303(e), \ 29 \ U.S.C. \ section \ 1083(e). \]
unfunded past service liabilities to reduce exposure for the PBGC should the plan be terminated later. While PPA ’06 closes the underfunding gap with a seven-year amortization of unfunded past service liabilities, there is still the potential for ongoing plans to terminate with unfunded benefits. Hence, PPA ’06 imposes additional funding requirements on plans that are deemed to be at risk in order to reduce the risk of an underfunded plan termination.172 Once a plan is determined to be at risk, the funding targets and the funding normal costs are calculated using actuarial assumptions that accelerate the timing of benefit payments, thereby resulting in higher funding targets and higher normal costs. Those are referred to as the at-risk funding target and the at-risk target normal costs. By requiring greater annual contributions, the amount of the underfunding will be reduced in the event of a subsequent plan termination.

As a result, for plans that are at risk, there are two sets of calculations:

- the regular funding target = plan’s accrued liabilities to date, using the normal actuarial assumptions set forth in section 430(h) and ERISA section 303(h), and the regular FTAP = [plan assets - COB - PFB] divided by regular funding target; and

- the at-risk funding target = plan’s accrued liabilities to date, adjusted for the at-risk actuarial assumptions under section 430(i)(1)(B) and ERISA section 303(i)(1)(B), and the at-risk FTAP = [plan assets - COB - PFB] divided by at-risk funding target.173

The at-risk actuarial assumptions accelerate the timing of benefit payments by assuming that all participants who are eligible for benefits during the current plan year and the next 10 plan years will retire at the earliest retirement date under the plan and elect benefits that result in the highest present value of benefits (for example, subsidized optional form, subsidized early retirement commencement).174 Normally this should produce a larger funding target than the regular funding target and a larger at-risk FTAP than the regular FTAP.175 Obviously plans with heavily subsidized early retirement benefits and/or optional forms of payment will be most affected, as well as plans with older workforces.

The determination of at-risk status is made with prior year data. A plan is deemed to be at risk if both:

- the regular FTAP for the prior year is less than 80 percent; and

- the at-risk FTAP for the prior year is less than 70 percent;176 however, there are transition rules whereby the at-risk funding target is phased in over a five-year period.177

There is a small-plan exception whereby plans with 500 or fewer participants are not deemed to be at risk for the plan year.178

There are two consequences for a plan that is deemed to be at risk in a given plan year:

- the at-risk funding target must be used in the computation of the shortfall amortization base, and therefore, the minimum required contribution for the year;179 and

- if the plan was at risk in any two of the preceding four plan years, a load factor of $700 per participant and 4 percent of the funding target and target normal cost apply;180 this load factor reflects the reality that, should the plan have to terminate, there would be an additional cost of purchasing annuities upon termination.

Thus, if a plan is determined to be at risk for a given plan year:

- funding target is greater of the regular funding target or the at-risk funding target;181

- if the plan has been at risk for two of the four preceding plan years, this funding target is increased by 4 percent and then added to a loading charge of $700 per participant;182

- target normal cost is the greater of the regular target TNC or the at-risk TNC;183 and

- if the plan has been at risk for two of the four preceding plan years, this target normal cost under

172Code section 430(i)(1) and ERISA section 303(i)(1), 29 U.S.C. section 1082(i)(1).

173While plan assets are normally reduced by credit balances in determining the at-risk FTAP, the plan sponsor does have the option to elect to reduce the credit balances by COB and PFB before ascertaining the at-risk FTAP.


175In no event are the at-risk funding target and the at-risk funding normal cost to be less than the regular funding target and the regular funding normal cost. See code section 430(i)(3) and ERISA section 303(i)(3), 29 U.S.C. section 1083(i)(3).

176Code section 430(i)(4)(A) and ERISA section 303(i)(4)(A), 29 U.S.C. section 1083(i)(4)(A). The 80 percent prong in the first part of this test is phased in over time: for 2008, 65 percent is used; for 2009, 70 percent; for 2010, 75 percent; and then 80 percent for 2011 and on. See code section 430(i)(4)(B) and ERISA section 303(i)(4)(B), 29 U.S.C. section 1083(i)(4)(B).

177Code section 430(i)(5) and ERISA section 303(i)(5), 29 U.S.C. section 1083(i)(5). The at-risk funding target is phased in 20 percent per year over a consecutive five-year period; hence after 3 consecutive years of at-risk status, the at-risk funding target would be calculated 40 percent of the regular funding target plus 60 percent of the at-risk funding target. However, if the plan is no longer at risk during one of these years, the phase-in drops to 0 percent and the plan loses the phase-in feature. However, years before 2008 are not considered in this computation.

178Code section 430(i)(6) and ERISA section 303(i)(6), 29 U.S.C. section 1083(i)(6).


180Code section 430(i)(1)(C) and ERISA section 303(i)(1)(C), 29 U.S.C. section 1083(i)(1)(C).


the first bullet is increased by 4 percent (but not increased by the loading charge of $700 per participant). 184

V. Details of the PPA ’06 Benefit Restriction Rules

As noted under prior law, funding targets were used to avoid the lump sum restrictions for the top 25 highly paid employees, 185 quarterly employer contributions, 186 additional funding charges and notifications to participants, 187 and restrictions on plan amendment improvements. 188 In some circumstances, providing a security to the plan could avoid the restriction. Obviously, the policy behind those restrictions was to prevent leakage from a poorly funded plan through lump sum distributions and to prevent further underfunding of the plan through the expansion of benefits. PPA ’06 continues the use of some of those restrictions but expands new benefit restrictions to further those policy goals.

The limitation on benefits restrictions are qualification rules under section 401(a)(29), which cross-reference the rules in section 436 (with counterpart rules in ERISA Title I). The limitations are of three types:

- restrictions on the ability to provide shutdown benefits and other unpredictable event benefits; 189
- restriction on benefit accruals (referred to as either a “soft freeze,” meaning limitations on the ability to increase plan liabilities either through increases in benefits, establishment of new benefits, changing the rate of benefit accrual, or changing the vesting rate; or “hard freeze,” meaning freezing of future benefit accruals); 190 and
- restriction on the ability to make full or partial lump sum payments. 191

Similar to prior law, PPA ’06 uses funding targets to determine which of the limitations are applicable. For purposes of the benefit restrictions, a new term is defined — adjusted funding target attainment percentage (AFTAP) 192 — which is similar but not identical to the FTAP used under the minimum funding rules. The AFTAP is determined as of the prior year for purposes of determining which benefit restrictions are applicable in the current year. 193 FTAP equals plan assets (reduced by COB and PFB) divided by funding target. AFTAP adds to the numerator and the denominator of FTAP any annuity purchases made during the past two years for all non-highly paid participants. 194 The regular funding target is used for the calculation of AFTAP, even if the plan is at risk for purposes of the funding rules. 195 Once the AFTAP is determined, the various benefit restrictions are triggered depending on whether the AFTAP is below 60 percent; between 60 percent and 80 percent; or below 100 percent and the plan sponsor is bankrupt.

There are several ways to avoid the benefit restrictions other than contributing the amount necessary to attain the appropriate funding target:

- Except for the restriction on full or partial lump sum payments, those restrictions do not apply for the first five years of a new plan (including a predecessor plan). 196
- The plan sponsor can pledge security (for example, bond, cash, U.S.-backed security) in lieu of making contributions to the plan. 197 The value of the security is then treated as plan assets for purposes of the AFTAP determination.
- A plan sponsor can also avoid all of those restrictions by keeping the plan 100 percent funded. 198 Solely for purposes of this requirement, plan assets do not have to be reduced by COB and/or PFB (regardless of whether the plan sponsor elects to waive all or a portion of the credit balances), making it easier to satisfy this hurdle. 199
- While the COB and PFB cannot be used as employer contributions for purposes of avoiding the benefit restrictions, the plan sponsor can elect to waive all or a portion of the credit balances (COB first, then PFB). Then the portion waived would not reduce plan assets in the AFTAP calculation.

Each of the three types of benefit restrictions will be discussed in detail:

184 Code section 430(i)(2)(B) and ERISA section 303(i)(2)(B), 29 U.S.C. section 1083(i)(2)(B).
185 Reg. section 1.401(a)-5(b). These restrictions were unaffected by the passage of PPA ’06 and thus continue to be in effect. They can be avoided through the use of a variety of security arrangements set forth in the regulations.
186 Former code section 412(m) and former ERISA section 302(e), former 29 U.S.C. section 1082(e).
187 Former code section 410(d)(9) and former ERISA section 101(d)(1), former 29 U.S.C. section 1021(d)(1).
188 Code section 412(d)(11).
189 Code section 436(b) and ERISA section 206(g)(1)(C), 29 U.S.C. section 1056(g)(1)(C).
190 Code section 436(c)(1) and (e) and ERISA section 206(g)(2) and (g)(4), 29 U.S.C. section 1056(g)(2) and (g)(4).
191 Code section 436(d) and ERISA section 206(g)(3), 29 U.S.C. section 1056(g)(3).
193 ERISA section 206(g), 29 U.S.C. section 1056(g).
194 Id.
196 Code section 436(g) and ERISA section 206(g)(6), 29 U.S.C. section 1056(g)(6).
198 Code section 436(j)(3)(A) and ERISA section 206(g)(9)(C)(i), 29 U.S.C. section 1056(g)(9)(C)(i). The 100 percent target is transitioned over the next four years: 92 percent in 2008; 94 percent in 2009; and 96 percent in 2010. However, the transitional percentage is lost if the funding target in the prior year is not attained. For example, if the plan’s funding target was only 93 percent in 2009, it could not rely on the transition percentage for 2010. See code section 436(j)(3)(B) and (C), and ERISA section 206(g)(9)(C)(i) and (ii), 29 U.S.C. section 1056(g)(9)(C)(i) and (ii).
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A. Shutdown/Contingent Event Benefits

Shutdown benefits and any other benefit payable on other unpredictable contingent events must become frozen for the plan year, and, therefore, cannot be paid if the plan’s AFTAP is below 60 percent or would be below 60 percent should such benefits be paid. This is the case even if the shutdown benefits were scheduled to be paid in the future but accrued during the year in which the AFTAP fell below the funding target, unless the plan sponsor contributes the amount necessary to fund the shutdown benefits.200

B. Restrictions on Benefits

The plan may not be amended in a fashion that would increase liabilities under the plan either by increasing benefits, establishing new benefits, changing the rate of benefit accrual, and/or changing the rate of vesting if the plan’s AFTAP is below 80 percent or would be below 80 percent taking into account the amendment.201 The restriction does not apply to benefit increases under pay-related formulas, or to average wage increases that increase non-pay-related formulas.202 If the AFTAP falls below 60 percent for a given year, all current benefit accruals are frozen as of the plan’s valuation date and therefore do not accrue for the plan year.203 The statute does not limit the crediting of service for vesting and/or other purposes under the plan. As was the case for the benefit restriction for shutdown benefits, the plan sponsor can avoid the benefit restrictions by making contributions to meet the 80 percent and/or 60 percent funding target.204

C. Restrictions on Distributions

For purposes of restrictions on lump sum or other forms of accelerated payments, the statute has three different funding targets and varying restrictions on what it calls “prohibited payments.” A prohibited payment is defined as (1) any payment in excess of the monthly amount paid under a single life annuity (including any Social Security supplements) to a participant or beneficiary whose annuity starting date occurs during any period that the restriction is applicable, (2) any payment for the purchase of an annuity from an outside insurer, and (3) any other payment specified by the IRS in its regulations.205

If the plan’s AFTAP is below 60 percent, the plan may not pay any prohibited payment during the plan year.206 If the plan sponsor is in bankruptcy and the AFTAP is below 100 percent, the plan may not pay any prohibited payment during the plan year.207 If the plan’s AFTAP is at least 60 percent but less than 80 percent, the plan may distribute a one-time lump sum or otherwise accelerate benefit to a participant provided it does not exceed the lesser of 50 percent of the lump sum benefit or the present value of the participant’s maximum PBGC guaranteed benefit.208

D. Determination of AFTAP

The application of the above three limitations on benefits clearly hinge on the plan’s AFTAP for the current plan year. The statute makes a series of presumptions to determine this year’s AFTAP until the plan’s enrolled actuary makes a certification as to the actual AFTAP for the current plan year (which of course requires a valuation to be made for the current year). The presumptions are as follows:

- This year’s AFTAP is deemed to be the same as last year’s AFTAP until the actuary certifies to the contrary.209

- Similar to the benefit limitations described above, if the plan’s prior year AFTAP was at least 100 percent (determined without regard to the adjustment for two years’ worth of annuities for the nonhighly paid and determined with plan assets not reduced by COB and PFB), the employer may continue to rely on the presumption of fully funding the AFTAP for the current year.210 Alternatively, the plan sponsor may wish to elect to use all or a portion of the COB and/or PFB so that plan assets are not reduced in the determination of the actual AFTAP calculation.211

- If the enrolled actuary certifies before the beginning of the fourth month of the current plan year, the plan must use the actual AFTAP in the year in which the actuary certifies.212

200Code section 436(b)(2) and ERISA section 206(g)(1)(B), 29 U.S.C. section 1056(g)(1)(B).
201Code section 436(c)(1) and ERISA section 206(g)(2)(A), 29 U.S.C. section 1056(g)(2)(A).
202Code section 436(c)(3) and ERISA section 206(g)(2)(C), 29 U.S.C. section 1056(g)(2)(C). For example, a plan amendment that applies a cost of living increase on the benefit payments would be permissible, as long as the cost of the living increase didn’t exceed the current increase in average salaries for those participants covered by the amendment.
203Code section 436(e) and ERISA section 206(g)(4), 29 U.S.C. section 1056(g)(4).
204Code section 436(c)(2) and (e)(2) and ERISA section 206(g)(2)(B) and (g)(4), 29 U.S.C. section 1056(g)(2)(B) and (g)(4).
208Code section 436(d)(3) and ERISA section 206(g)(3)(C), 29 U.S.C. section 1056(g)(3)(C). For purposes of this benefit restriction, a participant and any beneficiary on his behalf (including an alternate payee) is treated as a single participant. See code section 436(d)(3)(B)(ii) and ERISA section 206(g)(3)(C)(ii)(II), 29 U.S.C. section 1056(g)(3)(C)(ii)(II). The restriction also does not apply to participants under plans frozen as of September 1, 2005. See code section 436(d)(4) and ERISA section 206(g)(3)(D), 29 U.S.C. section 1056(g)(3)(D).
209Code section 436(h) and ERISA section 206(g), 29 U.S.C. section 1056(g).
210Code section 436(j)(1) and ERISA section 206(j)(1), 29 U.S.C. section 1056(j)(1) (note that the 100 percent requirement is subject to a transitional rule for 2008 through 2010).
presumption of assuming the prior year’s AFTAP can be rebutted and the actual current year’s AFTAP can be used. 212

• After the fourth month of the current year passes without the actuary’s certification, the current year’s AFTAP is presumed to be the prior year’s AFTAP decreased by 10 percent until the actuary makes a certification. 213

• After the tenth month of the current year passes without the actuary’s certification, the current year’s AFTAP is presumed to be below 60 percent for the remainder of the year. 214 As a result of the below 60 percent AFTAP presumption benefits must be restricted until the later of the actuarial certification for the year or January 1 of the next year.

• The proposed regulations recognize the use of a range of actuarial certification that can apply during the first nine months of the year. 215 As long as the actual actuarial certification is provided within the first nine months of the year, the actuary can certify that the plan is within one of three ranges: between 60 percent and 80 percent, between 80 percent and 100 percent, and 100 percent or greater. This certification is an actual certification, not an estimate; hence, the consequences of being wrong may subject the plan to potential disqualification as it may not have been administered according to its terms. For example, last year’s AFTAP was 81 percent so the actuary certifies that the current year’s AFTAP is within the 60 percent to 80 percent range, hence the applicable benefit restrictions apply. On October 1, the current year’s AFTAP is computed to be 83 percent, which means that the benefits during the first 10 months of the plan year should not have been restricted. The IRS’s correction program for those operational failures does not address this issue. 216

The new rules obviously put a premium on performing early valuations during the plan year (certainly problematic for small employers) to negate the effects of the prior year’s underfunded status through earlier certifications. It’s not clear whether the content and/or form required for the actuarial certification will be similar to the rules contained in Schedule B of Form 5500. Certainly actuaries will await IRS guidance.

212 Code section 436(h)(3) and ERISA section 206(h)(3), 29 U.S.C. section 1056(h)(3). That certification must be in writing and provided to the plan administrator.

213 Code section 436(h)(2) and ERISA section 206(h)(2), 29 U.S.C. section 1056(h)(2). That presumption continues until the earlier of the actual actuarial certification or the 10th month of the plan year. For example, if the prior year’s AFTAP was 69 percent, the plan is presumed to have a current year AFTAP of 59 percent on April 1 until the actuary certifies to the contrary or until October 1.

214 Id.

215 See supra note 45.


The new rules also call into question whether an actuary can deliberately delay certification to delay the effective date of the benefit restrictions. For example, the employer knows that the restrictions will not apply once the actual AFTAP is computed but wishes to avoid lump sum payments which could be restricted if the presumptions kick in and the actuarial certification is avoided.

VI. New Accounting Rules

The code’s and ERISA’s funding and benefit restriction rules certainly pose new challenges for employers in funding and amending existing defined benefit plans. However, those rules are now exacerbated by new accounting rules that have severe consequences for an employer’s balance sheet if it maintains an underfunded defined benefit plan. Financial Accounting Standards Board mandates the rules used by accountants that value assets, liabilities, and income in accordance with generally accepted accounting principles.

Before 2006, FASB issued Financial Accounting Standard 87, “Employers’ Accounting for Pensions,”217 which required annual pension costs to be expensed on the employer’s balance sheet, but any difference between plan assets and plan liabilities simply had to be disclosed in the employer’s balance sheet footnotes. Similar to ERISA’s original intent, underfunding of pension liabilities was not to be discouraged, but should be disclosed to prospective investors. Due to concerns that the funded status of the plan was not being clearly communicated to existing and potential investors, FASB undertook a two-phase project to improve the accounting of underfunded pension plans that were maintained by an employer.

The first phase of the project resulted in the publication of FAS 158, “Employers’ Accounting for Defined Benefit Pension and Other Postretirement Plans.” 218 That statement amended FAS 87 with two primary changes:

• the overfunded or underfunded status of defined benefit plan maintained by the employer should be disclosed as an asset or liability on the employer’s balance sheet (not simply in the footnotes); and

• the funded status of the defined benefit plan should be measured as of the employer’s reporting date.

The first requirement was effective, for publicly traded companies, for fiscal years ending after December 15, 2006; for nonpublicly traded firms, it was effective for fiscal years ending after June 15, 2007. The second requirement is effective no later than 2008.

The end result is a corresponding adjustment to the employer’s equity amount depending on the value of the

217 Issued in December 1985, available at http://www.fasb.org/pdf/fas87.pdf (last visited Aug. 8, 2008). Generally, the accounting guidelines required the reporting of accumulated benefit obligations that reflected actual benefits accrued under the plan based on assumptions used by the plan in valuation; however the recent guidance requires the posting of projected benefits obligation (PBO). If plan assets are not at least equal to plan liabilities, the PBO serves as a measurement of liability.

defined benefit plan’s underfunding. This has an immediate impact on the employer’s earnings, earnings per share, its ratings, and its ability to obtain corporate lending. Those amounts will have to be calculated as of the fiscal year-end date, instead of the prior three months before the fiscal year-end date. Additional disclosure is also required.

The overfunded or underfunded status of the defined benefit plan is measured as the difference between the fair market value of plan assets and the projected benefit obligation (referred to as the PBO). PBO includes the present value of benefits under the plan’s formula attributable to service already provided.

The net pension expense posted to the employer’s income statement will continue to be determined according to the rules of FAS 87.

The second part of the FASB project is to consider all aspects of accounting both pension and postretirement benefits for purposes of disclosure on the employer’s balance sheet and to align that accounting with international standards. The second part of the project does not have an anticipated effective date as of yet.

VII. Coping Strategies

Due to the drastic acceleration of the minimum funding rules, the limitations on benefits for some underfunded plans, and the posting of any funding shortfalls on the employer’s balance sheet, numerous strategies have been discussed to assist employers in coping with the consequences of those rules. The following list includes possible strategies (it is not intended to be an exhaustive list):

- Many plan sponsors with underfunded plans are freezing future benefit accruals and adopting defined contribution plans for subsequent year accruals. Those freezes can apply to all participants for future accruals only or to new participants (the hard freeze). Alternatively, a plan sponsor may limit future benefit accruals based on a component of the benefit accrual formula (for example, service or salary component) (the soft freeze).

- In a recent Government Accountability Office report, it was disclosed that frozen plans are common. In its study, the GAO discovered that about 21 percent of all active participants in a single-employer defined benefit plan were affected by a freeze — the most common type was a hard freeze, which accounted for about 23 percent of the plans in the study. Larger sponsors (those with 10,000 or more participants) were less likely than smaller sponsors to implement a hard freeze. For the vast majority of sponsors with frozen plans, alternative retirement savings arrangements were put in place for affected participants. Plan sponsors said that the two main reasons for freezing their plans were the impact of the annual contributions on their cash flows and the unpredictability of plan funding.

While this approach limits the growth of the defined benefit plan’s liabilities, it does not answer the question as to how the sponsor will fund the future required minimum contribution levels.

- The plan sponsor could certainly decide to fully fund the plan using current cash reserves. For many employers, this is not an option due to the adverse impact that contribution would have on its balance sheet and the current outlay from cash reserves that could otherwise be used for other corporate needs. Also, that approach does not address the dilemma that the employer may face in the future — as participant pay continues to increase, thereby increasing future plan liabilities, overall costs will not be contained.

- The plan sponsor could decide to fully fund the plan through outside financing, either through the issuance of corporate bonds or other financing. The advantage is to offset the direct hit to expenses by fully paying off the unfunded balance through the financing of those costs over time. However, that approach still adds debt to the sponsor’s balance sheet that has to be repaid.

- The plan sponsor could purchase annuities for all or a subset of plan liabilities. The result would be to eliminate any future liabilities as they have been offset by the purchase of liabilities. In the current low interest rate market, that approach could be costly due to the premium assessed by insurers. If only a subset of the plan liabilities are annuitized, the remaining liabilities and assets are subject to ongoing compliance with the rules of the code and ERISA until the plan is terminated.

- The plan sponsor may decide to pursue a liability driven investment strategy. This approach matches future asset values with future plan liabilities by investing part or all of the plan assets in long-term bonds that mirror the plan liabilities. If the entire amount of the plan assets is not matched with plan liabilities, the balance can be invested in hedging investments that accomplish a similar goal. That strategy may not maximize the rate of return on the plan assets (therefore costing employers more), and hedging strategies have their own additional level of risk.

- The final strategy is one that has had recent press, at least at bar association meetings. It involves transferring a portion or all of the plan’s liabilities and plan assets to an independent management firm that would become the sponsor of the transferred plan. Obviously if the plan were underfunded, additional cash or other business assets would also have to be transferred for the purchaser to assume the underfunding risk. Those buyouts have not yet occurred in the United States, but have occurred in

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219 See “Defined Benefit Pensions: Plan Freezes Affect Millions of Participants and May Pose Retirement Income Challenges,” GAO-08-817 (July 2008). See also “Why Are Healthy Employers Freezing Their Pensions?” Alicia Munnell, Francesca Colub-Sass, Mauricio Soto, and Francis Vitagliano, Center for Retirement Research, Mar. 2006, No. 44 (providing various explanations as to why employers were freezing pensions).  

220 Id.
VIII. Conclusion

The PPA ’06 rules were enacted to insulate the PBGC from potential liability from terminated underfunded defined benefit plans by requiring employers to accelerate minimum required contributions and to restrict leakage from underfunded plans through accelerated distributions and/or increased benefits. While the PPA ’06 minimum funding rules and benefit restriction rules may be applauded, as they shore up the underfunding of single-employer defined benefit plans, they are so onerous that they will cripple the approaches that plan sponsors may consider in satisfying the requirement and certainly will limit any new defined benefit plans, except for small-employer plans. Just as the purchase of a home is regarded by most Americans as a long-term investment, any requirement to accelerate mortgage payments from 30 years to 18 years to 7 years would certainly diminish the growth of home ownership, even though it would strengthen banks and other financial institutions from potential liability through foreclosures.

In response to those new rules, plan sponsors of existing defined benefit plans are drastically freezing accruals under the plans to minimize future plan liabilities, and are moving to defined contribution plans for future accruals. Such an approach helps control the volatility of costs for plan sponsors but, lost in all the press, it imposes significant risks on plan participants — namely interest and mortality risks — neither of which such participants are competent to insure. From the participants’ standpoint, the defined benefit plan model is preferred — not only for the participant but for society as a whole — as it guarantees a certain level of monthly income for life during retirement. Congress has turned its back on defined benefit plans (except for wealthy small employers), resulting in a defined contribution model for participants — that doesn’t guarantee any monthly income for any duration. The typical employee may well decide that he cannot afford to retire, but instead have to continue to work beyond his anticipated “retirement age.” That could result in rising voter complaints at the polls!

221See Matthew Goldstein, “Wall Street Eyes the Pension Pot,” BusinessWeek, Aug. 18, 2008, at 22 (noting that British companies unloaded pension assets through a group annuity purchase from an insurer).

222Id. at 21.

223Id. at 21-22.

224See supra note 13.


the United Kingdom. The new plan sponsor would presumably pursue one of two courses: aggressively invest the plan assets to cover plan liabilities and then terminate the plan, or partner with an offshore captive insurance company to purchase the plan liabilities at a discount rate comparable to U.S. insurers and then terminate the plan when fully funded. Financial institutions such as Citigroup, J.P. Morgan Chase, Morgan Stanley, Prudential Financial, Cerberus Capital Management, and others are interested in taking over frozen pension plans to charge fees based on the value of the plan assets. Charles Millard, director of the PBGC, is in favor of the plan, provided the acquiring entity has a greater credit rating than the seller.

There are numerous issues under the code and ERISA that must be addressed under that strategy. Treasury and the IRS weighed in on August 6 with the issuance of a revenue ruling. The ruling stated that the transfer of a qualified retirement plan to an unrelated taxpayer that was not in connection with a transfer of business assets, operations, or employees from the employer to the unrelated taxpayer would violate the exclusive benefit requirement of code section 401(a). However, Treasury announced it would assemble “a legislative framework of principles” that could guide the development of federal legislation that would permit such transfers of frozen underfunded retirement plans. Treasury would seek the assistance of the PBGC, the Department of Labor, and the Commerce Department in fashioning such a framework.

In its press release, Treasury stated that any future legislation would be subject to the following fundamental requirements:

• advanced disclosure to participants and regulators;
• proof that the transferee was a financially strong entity in well-regulated sectors;
• demonstration that the transfer would be in the best interests of the participants and would not expose participants or the PBGC to more risk;
• limits on undue concentration of risk;
• assumption of full responsibility by the transferees and members of their controlled group for the liabilities of the transferred plans; and
• restrictions on subsequent transfer transactions by the same rules applicable to original transfer transactions.

Given those constraints and the recent history of defaults with subprime mortgage failures, the potential for use of that strategy in the context of a qualified defined benefit plan will be drastically reduced. Not everyone in Congress is enamored with the idea. Rep. Earl Pomeroy, D-N.D., issued a press release, stating, “I do not anticipate legislation authorizing [such transfers] — period.”
Appendix A. Use of Credit Balance (CB)

<table>
<thead>
<tr>
<th>Exclusion of credit balance from plan asset value</th>
<th>COB</th>
<th>PFB</th>
</tr>
</thead>
<tbody>
<tr>
<td>To determine if MRC is due</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>To determine shortfall in establishing new base</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>To determine 80 percent funding so that CB can be used to reduce MRC</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>To determine if plan is “at risk”</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>To determine if plan fully funded to avoid benefit restrictions</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>To determine funding percent for various benefit restrictions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Appendix B

The proposed regulations illustrating those rules:

Example for January 1, 2008: On January 1, 2008, the plan’s funding shortfall totaled $700,000 (funding target of $2.5 million - plan assets of $1.8 million = 2008 shortfall amortization base of $700,000). Assuming a 2008 modified yield curve with an interest of 5.26 percent for the first 5 years of the amortization period (from the first segment of the yield curve) and an interest rate of 5.82 percent for the sixth and seventh years of the amortization period (from the second segment of the yield curve), the seven shortfall amortization installments are each equal to $116,852.227 Those level installments are due January 1, 2008, through January 1, 2014.

However, let’s assume that a funding waiver of $300,000 was granted as of December 31, 2006. As PPA ’06 was not effective for 2007, the $300,000 funding waiver was amortized over 5 years using an actuarial interest rate of 8.5 percent. Hence, for 2007 through 2011, each year’s amortized installment would be $70,166.228 However, for 2008, as PPA ’06 is now applicable, the four remaining waiver amortization installments (2008 through 2011 installments) must be discounted at the segment rates from the applicable modified yield curve, not the actuarial interest rate of 8.5 percent. This produces a present value for these four remaining waiver amortization installments of $260,318.229 As the waiver amortization installment is due separately, its amount must be deducted from the plan’s funding shortfall of $700,000 (determined above) before computing the resulting shortfall amortization installment. Hence the plan’s shortfall amortization base is $439,682 ($700,000 - $260,318 = $439,682). Using the segment rates from the modified yield curve, the resulting shortfall amortization installment for 2008 and the next 6 years is $73,397.230

Thus, the 2008 minimum required contribution is $243,563 (target normal cost of $100,000 + shortfall amortization installment of $73,397 + waiver amortization installment of $170,166 = $100,000 + $73,397 + $70,166 = $243,563).

The example is then further complicated by assuming that the plan is granted a funding waiver in 2008 to the largest extent possible under law (that is, the required minimum contribution which does not include the installment required for the 2006 funding waiver). Hence the target normal cost plus shortfall amortization installment, or $173,397, may be waived under the funding waiver, but the $70,166 cannot be waived. While the first waived amortization installment is not due until 2009, the calculation of those installments is determined during the 2008 plan year, using the then-applicable modified yield curve. Hence, $173,397 amortized using a first segment interest rate of 5.26 percent for the first four installments and a second segment interest rate of 5.82 percent for the fifth installment produces an annual waiver amortization for the 2008 waiver of $40,530.231

Example for January 1, 2009: Now fast-forward to the beginning of the 2009 plan year when the funding target changes to $2.75 million, and plan assets are $1.9 million. The 2008 modified yield curve is no longer applicable; assume a yield curve with a first segment interest rate of 5.5 percent, a second segment interest rate of 6 percent, and a third segment interest rate of 6.5 percent. The waiver amortization installment relating to the 2006 waiver is now due, which is $70,166, as is the waiver amortization installment relating to the 2008 waiver, which is $40,530. The funding shortfall is $750,000 = (2 $2 million - $2.75 million = $750,000).

However, before the shortfall amortization installment is to be determined, the present value of the remaining 2006 waiver amortization installments and the present value of the remaining 2008 waiver amortization installments must be redetermined using the 2009 modified yield curve and then deducted from the $750,000. Hence the present value of the remaining $70,166 in waiver amortization installments (for 2009 through 2011) and the present value of the remaining $40,530 in waiver amortization installments (for 2009 through 2013) equals $382,309.232 Also the present value of the remaining 2008 shortfall amortization installments must be also redetermined under the new modified yield curve and then

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227The calculation is as follows: $700,000 divided by [1 + 1.0526 + 1.0526(2) + 1.0526(3) + 1.0526(4) + 1.0582(5) + 1.0582(6)] = $116,852, as the shortfall amortization installment is due at the beginning of each plan year.

228The calculation is as follows: $300,000 divided by [1 + 1.085 + 1.085(2) + 1.085(3) + 1.085(4)] = $70,166, as the amortized value of the funding waiver for 2007 and each of the remaining four years.

229The calculation is made by discounting each applicable waiver amortization installment by the applicable segment rate from the yield curve: $70,166 x [1 + 1.0526 + 1.0526(2) + 1.0526(3)] = $260,318, the present value of all the amortization installments for 2008 and each of the remaining three years.

230The calculation is made as follows: $439,682 divided by [1 + 1.0526 + 1.0526(2) + 1.0526(3) + 1.0526(4) + 1.0582(5) + 1.0582(6)], as the shortfall amortization installment is due at the beginning of each plan year.

231The calculation is made as follows: $173,397 divided by [1.0526 + 1.0526(2) + 1.0526(3) + 1.0526(4) + 1.0582(5) + 1.0582(6)], as the amortization installments begin at the beginning of 2009 and each of the remaining four years.

232The calculation is made as follows: $70,166 x [1 + 1.055 + 1.055(2)] = $199,715 and $40,530 x [1 + 1.055 + 1.055(2) + 1.055(3) + 1.055(4)] = $182,594. $199,715 + $182,594 = $382,309.
deducted from the new funding shortfall. Hence, the remaining six $73,397 annual shortfall amortization installments must be revalued using the 2009 modified yield curve, producing a present value of $385,511.\textsuperscript{233}

Therefore, the new shortfall amortization base is $82,180 ($850,000 - $382,309 - $385,511 = $82,180). This produces an annual shortfall amortization installment of $13,795.\textsuperscript{234}

Hence, for 2009, if target normal costs are $110,000, the required minimum contribution is $307,888 (TNC + 2006 waiver amortization installment of $70,166 + 2008 waiver amortization installment of $40,530 + 2008 shortfall amortization installment of $73,397 + 2009 shortfall amortization installment of $13,795 = $307,888). Thank heavens for Excel spreadsheets!

\textsuperscript{233}The calculation is made as follows: $73,397 \times [1 + 1.055 + 1.055(2) + 1.055(3) + 1.055(4) + 1.06(5)] = $385,511, as the amortization installments begin at the beginning of 2009 and each of the remaining five years.

\textsuperscript{234}The calculation is as follows: $82,120 \div [1 + 1.055 + 1.055(2) + 1.055(3) + 1.055(4) + 1.06(5) + 1.06(6)] = $13,795, as the amortization installments begin at the beginning of 2009 and each of the remaining six years.