February 3, 2010

Estimated 2010 required contributions and credit balances

Internal plan survey data and analysis by Mercer's US pension actuaries

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Summary

This report updates our October 1, 2009 report on the funded status and contribution requirements for single employer defined benefit pension plans. Our goal in developing this update is to highlight some of the funding challenges faced by plan sponsors starting in 2010 and the potential effects of some funding relief proposals pending in Congress.

Significant declines in the market values of investments, particularly equities, during late 2008 have materially reduced the assets of US qualified retirement plans. For many sponsors, however, the "smoothing" of the market value of plan assets permitted under the Pension Protection Act (which allows sponsors to take expected investment earnings into account), along with an increase in corporate bond interest rates in the last quarter of 2008, gave plan sponsors some financial breathing room for 2009.

Nonetheless, the funded status for most pension plans is anticipated to decline significantly for 2010. There are several reasons for this. In particular, corporate bond interest rates have fallen significantly since the end of 2008, increasing plan liabilities. The resulting net decline in funded status will mean higher – in some cases dramatically higher -- required contributions for 2010 relative to 2009. In addition, 2010 will bring the recognition of another portion of the previously deferred 2008 asset losses (which will be partially offset by a portion of 2009 asset gains) for plans that have elected asset smoothing.

Against this backdrop, this report attempts to provide some answers to two key questions being asked by policymakers: to what extent (i) are required contributions for 2010 higher than required contributions for 2009 and (ii) are credit balances available to help meet the required contributions for 2010.

To this end, this report uses 2008 funded status and estimates 2009 and 2010 funding information, including funded status, required contributions, and credit balances, using plan-specific data. The data come from an internal survey of Mercer's US actuaries conducted in April 2009, in which we collected information regarding the funded status of our clients' calendar-year plans. (Full data on non-calendar year plans were not available when we undertook this survey.)

This report reflects our analysis of 874 surveyed calendar-year plans with over $190 billion in combined assets as of January 1, 2008, and covering over 4.1 million participants.

The results presented in this report are based on the rules of the Pension Protection Act ("PPA")[1] and take into account the relief already provided by the aforementioned asset smoothing provisions in the Worker, Retiree and Employer Recovery Act of 2008[2] and March 2009 IRS guidance clarifying that plan sponsors may select a spot yield curve rate (instead of a blended rate) from any of the last four months of 2008 in order to minimize their 2009 funding target ("yield curve look-back").[3] As we use quite a bit of technical terminology throughout this report, we have included a glossary in Appendix B that provides an overview of many of these terms.

2010 to bring funding challenges for sponsors

The data underlying our report shows that this funding relief – primarily the yield curve look-back – provides substantial relief for 2009 for most calendar-year plans because these plans are able to use the much higher yield curve for October 2008 to produce much lower liabilities for 2009. The data also show, however, that the funded status for many plans in 2010 will likely decline significantly as a result of lower interest rates

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[1] Plan financial data calculated using the rules that apply to sponsor financial statements are publicly disclosed and have been analyzed by Mercer and others. These data are of limited value in assessing required contributions and credit balances in defined benefit pension plans. We made some assumptions and approximations in preparing this analysis (see Appendix A), but we do not believe that these assumptions materially affect the results.

[2] The Worker, Retiree and Employer Recovery Act of 2008 ("WRERA") offered some relief to defined benefit plan sponsors in determining required contributions. In particular, technical corrections to PPA permit a plan sponsor to determine an actuarial value of assets that takes into account expected investment return in calculating an average value of assets over a period of up to two years. However, because the resulting value must be within 90%-110% of market value, this technical correction has limited the effect on any averaging method in addressing the dramatic market declines of 2008, since, in general, asset levels are roughly 30% less than expected market values. See Appendix B for additional information about the asset valuation requirements.

[3] On March 31, 2009, the IRS issued a special edition of *Employee Plans News* clarifying that plan sponsors may elect to determine their 2009 funding targets using the full yield curve for "any applicable month", which includes any one of the four months preceding the valuation date. The newsletter also states that the IRS anticipates that the final regulations will grant automatic approval for any change in an interest rate election – including the look-back period – in 2009. Based on this guidance, calendar-year plan sponsors may elect to use the full yield curve for 2009 based on observed yields during October 2008 (when corporate bond rates peaked), regardless of what interest rate methodology they used for 2008.

applicable for 2010, resulting in significant increases in minimum required contributions for 2010. In particular:

- **Funded ratios to fall.** The surveyed plans had an aggregate funded ratio (the ratio of total assets to the total funding target of surveyed plans) of about 111% as of January 1, 2009 and only 7% of plans had funded ratios under 80%[4]. *Looking ahead to 2010, the aggregate funding ratio for surveyed calendar-year plans for 2010 is expected to decline to 92%, and 36% of plans would have AFTAPs below 80%*.

- **Required contributions before credit balances to be higher relative to 2009.** For the surveyed plans, plan year 2010 required contributions are significantly higher than plan year 2009 required contributions. *In fact, the plans' aggregate required contributions for 2010 are estimated to be 126% higher than for 2009.* While a portion of this increase is for plans that had no required contribution in 2009 (and therefore have an infinite increase in percentage terms), the required contributions in 2010 for plans that had a required contribution in 2009 are estimated to increase by 98%.

  A significant portion of the increase in 2010 minimum required contributions is related to amortization of the funding shortfalls. There are been two alternative amortization periods proposed, each designed to extend the time required to fund these shortfalls. In this update we examine the impact on 2010 minimum required contributions of the two most prevalent extended amortization proposals: "2+7" shortfall base amortization and 15-year shortfall base amortization. More detailed information regarding how the amortization payments are developed under each of these alternatives can be found in Section 3 and Appendix B of this report.

  Even factoring in proposed legislation[5] that would give sponsors more time to amortize funding shortfalls, aggregate minimum required contribution amounts are still expected to increase dramatically for 2010 under either the "2+7" shortfall base amortization proposal (allowing shortfall payments to be deferred two years, with only interest on the shortfall included in the minimum required contribution during the two-year deferral period), or the 15-year shortfall amortization base proposal (which allows shortfall payments to be extended to 15 years). Thus, even with the proposed extended amortization periods, plan sponsors will be facing significantly higher minimum required contributions for 2010.

[4] Median numbers are usually less than average numbers due to the effect of a few very large plans.

[5] The Preserve Benefit and Jobs Act of 2009 (H.R. 3936) as introduced in the House this past October provides two alternative amortization schedules. A more detailed explanation of these extended amortization provisions can be found in Section 3 and Appendix B of this report. In conjunction with an election to use one of the extended amortization provisions, the proposed legislation requires certain benefits maintenance efforts on the part of plan sponsors; these benefits maintenance requirements are outside the scope of this report.

- **Erosion of credit balances continues.** The total credit balances for the surveyed plans were almost $52 billion as of January 1, 2008, and declined to $23 billion as of January 1, 2009. Looking forward to 2010, the available credit balances after taking into account both mandatory deemed and mandatory waivers are projected to be $19 billion. It is important to note that there is a high correlation between credit balances and funded status, in that approximately 90% of these credit balances belong to approximately 35% of surveyed calendar year plans that can fully satisfy their 2010 minimum required contribution with their available credit balance, and these plans have an average funded ratio of approximately 110%. The remaining 10% of credit balances belong to approximately 65% of surveyed calendar year plans, and those plans generally have funded ratios that are substantially lower than 100%.

- **Cash contribution requirements spike for many sponsors.** For the roughly 65% of plans that cannot fully satisfy their 2010 funding requirements with their available credit balance, approximately 20% of the projected aggregate 2010 minimum required contributions can be offset with credit balances, requiring the remaining 80% to be made in cash.

  Even with proposed extended amortization relief, many plans are facing dramatically higher 2010 contributions. The aggregate cash contributions (after considering available credit balances) for 2009 were approximately $1 billion. *Looking forward to 2010, these "net" cash contributions are projected to increase by nearly 400% to $4.9 billion.* Even with the proposed extended amortization relief, most calendar-year plans are facing significantly higher contributions for 2010. For example, under the proposed "2+7" shortfall base amortization relief, net cash contributions are expected to increase to $3.3 billion. Alternatively, under the proposed 15-year shortfall base amortization relief, the net cash contribution requirements for 2010 are projected to increase to $3.7 billion. As such, even with the proposed relief alternatives, plan sponsors will be making very meaningful cash contributions towards their funding shortfalls.

  While this is not the first time that plan sponsors have faced sharply higher required pension plan contributions, the current economic environment and the limited availability of credit could place many plan sponsors in the uncomfortable position of having to cut costs or investments in order to make their pension contributions.

Subsequent analysis – Fourth quarter 2009 asset returns

The information presented in this update was compiled based on financial market data as of September 30, 2009 which was projected to year-end. During the fourth quarter of 2009, equity markets appreciated by approximately 6%, whereas our projections anticipated equity appreciation of approximately 2%. Conversely, fixed income returns were a fraction of a percent lower than the allowance in our model.

The impact of actual fourth quarter asset performance will serve to slightly lower the 2010 required contribution amounts that are shown in this update. For example, under current law we are now estimating aggregate 2010 required contributions before credit balances of $11.2 billion as compared to $11.3 billion as shown in this report. The corresponding amount after consideration of available credit balances is $4.7 billion, compared to $4.9 billion as shown in this report. As the use of more up to date investment market information does not dramatically alter our conclusions regarding the large increases in required contribution amounts for 2010, we have opted not to update the figures in this report at this time.

2

Funded status

This section addresses the change in funded status for the surveyed calendar-year plans from January 2009 to January 2010.

For the surveyed plans, funding target[6] liability as of January 1, 2008 totaled more than $175 billion and the market value of combined plan assets was about $192 billion, for an aggregate funded ratio on a market basis of about 110%. Our most recent data suggest that as of January 1, 2009, the liability was $174 billion and the market value of combined plan assets was $151 billion, for an aggregate funded ratio on a market basis of about 87%. Assuming all plan sponsors elect to utilize asset smoothing to value January 1, 2009 assets, the actuarial value of assets would be about $166 billion, for an aggregate funded ratio on a smoothed basis of 95%.

[6] See Appendix B for details.

Figure 1 shows the distribution of surveyed plans by estimated funded status as of January 1, 2009 (the Adjusted Funding Target Attainment Percentage, or "AFTAP"). These calculations take into account deemed and voluntary credit balance waivers anticipated for 2009 AFTAP certifications. Of the 874 surveyed plans, 801 plans (91.6%) had AFTAPs of 80% or more at January 1, 2009, avoiding potential benefit restriction issues and at-risk valuations.

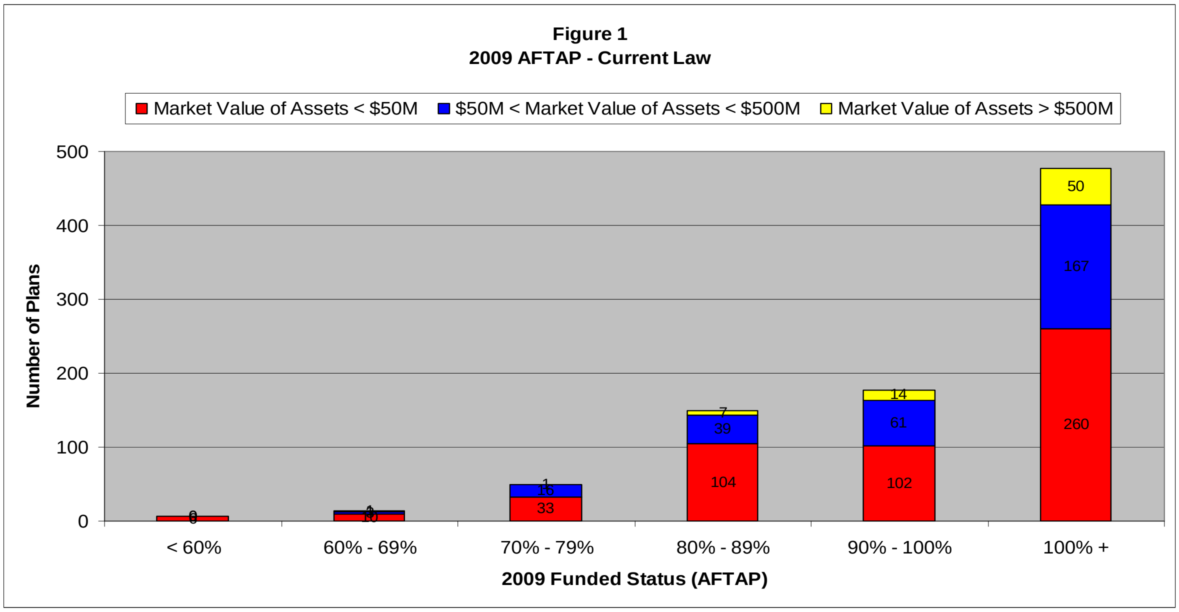


Figure 1
2009 AFTAP - Current Law

Despite favorable asset returns in 2009, the funded status for most pension plans is expected to decline significantly for 2010. There are two primary items that drive this result. In particular, corporate bond interest rates have fallen significantly since the end of 2008, increasing plan liabilities. The resulting net decline in funded status will mean higher – in some cases dramatically higher – required contributions for 2010 relative to 2009. In addition, 2010 will bring the recognition of another portion of the previously deferred 2008 asset losses for plans that have elected asset smoothing.

For 2010, we are projecting that the funding target liability as of January 1, 2010 will total approximately $185 billion and the market value of combined plan assets will be about $165 billion, for an aggregate expected funded ratio on a market basis of about 89%. Assuming all plan sponsors elect to utilize asset smoothing to value January 1, 2010 assets, the actuarial value of assets would be about $170 billion, for an aggregate funded ratio on a smoothed basis of 92%.

Figure 2 presents the distribution of plans based on January 1, 2010, estimated AFTAPs, reflecting only deemed waivers that would be mandatory for 2009. *Assuming all plan sponsors would elect asset smoothing and the 24-month average segment interest rates for 2010, 69 (7.9%) of the 874 surveyed plans are projected to have AFTAPs below 70% as of January 1, 2010, and 311 (35.6%) of the 874 surveyed plans are projected to have AFTAPs less than 80%.*

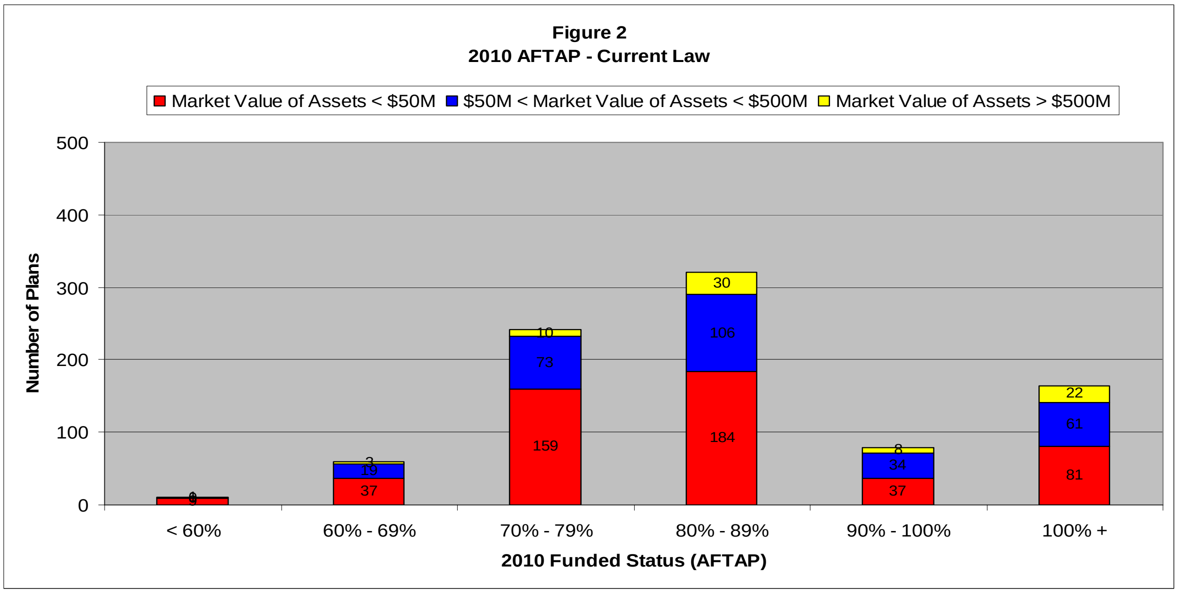
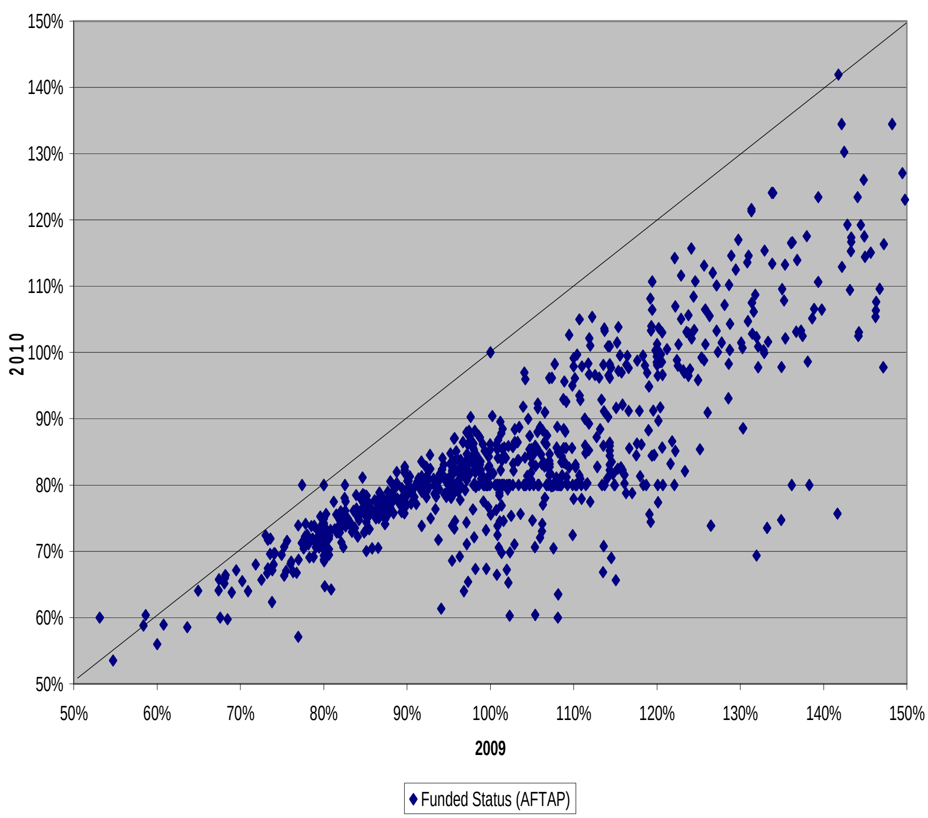


Figure 2
2010 AFTAP - Current Law

Figure 3 illustrates the decline in funded status in more detail for each of the surveyed plans. It is important to note that nearly all plans are to the right of the diagonal line, which indicates a drop in funded status from 2009 to 2010. As seen in this chart, and the charts above, *the funded status for nearly all plans are expected to decline by 10 to 25 percentage points from 2009 to 2010*.

Figure 3
2009 vs. 2010 Funded Status (AFTAP)



3

Required contributions

This section discusses the change in required contributions for the surveyed plans from calendar year 2009 to calendar year 2010. *It is important to note that in this section, all contributions are the minimum required contributions before consideration of any credit balances (credit balances and the net cash contributions are discussed in Section 4).*

In general

Figure 4 shows the distribution of surveyed calendar-year plans by their expected 2010 required contributions relative to their 2009 required contributions, assuming all plan sponsors elect asset smoothing and the PPA segmented interest rates.[7] Each point on the chart represents the 2009 required contribution on the horizontal axis and the 2010 required contribution on the vertical axis. Note that for all graphs in this section, the black line represents 2010 estimated required contributions being equal to 2009 contributions, the green line represents 2010 estimated contributions being equal to 150% of 2009 contributions, and the orange line represents 2010 estimated contributions being equal to 200% of 2009 contributions.

Despite the 2008 financial market declines, many plans did not experience significant increases in minimum required contribution amounts for 2009. This is the combined result of their ability to elect to use the October 2008 corporate bond interest rates for their 2009 valuations and to smooth investment returns over a period of up to 24 months. Aggregate minimum required contributions for surveyed plans declined from $5.6 billion for 2008 to $5.0 billion for 2009 as a result of the previous relief measures that permitted the use of the October 2008 interest rates and asset smoothing.

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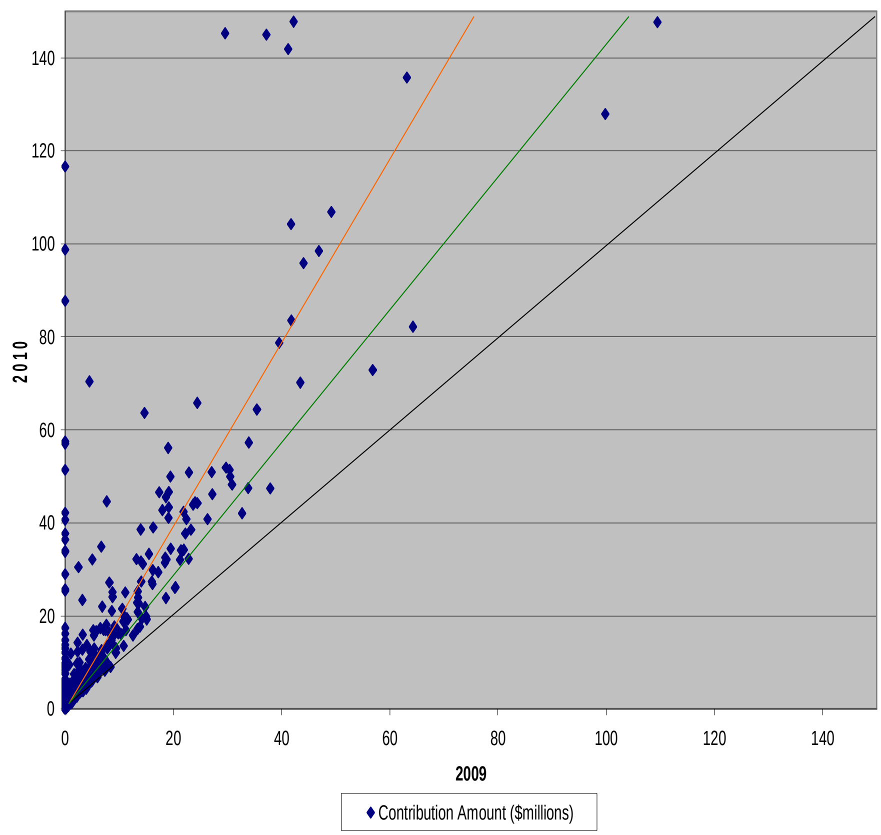
[7] Surveyed plans with contributions more than $150 million were omitted to avoid the necessity to shrink the graph and thus lose helpful detail. These plans demonstrated the same trend as the other surveyed plans.

Despite positive investment performance during 2009, most plans will experience significantly higher contributions for 2010 as a result of the decline in interest rates since October 2008 and the additional tranche of the 2008 investment losses that will be recognized for 2010. The aggregate minimum required contributions for surveyed calendar year plans are expected to more than double to $11.3 billion for 2010. Individually, the vast majority of calendar-year plans have expected 2010 required contributions that greatly exceed their respective 2009 required contribution amounts (as depicted by the points to the left of the black line). As shown in the chart below, in many cases the required contribution amounts have more than doubled from 2009 to 2010 (represented by the points to the left of the orange line).

Figure 4
Comparison of 2009 and 2010 Minimum Required Contributions
Current Law



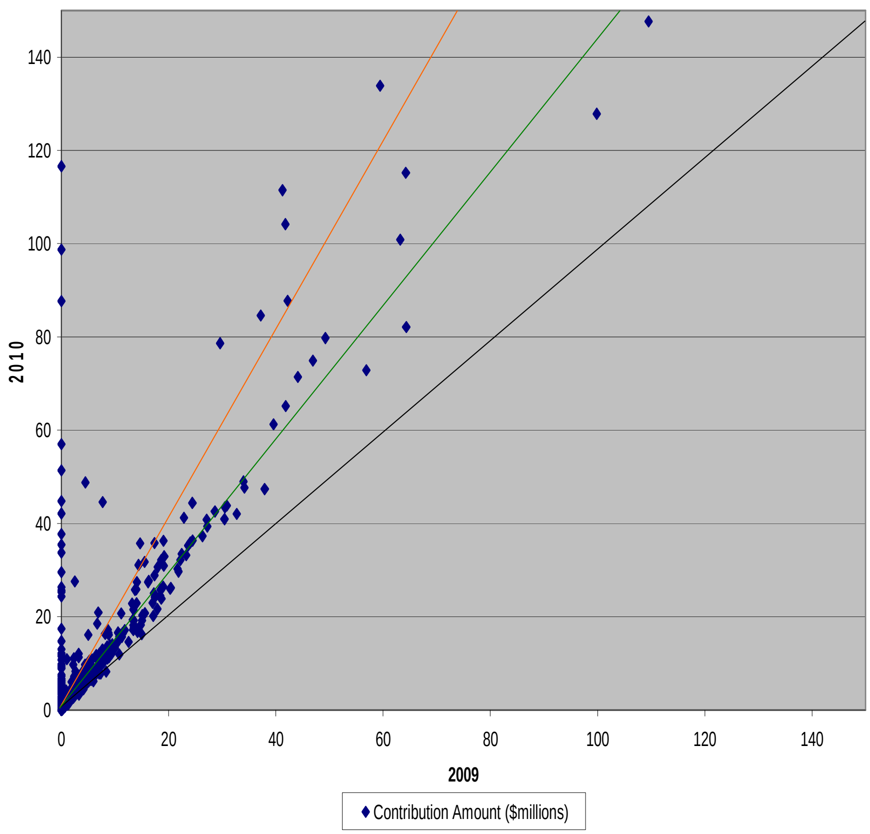
Black reference line indicates 2010 contributions same as 2009
Green reference line indicates 2010 contributions 50% higher than 2009
Orange reference line indicates 2010 contributions 100% higher than 2009

Analysis of Proposed Funding Relief Alternatives – Extended Amortization Periods

A significant portion of the increased 2010 minimum required contributions shown in Figure 4 is related to amortization of the funding shortfalls. There are been two alternative amortization periods proposed, each designed to extend the time required to fund the shortfall. In this section we examine the impact on 2010 minimum required contributions of these two proposals: "2+7" shortfall base amortization and 15-year shortfall base amortization (in determining 2010 amounts it was assumed that the plan sponsor elected the same relief for the plan's 2009 minimum required contributions).

Figure 5 depicts the same distribution, but anticipates that all sponsors of calendar-year plans will elect to use the proposed "2+7" shortfall base amortization period. Under this method, the amortization period is extended to nine years, consisting of interest only for the first two years, then a standard principal and interest amortization for the next seven years. In addition, during the two years of interest only amortization, the minimum required contributions are subject to a floor based on a 5% per year increase starting from the last year prior to electing the extended amortization relief.

Figure 5
Comparison of 2009 and 2010 Minimum Required Contributions
2+7 Amortization with 5% Per Year Minimum Contribution Increases

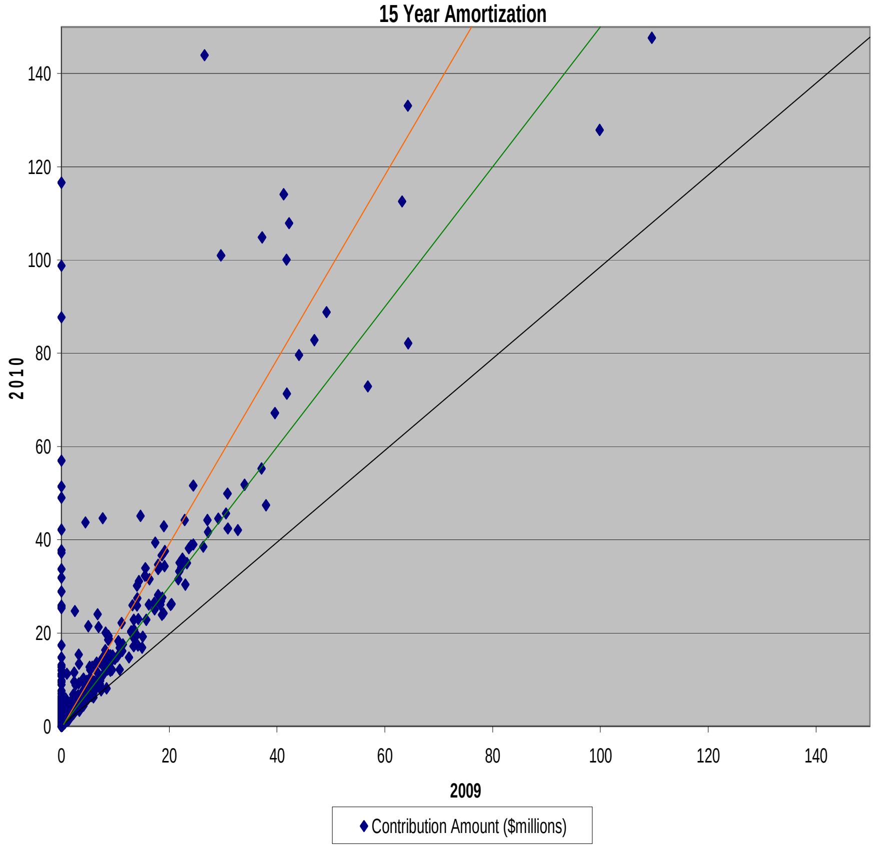


Black reference line indicates 2010 contributions same as 2009
Green reference line indicates 2010 contributions 50% higher than 2009
Orange reference line indicates 2010 contributions 100% higher than 2009

As shown in Figure 5, the use of the "2+7" shortfall base amortization relief reduces the number of calendar-year plans that are facing dramatic increases in their 2010 required contribution amounts. However, despite the relief afforded by the extended amortization period, there are still 502 plans (57%) whose 2010 required contribution increases by at least 50% (174 of these had no contribution requirement for 2009).

Figure 6 depicts the same distribution, but anticipates that all sponsors of calendar-year plans will elect to use the proposed 15-year shortfall base amortization period. Under this method, the amortization period is extended from seven to 15 years, without an interest only period.

Figure 6
Comparison of 2009 and 2010 Minimum Required Contributions
15 Year Amortization



Black reference line indicates 2010 contributions same as 2009
Green reference line indicates 2010 contributions 50% higher than 2009
Orange reference line indicates 2010 contributions 100% higher than 2009

As shown in Figure 6, the use of 15-year shortfall base amortization also reduces the number of calendar-year plans that are facing dramatic increases in their 2010 required contribution amounts. In the first two years the shortfall base amortization amounts under this proposed amortization schedule are higher than the corresponding figures under the "2+7" shortfall base amortization proposal. This is the result of a fixed 15-year amortization payment consisting of both principal and interest, as compared to interest only for the first two years under the "2+7" shortfall base amortization proposal. Under the 15-year shortfall base amortization proposal, there are 620 plans (71%) whose 2010 required contribution increases by at least 50% (174 of these had no contribution requirement for 2009).

Both of these extended amortization methods would provide some limited relief from escalating contributions. The aggregate 2010 minimum required contributions for surveyed calendar year plans are expected to be $9.0 billion based on "2+7" shortfall base amortization and $9.7 billion based on 15-year shortfall base amortization (down from $11.3 billion absent any relief). It is important to note that this still represents a dramatic increase from 2008 and 2009 minimum required contribution levels of $5.6 billion and $5.0 billion, respectively.

The following table summarizes, for surveyed plans, the change in 2010 contributions relative to 2009 contributions for the three scenarios examined in Figures 4-6.

Change in 2010 Contribution Relative to 2009	Current Law	"2+7" Shortfall Base Amortization	15-Year Shortfall Base Amortization
Decreases	1	3	3
No Change	52	52	52
Increases < 50%	118	317	199
Increases 50-100%	263	185	263
Increases > 100%	440	317	357

Table notes:

- Figure 4 represents amortization under current law
- Figure 5 represents "2+7" shortfall base amortization.
- Figure 6 represents 15-year shortfall base amortization
- For 2009, 226 plans had a zero contribution requirement. If the 2010 requirement is also zero, these plans are placed in the "No Change" category. Otherwise, these plans are placed in the "Increases > 100%" category. For example, of the 226 plans with no 2009 requirement, Figures 4-6 include 52 with no 2010 requirement and 174 plans with a non-zero 2010 requirement.

Analysis of Proposed Funding Relief Alternatives – Expanded Asset Smoothing Corridor

Another proposed funding relief option is to reinstate the pre-PPA asset smoothing corridor that permits the actuarial value of assets to fall between 80% and 120% of market value (under PPA the permissible corridor is 90% to 110% of market value).

Nearly all plans with even a modest equity exposure had their assets limited by the 110% upper corridor limit for 2009. Absent the dramatic increases in interest rates in October, 2008 that served to sharply reduce liabilities, many plans would have faced significantly higher minimum contribution requirements for 2009 as a result of the extreme asset volatility.

The purpose of using asset smoothing is to mitigate the impact on contributions of financial market volatility. For 2010, we estimate that fewer than 10% of surveyed plans will have their assets limited by the 10% corridor, indicating that the current asset smoothing methodology is doing an efficient job of modulating asset returns. However, as noted above, the short term volatility such as experienced during 2008 could cause significant swings in contributions due to the narrow 90%-110% corridor if there aren't offsetting movements in the plan liabilities.

4

Credit balance amounts

This section addresses the extent to which credit balances at the beginning of 2010 are sufficient to mitigate 2010 funding requirements for the surveyed calendar-year plans.

Changes in credit balances from 2008 to 2009

The total of the credit balances for the surveyed calendar-year plans was slightly over $52 billion as of January 1, 2008 (actually, as of the end of 2007 as reflected on the Forms 5500 filed in 2008), equal to approximately 27% of plan assets.

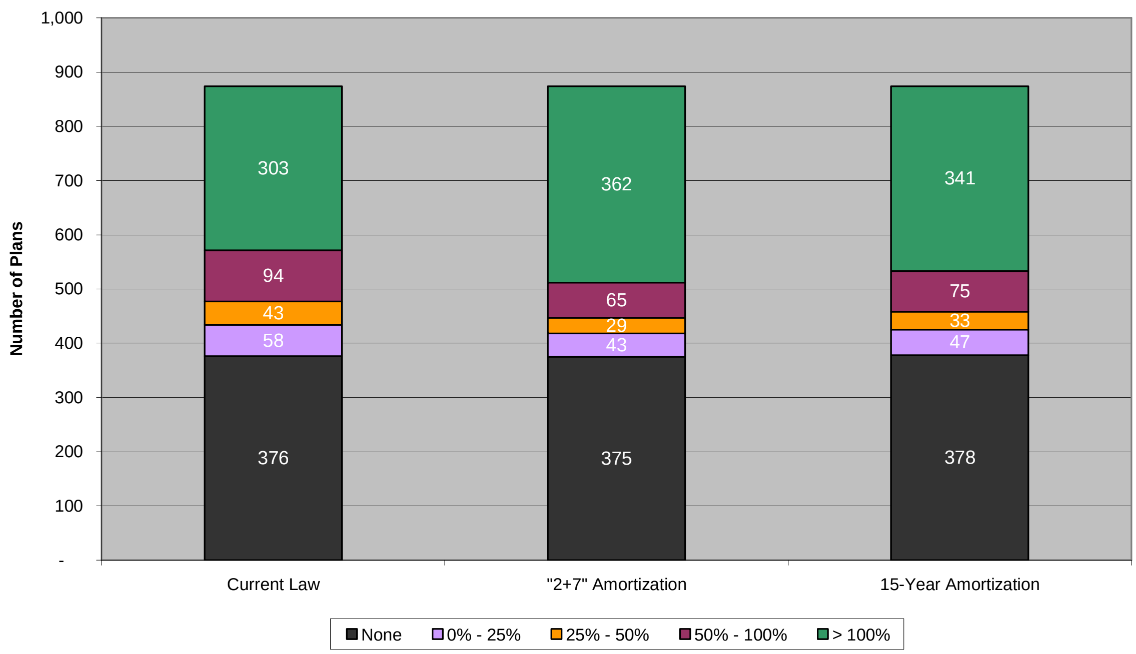
As shown in our October 1, 2009 report, assuming all plan sponsors elect the smoothed value of assets and the October 2008 full yield curve for their 2009 valuations, the total credit balance total was reduced to roughly $23 billion as of January 1, 2009 after taking into account both mandatory-deemed and voluntary waivers.

Regardless of which extended amortization election is made for 2009, plan sponsors are expected to apply slightly less than $4 billion of credit balances towards their 2009 funding requirements. Bringing forward the remaining $19 billion with projected asset returns for 2009 yields projected credit balances of approximately $22 billion as of January 1, 2010. The aggregate credit balances available after taking into account both mandatory-deemed and voluntary waivers as of January 1, 2010 are approximately $19 billion.

It is important to note that there is a very strong correlation between funded status and credit balance – the plans with the largest credit balances are the most well funded plans. Approximately 90% of the aggregate $19 billion in available credit balances is related to the roughly 35% of surveyed calendar year plans that can fully offset their 2010 minimum required contributions by the available credit balances; these plans have an average funded ratio of approximately 110%. The remaining 10% of aggregate credit balance is attributable to the remaining 65% of plans; these plans generally have funded ratios of less than 100%.

Figure 7 shows the percentage of the projected 2010 minimum required contribution that can be satisfied by using the available credit balance under current law and the under each of the proposed extended amortization alternatives. As shown in this chart, the choice of amortization option has little effect on the percentage of the projected 2010 minimum required contribution that can be satisfied by applying credit balances.

Figure 7
Portion of 2010 Minimum Required Contribution
That Can Be Satisfied By Using Available Credit Balance



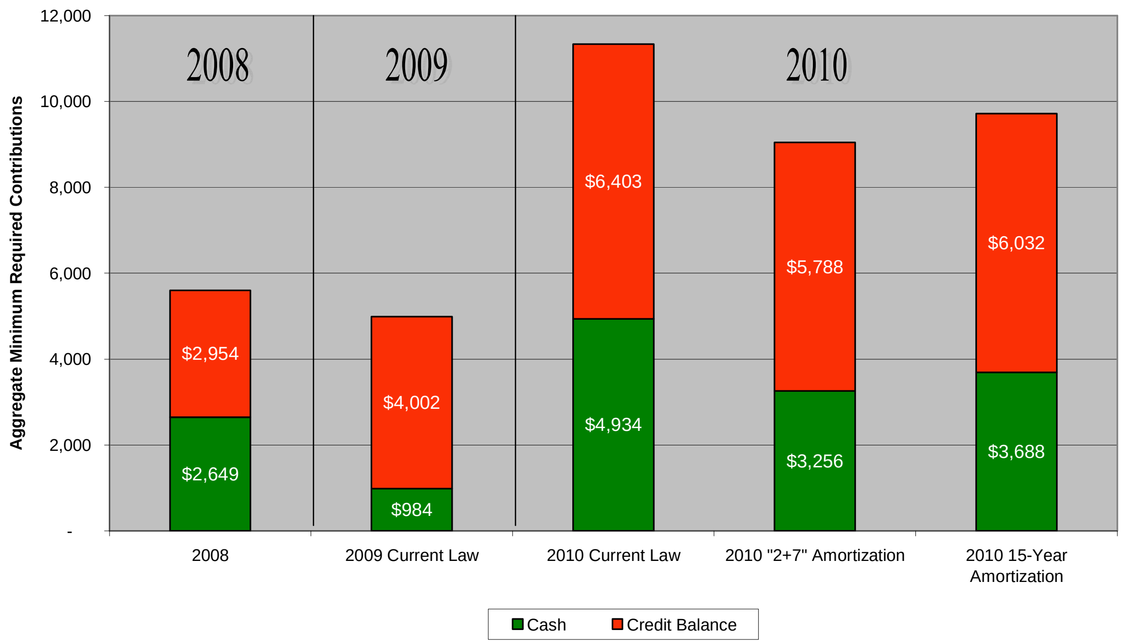
Credit balances relative to required contributions

The increase in minimum required contribution amounts discussed in Section 3 becomes more relevant when we focus on the net cash contributions required, after offsetting any available credit balances. For 2009, the net cash funding requirement for surveyed calendar year plans is roughly $1.0 billion irrespective of whether or not extended amortization relief is made available.

Looking at 2010, the cash requirements increase several fold. *In particular, absent any extended amortization relief, the net cash contribution for surveyed calendar year plans increases to $4.9 billion, nearly a 400% increase. Even with the extended amortization provisions, the net cash requirements range from $3.3 billion (under "2+7" shortfall base amortization) to $3.7 billion (under 15-year shortfall base amortization)*. Thus, the extended amortization relief options provide significant funding relief, while ensuring that sponsors will be making meaningful cash contributions towards their funding shortfalls.

Figure 8 shows the allocation of the aggregate projected 2010 minimum required contribution under current law and under each of the proposed extended amortization alternatives between cash contributions and available credit balance. As shown in this chart, the choice of amortization option does provide some significant relief from the dramatic increase in cash contribution requirements from 2009 (for reference, the cash portion of the aggregate 2009 minimum required contribution for surveyed calendar year plans was $1.0 billion). The proposed extended amortization relief brings the cash portion of the 2010 minimum required contributions much closer to 2008 levels.

Figure 8
Allocation of Aggregate Minimum Required Contribution Amount Between Cash and Available Credit Balance (in $ millions)



Note: The aggregate 2008 cash contribution shown in Figure 8 reflects actual amounts made in cash by plan sponsors toward their 2008 minimum required contributions. A significant portion of this aggregate amount could have been satisfied by available credit balance.

Appendices

Appendix A

Data, assumptions and methods

Data

Mercer actuaries serve approximately 1,500 US qualified defined benefit pension plans. An internal survey was performed in October of 2008 – after final AFTAP certifications for calendar year plans were complete – to collect information regarding the funded status of client pension plans. The survey was updated in April of 2009 to confirm the 2008 funded status information and to gather 2009 specific funded status information. Over 1,400 responses were gathered via intranet software, and these data have been used internally to infer likely sponsor priorities and to anticipate potential training needs for our consulting staff.

Several steps were taken to select the 874 responses analyzed in this report. First, 102 plans that are not subject to PPA were removed. This includes church plans, governmental plans, multiemployer plans, nonqualified plans, and post-retirement medical plans.

Our survey responses included 221 non-calendar year plans, which were excluded from this analysis for a variety of reasons. Most importantly, at the time our survey was taken, many of these plans had yet to complete a full year under the PPA requirements. In addition, while certainly affected by the economic events of late 2008, the impact on non-calendar year plans may not be fully observed until the beginning of the 4th quarter in 2009.

Some survey responses included incomplete data. This includes plans that were involved in plan merger or spinoff activities, were first serviced by a Mercer actuary in 2009, or had terminated Mercer as actuary prior to 2009. We excluded these incomplete submissions (228 records) from this analysis.

The remaining data set consisting of 874 plans accounts for the majority of plans, should be representative of pension plans in general, and allows us to focus on the specific economic events affecting pension plans in late 2008.

Requested survey data included plan-specific asset and liability information, sponsor elections made for AFTAP certifications, plan participant counts, asset returns, and other information related to the 2008 valuation, as well as estimates of such information for the 2009 valuation where final amounts were not available. This additional information represents a significant increase in specific information and reduced reliance on high-level estimates compared to the information contained in our initial draft report from March 2009.

The following table provides a complete list of the survey information collected that was used in developing this report:

2008 Valuation Results	Supplemental 2008 Information	2009 Valuation Results
Plan year end	Effective interest rate	Status of results: estimated, preliminary, near final, final
Eligibility for exemption from AFTAP requirements and, if any, reason	Indication of collectively bargained status and date benefit restrictions would first apply	Market value of assets excluding receivable contributions
Participant count	Plan year deemed waivers	Market value of assets including receivable contributions
Annuity purchases	Plan year voluntary waivers	Smoothed value of assets before application of corridor
Market value of assets	Investment return	Smoothed value of asset averaging period
Actuarial value of assets	Benefit payments	Smoothed value of assets averaging frequency
Asset averaging period	Target normal cost	Funding target
Asset averaging frequency	Minimum required contribution	Effective interest rate
Funding target	Credit balance applied to minimum required	Deemed credit balance waivers
AFTAP	Does plan pay non-exempt accelerated forms of payment?	Voluntary credit balance waivers
Credit balance after known waivers	Plan status: (i) open, (ii) soft freeze, or (iii) hard freeze?	Carryover balance after waivers
Credit balance waived	Active employee/participant headcount and payroll	Prefunding balance after waivers
Interest rate basis including look-back and phase-in elections, if any	Actual or target asset allocation (equity, fixed income, cash, other)	AFTAP
Mortality basis (static or generational)		Target normal cost
		Interest rate basis

The analysis of the survey data covers 874 plans. These plans cover more than 4 million employees, and have plan assets as of January 1, 2008 of almost $200 billion. The following tables summarize key figures relating to our data and analysis (all amounts in $billions):

Funding Metric	2008	2009
Market value of assets	$192.5	$150.5
Actuarial value of assets	192.2	165.6[(b)]
Funding target liability	175.2	173.6[(c)]
Credit balance before waivers	52.1	26.2(d)
Credit balance after waivers	42.0[(a)]	22.1(e)
Credit balance after application to minimum required contribution	39.1[(a)]	TBD

(a) Per sponsor elections.

(b) 110% of market value due to statutory corridor. As submitted the actuarial value of assets was $164.6 billion without regard to the 110% corridor and $160.7 billion after application of the 110% corridor.

(c) Adjusted for interest rate shifts and known changes in sponsor elections.

(d) 2008 credit balance after application to required contributions decreased due to asset return.

(e) Under current elections after application of deemed waivers and known voluntary waivers only (without presuming additional potential voluntary waivers). If plan sponsors voluntarily waive credit balance to avoid applicable restrictions, the remaining credit balance will be $19.9 billion.

Plan Size (in millions)	Mercer count	Universe count	Mercer proportion of universe
< $10	221	37,189	0.6%
$10 - $50	304	3,485	8.7%
$50 - $100	121	975	12.4%
$100 - $500	163	1,186	13.7%
$500 - $1,000	30	229	13.1%
> $1,000	35	335	10.4%

Mercer must respect the confidentiality of our individual clients. This prevents us from making available specific survey records. However, we are willing to address reasonable inquiries, and provide when possible additional information. All such requests should be sent to Ethan Kra, chief actuary–retirement, Mercer Retirement, Risk & Finance, New York, NY (212-345-7125, ethan.kra@mercer.com).

Figures 9, 10 and 11 below show the distribution of plans in our survey by number of participants, by asset size, and by ratio of funding target normal cost to funding target liability. Particularly for plans with more than $50 million in assets, our survey is strongly representative of the single-employer defined benefit plan universe, representing approximately 15% of this universe (based on information presented in the EBSA *Private Pension Plan Bulletin* using 2006 Form 5500 filings as summarized in the following table).

Figure 9

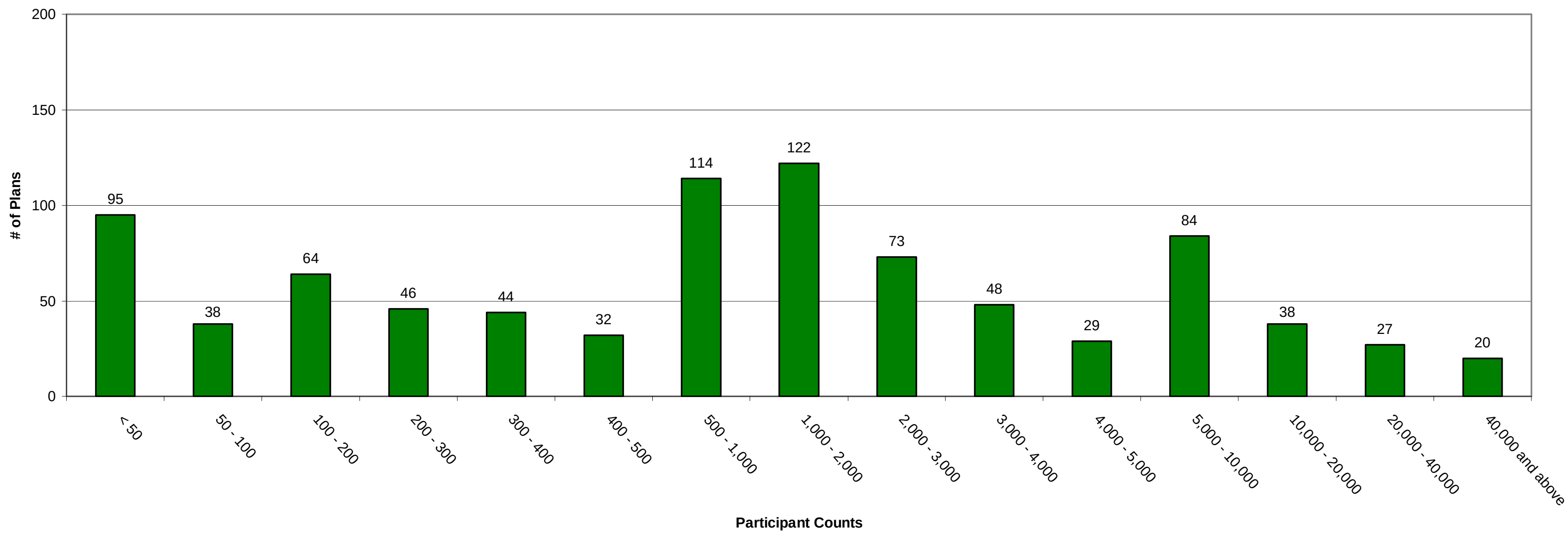


Figure 10

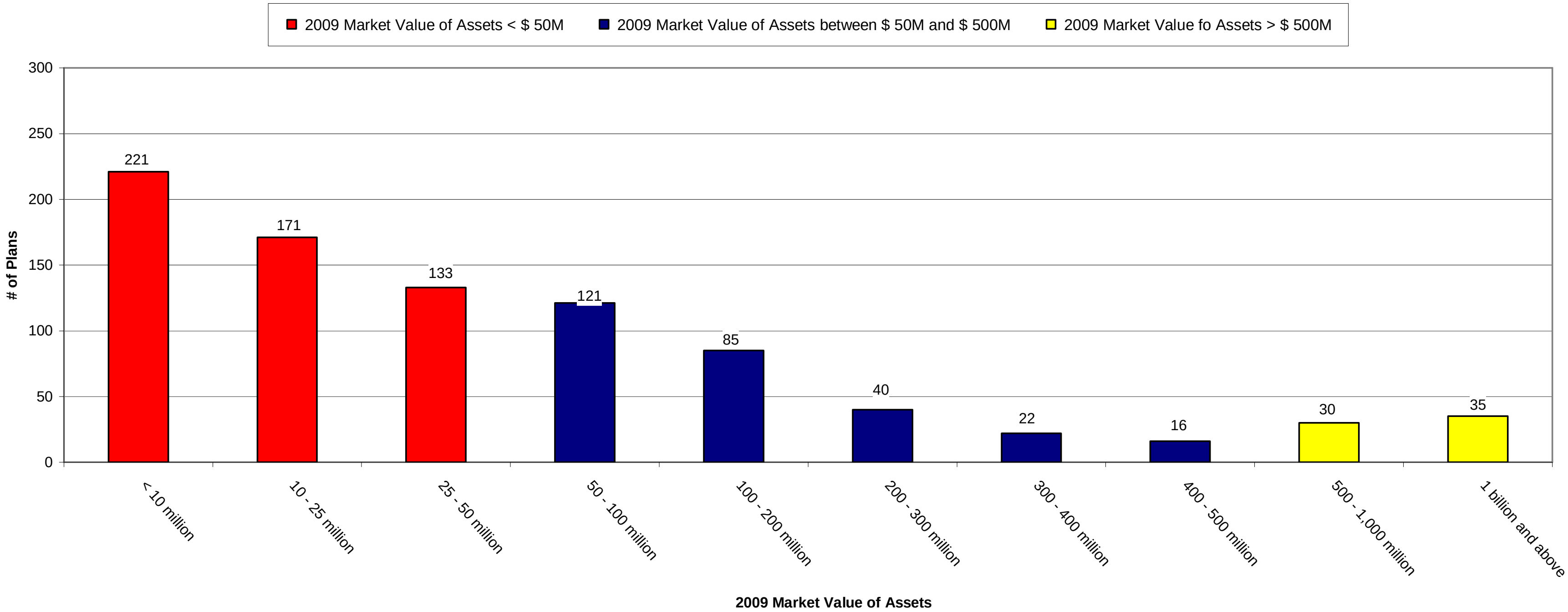
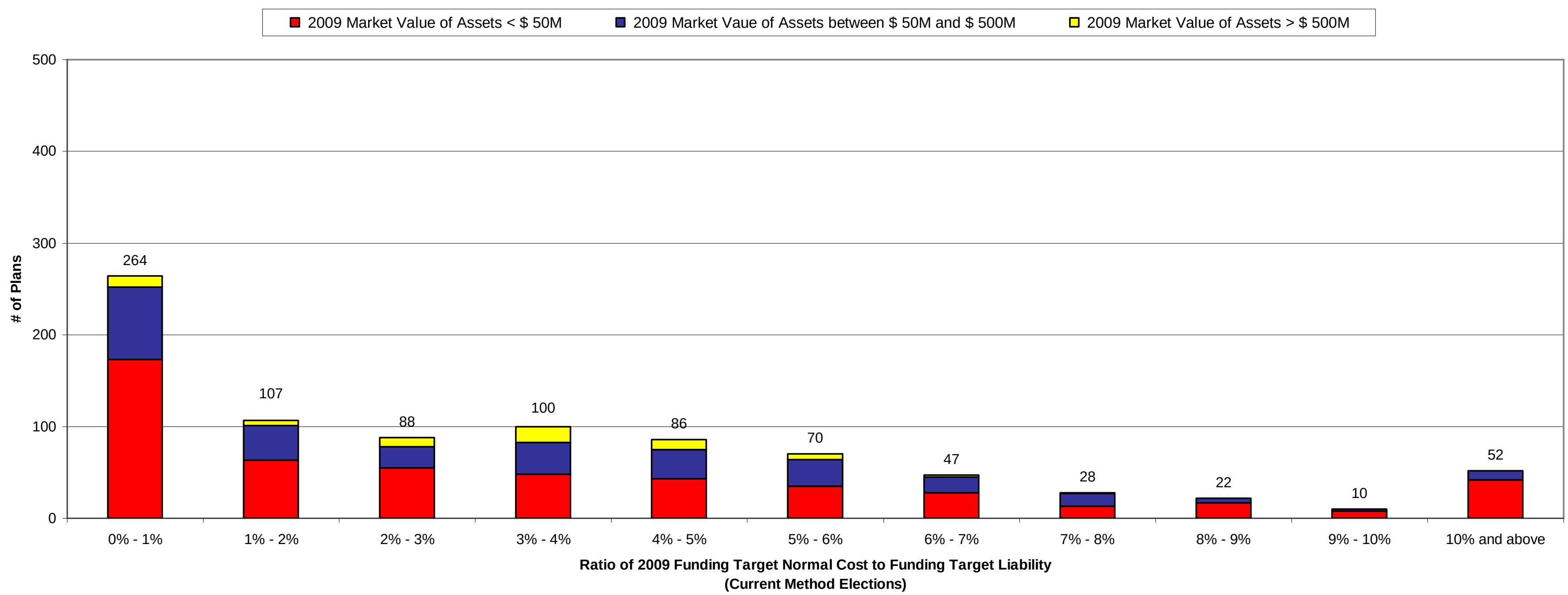

2009 Market Value of Assets < $ 50M
2009 Market Value of Assets between $ 50M and $ 500M
2009 Market Value fo Assets > $ 500M
# of Plans
300
250
200
150
100
50
0
221
171
133
121
85
40
22
16
30
35
< 10 million
10 - 25 million
25 - 50 million
50 - 100 million
100 - 200 million
200 - 300 million
300 - 400 million
400 - 500 million
500 - 1,000 million
1 billion and above
2009 Market Value of Assets

Figure 11


2009 Market Value of Assets < $ 50M
2009 Market Vaue of Assets between $ 50M and $ 500M
2009 Market Value of Assets > $ 500M
500
400
300
200
100
0
# of Plans
264
107
88
100
86
70
47
28
22
10
52
0% - 1%
1% - 2%
2% - 3%
3% - 4%
4% - 5%
5% - 6%
6% - 7%
7% - 8%
8% - 9%
9% - 10%
10% and above
Ratio of 2009 Funding Target Normal Cost to Funding Target Liability
(Current Method Elections)

Assumptions and methods

We collected information on plans' estimated 2009 funded status where it was available. For 157 plans where this was not available, we projected the 2009 and 2010 funded status using the 2008 information provided and standard roll-forward techniques. When necessary, we made the following key assumptions in order to estimate 2009 and 2010 funded status:

1) The effect of the change in interest rates since 2008 on a plan's funding target and normal cost followed exactly the impact of these interest rate changes on the standard average Mercer plan unless the plan was completely frozen. If the plan was completely frozen, the interest rate impact on the plan's funding target was assumed to follow exactly the interest rate impact of a standard mature Mercer plan. For more information on Mercer's standard plan indices, please visit: http://www.mercer.com/referencecontent.jhtml?idContent=1213490

   For 2009 we assumed all plan sponsors will elect the October, 2008 PPA full yield curve, and then switch to the PPA segmented yield curve for 2010 (these elections generally provide for the lowest minimum required contributions for these years).

2) Each plan's expenses (administrative and investment) for 2009 were assumed to be 0.50% of the plan's funding target.

3) For 2009, the actuarial value of assets was assumed to be 110% of market value. Given market performance during late 2008, the application of virtually any smoothing method to a pension plan with a modest allocation to equity investments would result in the applicability of the 110% corridor.

   For 2010, the assets were projected based on each plan's allocation between equities and fixed income securities. Equity returns for the first three quarters of 2009 were assumed to follow the S&P 1500 index (total return), and fixed income investments were assumed to follow a composite fixed income index (with assumed allocations of 12.5% to long Treasuries, 37.5% to long corporate bonds and 50% to AA-rated corporate bonds). Returns for the 4th quarter of 2009 were assumed to be at annual rates of 8.4% for equities and 5.75% for fixed income investments, respectively. Furthermore, all plans were assumed to elect asset smoothing for 2010.

4) WRERA provided minimum funding relief to plans that did not have a Deficit Reduction Contribution ("DRC") for plan years beginning in 2007. We did not collect information on whether or not plans had a DRC in 2007. As such, in calculating the 2009 minimum required contributions, we assumed any plan that was not required to amortize the 2008 funding shortfall was also eligible for the 94% funding target phase in 2009 (i.e., we assumed all plans with 2008 AFTAPs of at least 92% did not have a 2007 DRC).

5) Some survey respondents provided 2009 AFTAPs that were inconsistent with the various calculation inputs. For example, a plan with assets of $74 million, funding target of $100 million, and carryover balance of $2 million, may have reported a 2009 AFTAP of 80%. In these and similar situations, we assumed survey respondents were indicating that their clients would take the necessary actions to reach an 80% AFTAP once their 2009 valuation results were finalized. In such situations, sponsors could achieve the higher AFTAP by: (i) changing their interest rate basis for measuring the funding target, (ii) adopting asset smoothing, and/or (iii) waiving credit balance and/or contributing additional 2008 plan year contributions. We assumed sponsors would contribute the minimum additional amounts necessary to achieve the reported AFTAP under the various combinations of sponsor elections studied.

Appendix B

Glossary of terms

Statutes and IRS or PBGC rules and regulations

Pension Protection Act of 2006 (PPA) requirements –

- IRC Section 404(o) – new maximum deductible contribution section
- IRC Section 417(e) – revised minimum lump sum assumptions
- IRC Section 430 – new minimum funding requirements section
- IRC Section 436 – new benefit restrictions section
- ERISA Section 4010 – revised PBGC filing for significantly underfunded plans

Funding target attainment percentages (FTAP)

FTAP (credit balance use) – Prior-year (AVA – PFB) / NAR liability

FTAP (shortfall base exemption) – (AVA – PFB) / FT liability: under certain circumstances the PFB is not subtracted in numerator

FTAP (at-risk prong 1, PBGC 4010) – Prior-year (AVA – COB – PFB) / NAR liability

FTAP (at-risk prong 2) – Prior-year (AVA – COB – PFB) / AR liability

Funding terms

15-year shortfall base amortization – Under this method, the standard shortfall amortization period is extended to 15 years

"2+7" shortfall base amortization – Under this method, the standard shortfall amortization period is extended to nine years, consisting of interest only for the first two years, then a standard principal and interest amortization for the next seven years. During the two years of interest only amortization, the resulting minimum required contributions are subject to a floor based on a 5% per year increase starting from the last year prior to electing the extended amortization relief.

Actuarial value of assets (AVA) – This is the value of assets used for funding purposes. Plans can average market values over a period not to exceed 24 months. Resulting value can not be less than 90 percent of market value or exceed 110 percent of market value.

At-risk – Significantly underfunded pension plans may be classified as at-risk. At-risk plans have potentially higher minimum funding requirements and a controlled group with any at-risk plan is prohibited from funding nonqualified pension plans. A plan is at-risk if all of the following conditions apply:

- Controlled group has over 500 defined benefit plan participants,
- Prior year FTAP (prong 1) is less than 80 percent (65 percent for 2008), and
- Prior year FTAP (prong 2) ratio is less than 70 percent.

Effective interest rate (EIR) – The EIR is the single rate of interest which, if used to determine the FT liability, would match the FT liability. The EIR is used to discount contributions for minimum funding requirements and to accumulate excess contributions to the end of the year.

Funding shortfall – This is the excess, if any, of the FT liability over adjusted assets (i.e., generally, AVA – COB – PFB).

Market value of assets (MV) – This figure represents the fair value of plan assets.

Segment interest rates – These rates are used to discount benefit payments. They are based on a 24-month average of corporate bond rates for three separate periods:

- ***First segment rate*** – used to discount benefits payable in first five years
- ***Second segment rate*** – used to discount benefits in next 15 years
- ***Third segment rate*** – used to discount benefits beyond 20 years

  The sponsor can elect to use the rates for any applicable month, which is the valuation date or any of the four preceding months. The sponsor can also elect to phase in these rates from the weighted average corporate bond rate over three years.

Shortfall amortization charge (SAC) – This is the sum of all shortfall base amortizations, not less than $0.

Shortfall base – This is the funding shortfall minus the present value of all unamortized shortfall and waiver installments for the prior year, discounted at the current year's interest rates. A shortfall base can be negative.

Shortfall base amortization – This is a seven-year amortization of the shortfall base. The installment amount is determined based on the interest rates in the year it is created.

Waiver amortization charge – If the plan obtains IRS approval of a waiver of minimum funding charges, this waiver must be funded over the succeeding five plan years. The charge is determined based on the segment interest rates in the year of the waiver.

Yield curve – The IRS publishes corporate bond rates at each half-year duration. Depending on valuation system, plans can use the rates at duration ½, 1½, 2½, etc. or duration 1, 2, 3, etc. Unlike segment rates, this curve is not averaged over 24 months.

Liability terms

At-risk liability (AR liability) – This is the same as (but not less than) NAR liability (discussed below), except:

- ***Retirement assumption*** – All employees eligible to elect benefits during the current and next 10 plan years and not assumed to retire on the valuation date are assumed to retire at the earliest date under the plan, but not before the end of the current plan year.
- ***Most valuable form of payment*** – All employees are assumed to elect the benefit form that results in the highest present value of benefits.
- ***Loading factor*** – If the plan has been at-risk for at least two of the last four plan years, the liability is increased by 4 percent plus $700 times the number of plan participants and the normal cost is increased 4 percent. This loading factor will not apply until 2010, at the earliest.

Funding target liability (FT liability) – If the plan is not-at-risk, the FT liability equals the NAR liability (see next glossary term). If the plan is at-risk, the FT liability equals the NAR liability plus 20% times the consecutive years at risk (up to five) of the excess (if any) of the AR liability over the NAR liability. Years before 2008 are excluded when determining at-risk consecutive years.

Not-at-risk liability (NAR liability) – This liability represents the present value of plan benefits earned to the valuation date. These liabilities are determined based on required:

- ***Interest rate assumptions*** – Plans can either use segment interest rates or the full yield curve rates.
- ***Mortality assumptions*** – Plans can either use static separate annuitant / nonannuitant tables, static combined tables (only for plans with fewer than 500 total

active and inactive participants), generational annuitant / nonannuitant tables, or plan-specific tables. Plan-specific tables must be approved by the IRS before they can be used

PBGC target liability (PBGC liability) – This liability is used to determine the amount of risk-based PBGC premiums. It is based only on vested benefits earned to the valuation date. The sponsor can elect to use the vested FT liability or calculate a vested liability based on spot segmented interest rates at the valuation date (i.e., not averaged over 24 months).

Target normal cost – This is the funding normal cost. It represents the present value of benefits expected to be earned during the current plan year.

Credit Balance Terms

Applying credits – Sponsors with prior year FTAPs of 80 percent or more may apply a credit balance to minimum funding requirements. To do so, sponsors must provide an unconditional written election to the plan's enrolled actuary and the plan administrator by the applicable due date. For example, elections to apply credits to minimum quarterly contributions must be made by their due date, and all other applications must be elected by the Form 5500 due date.

- ***Binding agreement with the PBGC*** – Plans that have entered into a binding agreement may not use their credit balances to satisfy minimum funding requirements and the FTAP used to determine the plan's funding shortfall and resulting amortization bases must use the plan's assets unreduced by its credit balance.
- ***Election not to apply PFBs to minimum funding*** – The shortfall amortization exemption is based on assets unreduced by the PFB. Since the 2008 PFB is $0, this election is not applicable in 2008.

Carryover balance (COB) – This is the balance attributable to pre-2008 excess contributions. Therefore, 2007 is the last year to add to the carryover balance. Carryover balances have advantages over prefunding balances in that carryover balances are not deducted from assets for certain funding percentages (eligibility to use credits and exemption from shortfall amortization bases). But carryover balances must be used or waived before prefunding balances are used or waived.

Contribution elections – Sponsors making unconditional elections to add excess contributions to their prefunding balance must notify the plan's enrolled actuary and plan administrator by the Form 5500 due date. Otherwise, excess contributions are not added to the prefunding balance.

Credit Balance – We use this simplifying term throughout this report to refer to the combination of both the carryover balance and prefunding balance.

Interest on credit balances – Beginning with the 2008 plan year, excess contributions are accumulated with interest at the effective interest rate to the end of the plan year.

Credit balances not used to satisfy minimum funding requirements are accumulated from the start to the end of the plan year at the plan's actual rate of investment return for that year.

Prefunding balance (PFB) – This is the balance attributable to post-2007 excess contributions. This balance is $0 at the beginning of 2008.

Waiving credits – Credits can be waived (written off) at the beginning of the year.

- ***Deemed waivers*** – These waivers are amounts that must be waived in order to avoid or limit benefit restrictions. If waiving the entire credit balance is not sufficient to eliminate or change the plan's benefit restrictions, no deemed waiver is required.
- ***Voluntary waivers*** – Sponsors may waive additional credits by providing written notification to the plan's enrolled actuary and administrator of this unconditional waiver by the end of the plan year. A sponsor may choose to waive additional amounts in order to achieve additional objectives (e.g., avoid at-risk status, enable plan to use any remaining credit in the following year, avoid or limit benefit restrictions in the following year, etc.).

Appendix C

About Mercer

Mercer is a leading global provider of consulting, outsourcing and investment services. Mercer works with clients to solve their most complex benefit and human capital issues, designing and helping manage health, retirement and other benefits. It is a leader in benefit outsourcing. management. Mercer's investment services include investment consulting and multi-manager investment. Mercer's 18,000 employees are based in more than 40 countries. The company is a wholly owned subsidiary of Marsh & McLennan Companies, Inc., which lists its stock (ticker symbol: MMC) on the New York, Chicago and London stock exchanges. For more information, visit www.mercer.com.

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