MetLife

# MetLife U.S. Pension Risk Behavior Index[SM]

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Fourth Annual Study of Risk Management Attitudes and Aptitude Among Defined Benefit Pension Plan Sponsors

FEBRUARY 2012

# About MetLife

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The MetLife enterprise serves 90 of the top 100 FORTUNE 500®-ranked companies* and has $800 billion in total assets and $739 billion in liabilities.[1] The operating companies, Metropolitan Life Insurance Company and MetLife Insurance Company of Connecticut, have $398 billion in total assets and $379 billion in liabilities.[2] These operating companies manage $77 billion of group annuity assets[3] and lead the market[4] with $37 billion of transferred pension liabilities.[3] The company also has an over 35-year track record in stable value with $41 billion of stable value business,[3] and has $22 billion of nonqualified benefit funding assets.[3]



[1] MetLife Inc. as of December 31, 2011. Total assets include general account and separate account assets and are reported under accounting principles generally accepted in the United States.

[2] Metropolitan Life Insurance Company and MetLife Insurance Company of Connecticut as of December 31, 2011. Total assets include general account and separate account assets and are reported on a statutory basis.

[3] As of December 31, 2011.

[4] LIMRA, Group Annuity Risk Transfer Survey, Fourth Quarter 2011.

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# ABOUT THE RESEARCH PARTNERS

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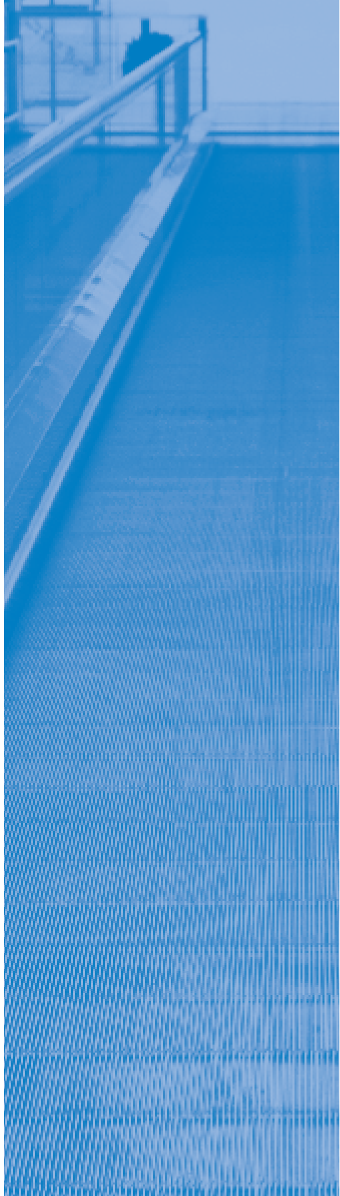
# Foreword



Each year, MetLife commissions a study of plan sponsors of the largest U.S. defined benefit (DB) pension plans to measure their aptitude for managing – and attitudes about – the investment, liability and business risks to which their plans are exposed. The study consists of two parts: an index, which measures the extent to which plan sponsors are managing the risks they believe are most important, and an analysis, which examines patterns and inter-relationships between risk attitudes and behaviors.

MetLife originally designed and fielded the U.S. Pension Risk Behavior Index$^{SM}$ (U.S. PRBI) study four years ago to encourage public dialogue around pension risk-related issues for plan fiduciaries. Since the study was introduced, it has helped plan sponsors develop a new framework for understanding pension risk management and identify early warning signs of pension risk management gaps.

The inaugural U.S. PRBI study,[5] published in 2009, found that plan sponsors were almost exclusively focused on the asset side of the asset-liability equation. A year later, as the economy was struggling, the 2010 study reported that, in the course of just a year, plan sponsors were open to a potential reconsideration of the importance of all risks.

Last year, as the economy started to stabilize, the 2011 study found that plan sponsors were showing signs of differentiating among the risk factors, focusing on a smaller number of risk factors and paying greater attention to them. Furthermore, rather than returning to the asset-centric, total rate of return focus, as seen in the inaugural study, sponsors were starting to look at assets in the context of liabilities.

Against the backdrop of continued market volatility, a low interest rate environment and regulatory uncertainty, the 2012 study indicates that this finding has continued and deepened, suggesting a new trend may be taking hold. In addition, the study finds the following: greater concentration on fewer risk items; higher perceived success in managing risks overall; and, more consistency in the management of the pension risks that are deemed most important.

On the following pages are the study's findings, including detailed responses to a series of open-ended questions that shed light on plan sponsors' high levels of attention focused on how best to manage pension liabilities during times of such uncertainty.

Weighing heavily on plan sponsors' minds is how best to improve funded status and, in turn, ensure that pension obligations are fulfilled for plan participants and their beneficiaries, as many of these obligations extend long into the future.



[5] References throughout the report to previous years' studies refer to the year in which prior studies were released.

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# Executive Summary

## RISK FACTOR REDUX

Over the past several years, defined benefit (DB) pension plan management has grown increasingly challenging for plan sponsors. A weakened economic environment, persistently low interest rates and an ever-changing regulatory environment have combined to exert more pressure than ever before on DB plans.

But these challenges have also given way to opportunity and new ways of thinking about DB plan management. Over the past four years, the findings of the MetLife U.S. Pension Risk Behavior Index℠ (U.S. PRBI) study have chronicled plan sponsors' shift away from an asset- and returns-centric approach to managing their plans toward a more balanced mindset that takes into account both the liability and asset sides of the pension risk management equation. Plan sponsors no longer believe they can rely on traditional portfolio diversification alone to meet their future obligations.

The 2012 U.S. PRBI study reveals that plan sponsors have taken another step in this direction. Plan sponsors for the largest U.S. DB pension plans are displaying remarkably similar patterns over the past two years in the way they think about and manage a set of 18 business, investment and liability risks[6] to which pension plans are exposed – and, by most accounts, that is a positive development.

First, plan sponsors appear to be building on the balanced attention paid to assets and liabilities that emerged in the 2011 study. At the top of the importance rankings are the same two liability-related risks – Underfunding of Liabilities and Asset & Liability Mismatch – indicating that plan sponsors are more focused on the liability side of pension plan management than ever before.

Plan sponsors are also continuing to differentiate among the full spectrum of risk factors by honing in on a handful of risks, paying greater attention to them and demonstrating more consistency in their successful management of these risks. The comparability of the year-over-year findings, which are in stark contrast to the findings in the first two U.S. PRBI studies, suggest that the new, integrated risk framework that showed signs of emerging last year is taking hold more broadly.

The four years' results taken together also chart the changes in how plan sponsors think about pension plan risk. Only the future will tell whether the changes that are reported will endure for the long term through a full range of market cycles.

## HIGHEST INDEX VALUE TO DATE IS GOOD NEWS FOR PLAN SPONSORS

Since the study's inception, data from the research have been used to calculate an Index value for the U.S. PRBI. The data are used to calibrate the importance that these companies ascribe to managing each risk, their reported success at implementing comprehensive practices to manage each risk and the consistency between the two, effectively measuring both attitudes toward, and aptitude for managing, pension plan risks.

The 2012 Index value is 85 out of 100, up from 81 in 2011, 79 in 2010 and 82 in 2009. Based

[6] Appendix B contains the complete list of risk items and associated risk management statements.

on the analysis of 156 respondents, the fourth annual Index value is at its highest level. It is also the first significant[7] increase in the study's history. The increase in the Index value is consistent with the sustained level of engagement plan sponsors have with risk management. Just as awareness precedes success, a sustained focus on the most important risks is a prerequisite for a higher Index measurement. The rise in the Index value provides cautious optimism that plan sponsors are developing some commitment to a new course of risk management.

## LIABILITY-RELATED RISKS AGAIN TOP IMPORTANCE RANKINGS

The top four risks by importance, which are identical to last year's rankings, demonstrate that plan sponsors continue to be much more cognizant of plan liabilities, and asset decisions are more likely to be made in the context of those liabilities.

The top two risk factors by importance – Underfunding of Liabilities and Asset & Liability Mismatch – have once again garnered the highest attention. These two risks, which reflect the liability side of the pension risk management equation, are followed by two investment-oriented risk factors – Asset Allocation and Meeting Return Goals.

The year-over-year consistency in the top four risk factors by importance is not entirely surprising, considering that the nation's 100 largest corporate DB pension plans' aggregate funded ratio (as estimated by Milliman) dropped nearly three percentage points in only a month, ending 2011 at 72.4%, down from 75% one month earlier.[8] This change largely resulted from Milliman's setting the average discount rate at 4.25% from November's 4.53%.[9] Further, the largest driver of the Milliman projections across a variety of potential economic scenarios suggests how sensitive funded ratio is to even small absolute movements in the discount rate. As improvement in funded status continues to lag behind increased awareness and understanding of risks, plan sponsors remain understandably concerned about their ability to manage the impact of funded ratio volatility and their underfunded plans.

The study's *Importance Selection Rate,* the percentage of times risk factors were selected as the most important when presented alongside other risk factors, should be viewed in conjunction with overall importance rankings. The first two risk factors – Underfunding of Liabilities and Asset & Liability Mismatch – were selected 66% of the time and 65% of the time, respectively. In addition, it is notable that the latter, Asset & Liability Mismatch, jumped five percentage points year-over-year – an increase matched only by Liability Measurement.



[7] The word "significant" is used throughout this report in its generic meaning and not to imply formal statistical significance. The composition of the sample and the aggregated nature of the reported results preclude using a standard method of calculating statistical significance.

[8] The 2011 Milliman 100 Pension Funding Index, January 6, 2012.

[9] The 2011 Milliman 100 Pension Funding Index, January 6, 2012. We note that Milliman's Index assumed a discount rate of 4.25% for December 2011, lower than the 4.36% (BNY Mellon) and 4.51% (Towers Watson) used for similar aggregate pension funding calculations for corporate plans.

## CORE SET OF PENSION RISKS TAKES HOLD

Faced with economic uncertainty, unrelenting market volatility, increasing accounting transparency and regulatory uncertainty, plan sponsors are holding true to a core set of risk factors – albeit with some fine-tuning taking place.

Overall, the ranking of the risk factors is very close to that of the 2011 study. Including the top four risk factors by importance, the importance rankings remained unchanged year-over-year for eight of the 18 risk items, with a further four items changing by only one rank. All of the top eight risk factors ranked by importance in last year's study also ranked in the top eight this year – with some slight changes in the order assigned to the fifth- through seventh-ranked risk factors.

Additionally, the *Risk Importance Concentration,* a measurement that indicates the extent to which importance is being ascribed to just a few risk factors, is at its highest level in the four years that MetLife has commissioned this study. In 2012, the *Risk Importance Concentration* is 40% – up from 37% in 2011, 1% in 2010 and 30% in 2009 – indicating that plan sponsors are differentiating among the 18 risk factors to a large degree and concentrating on the specific risks they believe can have the greatest impact on their plans.

## SELF-REPORTED SUCCESSFUL MANAGEMENT OF PENSION RISKS AT HIGHEST LEVEL

Each year the study is conducted, respondents are asked to rate on a scale of 1 through 5, with 5 indicating highest success, how strongly they agree with the statements that describe successful management of each of the 18 risk factors. The rating is used as a proxy for how successfully plan sponsors believe they are implementing comprehensive measures to manage each risk item.

In the 2012 U.S. PRBI study, reported success ratings increased, with 83% of all ratings indicating success (i.e., rated a 4 or 5), compared to 79% in 2011, 80% in 2010 and 75% in 2009.

## LIABILITY MEASUREMENT RETAINS TOP SUCCESS SPOT

Liability Measurement retained the number one success ranking for the third year in a row, demonstrating that plan sponsors take very seriously the need to routinely review liability valuations and understand the drivers that contribute to their plans' liabilities, including how the liability profile may change over time. Not only has Liability Measurement held the top success spot for three consecutive years, its *Average Success Rating* – which incorporates the plan sponsors' self-reported success at managing each of 18 risks, weighted by the relative importance that sponsors ascribed to each risk – has improved every year.

## GREATER CONSISTENCY IN SUCCESSFUL MANAGEMENT OF RISKS

Ideally, there should be consistency over time between the level of importance that plan sponsors ascribe to certain risks, and how successfully they believe they are managing the risks. Consistency is often driven in part by the level of attention and resources devoted to certain risk factors. The Index value – the highest in the study's history – indicates that there is greater consistency between importance and success than ever before. Specifically, an analysis of the 2012 study findings revealed that ten risk items had self-reported levels of success consistent with the levels of importance ascribed by respondents to those risk factors. Interestingly, for the first time in the U.S. PRBI study, no risk factor was in complete alignment with respect to importance and success.

Additionally, as part of the study's rigorous analysis, three measurements or tests have been devised to determine the consistency with which individuals are reporting that they are successfully managing the risks to which they had given the greatest attention for their respective plans. The percentage of respondents who passed all three consistency tests improved compared to last year with 29% passing (vs. 17% in the 2011 study) and only 12% failing all three tests in the 2012 study (vs. 23% in the 2011 study).

## SUCCESS STILL LAGS FOR MOST IMPORTANT LIABILITY-RELATED RISKS

Although there is greater consistency for the majority of risk factors, the study captures the fact that self-reported success in managing the top two liability-related risks – Underfunding of Liabilities and Asset & Liability Mismatch – is still lagging. The former, although ranked first in terms of importance, is reported as the 11th most successfully managed risk; the latter, which is the second most important risk, ranked 12th in terms of reported success. Even though their *Average Success Ratings* improved moderately, the low reported success rankings for these risks is likely due to market forces beyond plan sponsors' control as they appear to struggle to identify new ways to stabilize liability valuations and generate more reliable and less volatile returns. For example, the disconnect between importance and success for Asset & Liability Mismatch is consistent with the fact that improving asset returns is not sufficient to overcome the rise in liabilities due to the sustained low interest rate environment, resulting in part from efforts to support the overall economy.

# The Index

To conduct the MetLife U.S. PRBI study, now in its fourth year, MetLife worked with Bdellium Inc. and Greenwich Associates to survey large U.S. pension plan sponsors. Data from this survey were used to calibrate the importance that these companies ascribed to managing each risk, their reported success at implementing comprehensive practices to manage each risk and the consistency between the two, effectively measuring both attitudes toward, and aptitude for managing, pension plan risks.

In 2009, the U.S. PRBI study established a baseline Index value for risk management practices against which future changes can be measured. Since the inaugural study, the Index has measured the extent to which attitudes and behaviors have changed over time.

The higher the value on the Index, the greater the degree to which plans are being managed by sponsors who are reporting that they are successfully addressing important risks. A rise in the Index value would most likely indicate either an increase in reported success at managing risks that remain highly important or a decrease in the importance of certain risks that respondents are reporting as less successfully managed. Appendix A explains in detail the methodology used to calculate the Index.

## INDEX VALUE: HIGHEST VALUE TO DATE

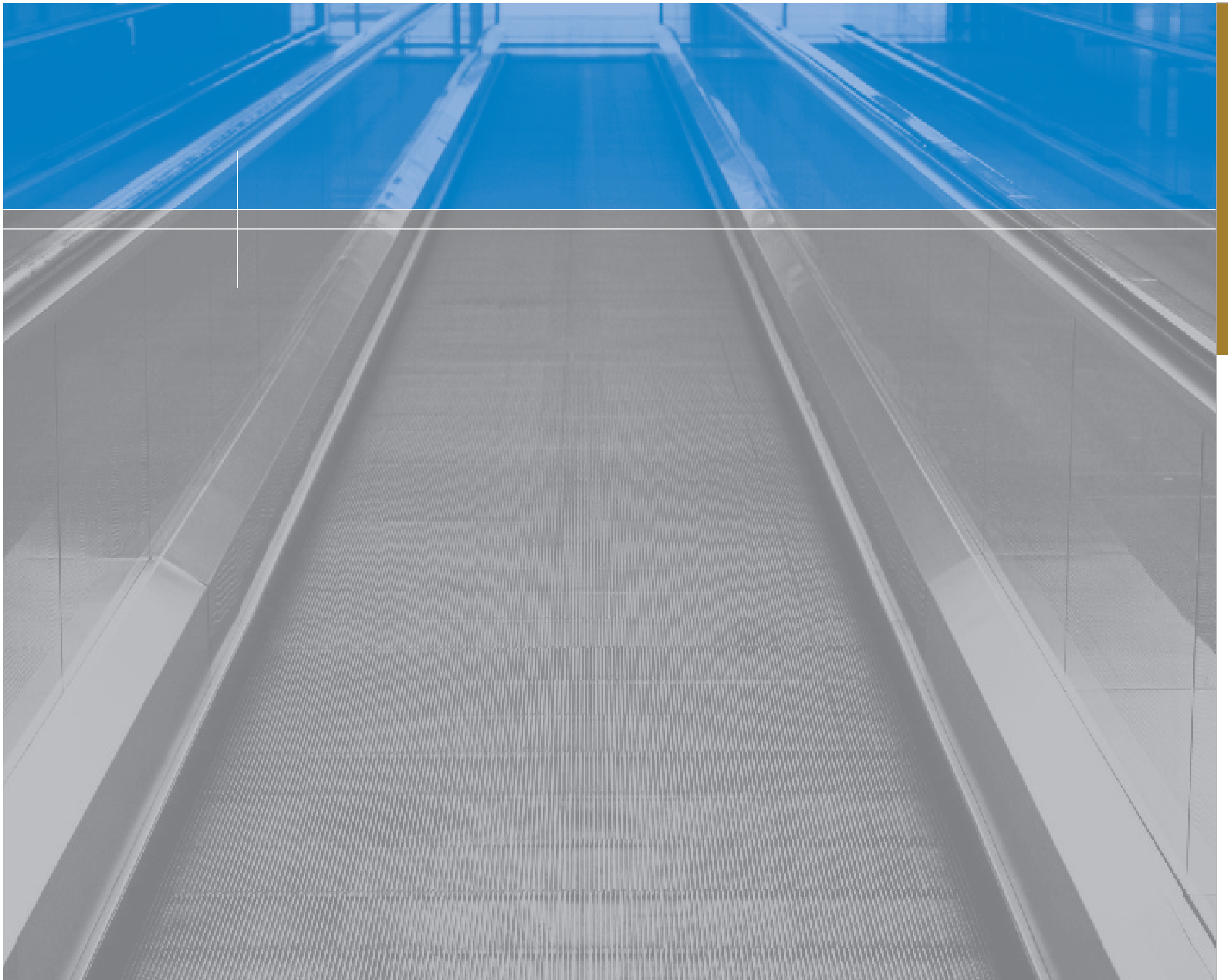
Based on an analysis of 156 respondents, the fourth annual value of the Index is at its highest level at 85 out of 100, a significant[10] improvement from all prior years.[11] Simply put, the increase in the overall Index value, which is very close to the target of 87 that the researchers believe is achievable, reflects the progress that plan sponsors believe they have made in identifying and successfully managing a core set of risks.

The U.S. PRBI is built on responses by individual plan sponsors as to whether they agree that they are successfully addressing various risk issues. An individual success rating of 1 or 2 indicates that a respondent disagrees strongly or somewhat disagrees that they are successfully addressing the risk. A value of 3 indicates that the respondent is neutral. Values of 4 or 5 indicate agreement or strong agreement, respectively, that they are successfully managing the relevant risk.

At a minimum, every plan sponsor should agree that they are addressing important risk items. This would translate into both an individual *Importance-Weighted Average Rating* for each plan sponsor and an industry *Average Success Rating* of 4.0. The equivalent Index value is 75. This sets a minimum acceptable Index value. While it is unrealistic to expect to achieve an Index value of 100, a score of 87 would suggest that sponsors as a group are proactively engaging in pension risk management.

[10] As noted earlier in the report, the word "significant" is used throughout this report in its generic meaning and not to imply formal statistical significance. The composition of the sample and the aggregated nature of the reported results preclude using a standard method of calculating statistical significance.

[11] The Index value was 81 in the 2011 study, 79 in the 2010 study and 82 in the 2009 study.



> *"Pension plans are now underfunded, so they have moved from the back to the front burner."*

# Importance of Managing Pension Risk

## CORE SET OF PENSION RISKS TAKES HOLD AS PLAN SPONSORS CONCENTRATE ON A HANDFUL OF THE MOST IMPORTANT RISKS

As was predicted in last year's report, plan sponsors have firmly placed the greatest importance on a core set of risk factors – identified as an emerging potential trend last year. In fact, the ranking of the risk factors by importance remains very close to last year's ranking of risk factors.

Overall, the importance rankings were unchanged year-to-year for eight of the 18 risk items, with a further four items changing by only one ranking level.

The top eight risk factors by importance in last year's study also ranked in the top eight again this year. The *items* ranked fifth through eighth are identical to the group from last year, though the specific *order* shifted for the fifth through seventh items. This year, Accounting Impact and Liability Measurement

**Table 1:** Importance Rankings (2009–2012)

| Risk Item | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|
| Underfunding of Liabilities | 1 | 1 | 2 | 3 |
| Asset & Liability Mismatch | 2 | 2 | 6 | 4 |
| Asset Allocation | 3 | 3 | 4 | 1 |
| Meeting Return Goals | 4 | 4 | 14 | 2 |
| Accounting Impact | 5 | 6 | 15 | 5 |
| Liability Measurement | 5 | 7 | 1 | 6 |
| Ability to Measure Risk | 7 | 5 | 8 | 7 |
| Plan Governance | 8 | 8 | 3 | 9 |
| Investment Management Style | 9 | 12 | 16 | 8 |
| Fiduciary Risk & Litigation Exposure | 10 | 9 | 9 | 10 |
| Investment Valuation | 11 | 11 | 13 | 11 |
| Decision Process Quality | 12 | 10 | 10 | 12 |
| Longevity Risk | 13 | 13 | 10 | 16 |
| Advisor Risk | 14 | 14 | 5 | 13 |
| Quality of Participant Data | 15 | 16 | 17 | 15 |
| Mortality Risk | 16 | 17 | 17 | 17 |
| Early Retirement Risk | 16 | 18 | 10 | 18 |
| Inappropriate Trading | 18 | 14 | 7 | 14 |

are jointly ranked fifth, up from sixth and seventh, respectively, last year. Ability to Measure Risk dropped from fifth to seventh. Plan Governance held its position at eighth place both years. The biggest changes were Inappropriate Trading, which dropped from 14th to 18th, and Investment Management Style, which rose from 12th to ninth.

Additionally, the *Risk Importance Concentration,* a measurement that indicates the extent to which importance is being ascribed to just a few risk items, is at the highest level in the four years MetLife has commissioned this study. A value of 0% would indicate that all risk areas are being ascribed equal importance (no concentration). A value of 100% would indicate all importance being placed on just one risk area (total concentration). In 2012, the *Risk Importance Concentration* is 40% – up from 37% in 2011, 1% in 2010 and 30% in 2009 – indicating that plan sponsors are differentiating among the 18 risk factors to a large degree and concentrating on the core set of risks that they believe can have the greatest impact on their plans.

## ONCE AGAIN, LIABILITY-RELATED RISKS TOP IMPORTANCE RANKINGS

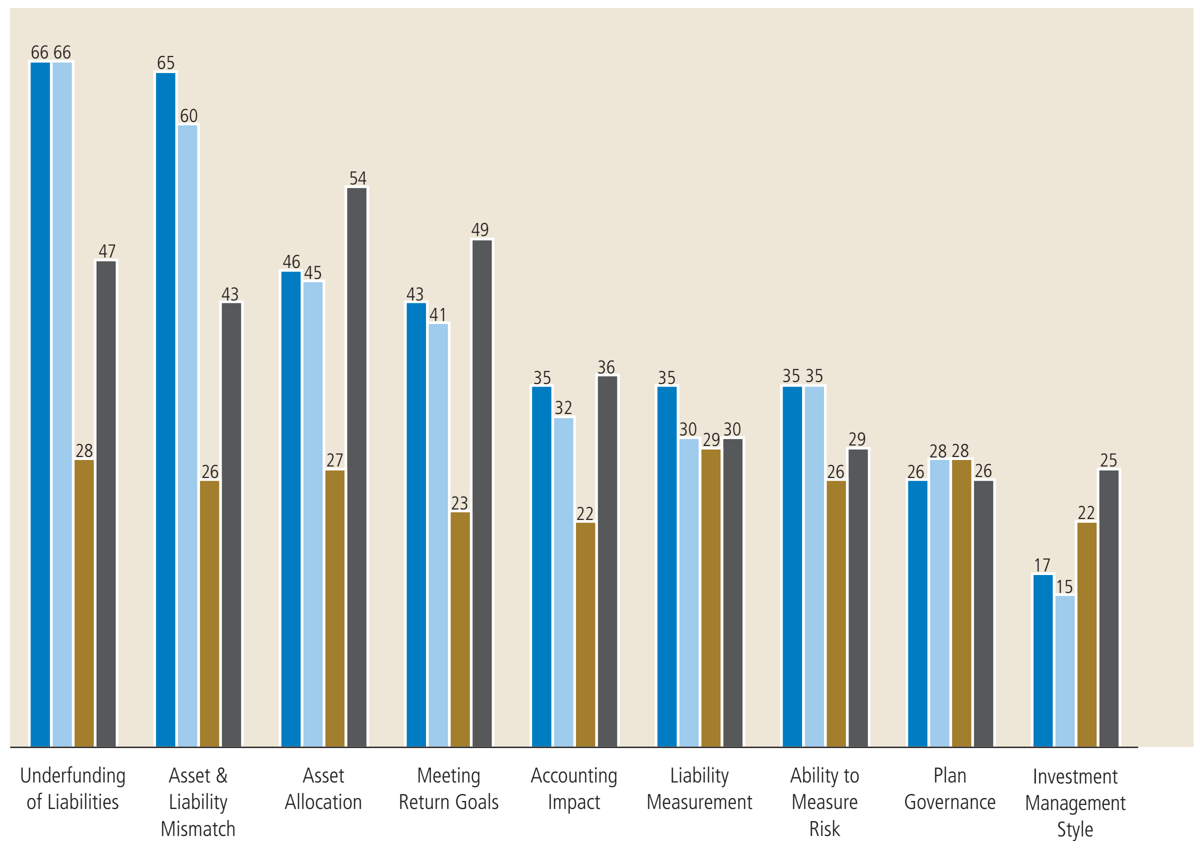
The top four risk factors selected as most important by most plan sponsors are identical to last year's findings. The top two risk factors by importance – Underfunding of Liabilities and Asset & Liability Mismatch, which reflect the liability side of the pension risk management equation, are followed by two investment-oriented risk factors – Asset Allocation and Meeting Return Goals. With the order of the top four rankings being the same two years in a row, it appears that the notion that assets should be viewed in the context of liabilities is firmly taking hold.

The *Importance Selection Rates,* the percentage of times risk factors were selected as the most important when presented along-side other risk factors, for Underfunding of Liabilities and Asset & Liability Mismatch were nearly twenty percentage points higher than the risks ranked third and fourth in importance in 2012. These first two risks were selected 66% of the time and 65% of the time, respectively, while the next two risks were selected 46% and 43% of the time. While all four of these *Importance Selection Rates* are relatively on par with last year's values, a notable difference is the increase from 60% to 65% for Asset & Liability Mismatch, perhaps suggesting that plan sponsors are increasingly aware of the important role that asset-liability matching can play in both the level and volatility of funded status.

While the top four risks have identical importance rankings as last year and the *Importance Selection Rates* are also relatively on par with last year's selection rates, there are some notable differences in the rankings and selection rates for these same risk factors compared to the study's earliest years. For example, the *Importance Selection Rates* for this year's top-ranked risks were much lower in 2010 – the selection rates were 28%, 26%, 27% and 23%, respectively. That year, Liability Measurement edged out every other risk in terms of importance. In retrospect, it seems clear that 2010 served as a "reset" year of returning to "first principles" for plan sponsors, setting up a foundation for a new and more integrated way of looking at pension plan risk and management.

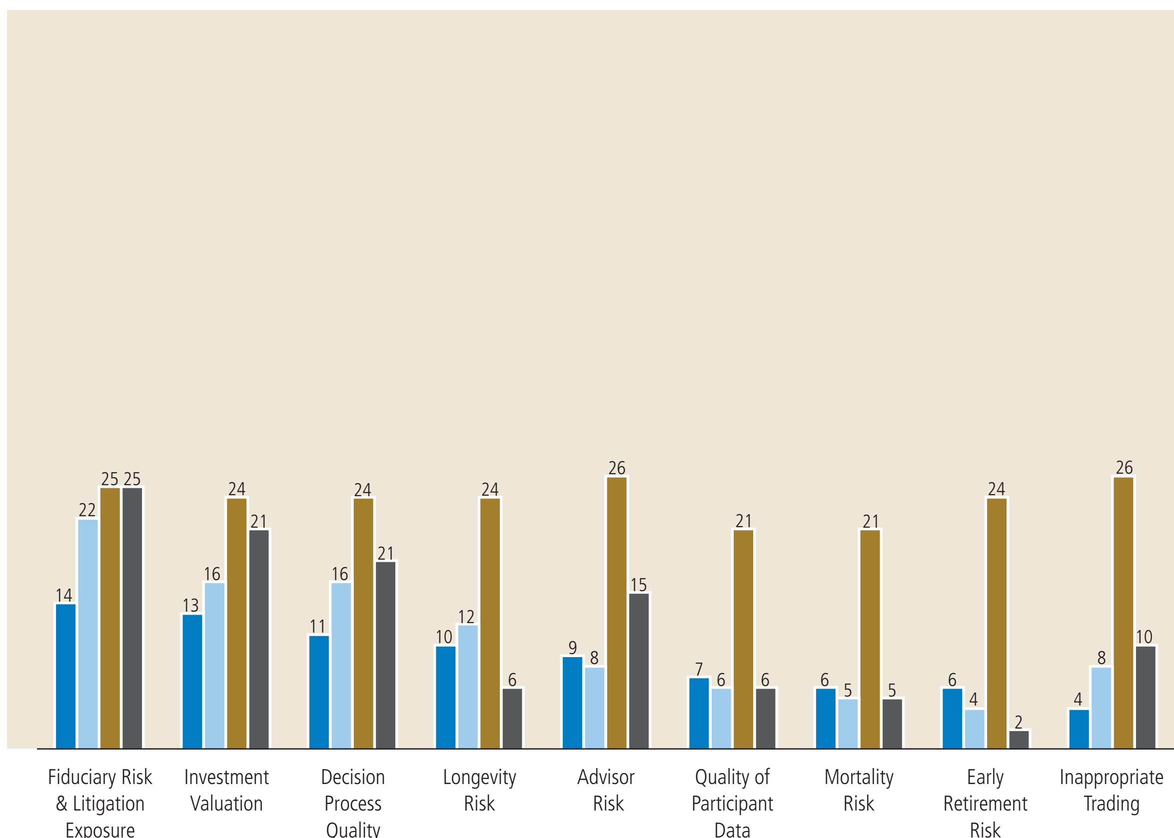
## **Chart 1:** Overall Importance Selection Rates (2009–2012)

Numbers are percentages




The focus on liability-related risks that has emerged in the U.S. PRBI study has clearly accelerated as a result of the economic downturn. Over the past several years, plan sponsors have seen plan assets decline and liability valuations rise. As a result, most U.S. pension plans are substantially underfunded on an accounting basis. This "perfect storm" of the turbulent economic environment, recent regulatory changes, impending accounting rule changes and the continued low interest rate environment is being synthesized by plan sponsors into a newfound understanding of the risks that their pension plans represent. This better understanding of pension risks may offer new insights into how best to manage them. At the same time, financial analysts appear to have a new appreciation for the impact of pension plans' liabilities on companies' income statements and balance sheets.

Once the net effect of the pension plan's internal financial dynamics are clearly separated from operating earnings, pension assets are viewed with reference to their primary purpose, which is to fund the benefit promises made by plan sponsors to plan participants and their beneficiaries. Consistent with this, a greater awareness appears to be emerging of how best to manage – and protect – the investment portfolio in order to be able to fund the plan's liabilities over the long term. Today, since plan sponsors are more focused on the liability side of pension plan management than ever before, they are more likely to make asset decisions in the context




of liabilities. This approach appears to be gradually replacing the singular focus on maximizing returns that existed over the past couple of decades; instead, sponsors may be taking steps intended to minimize the volatility of their plans' portfolios relative to the liabilities they support, including closing or freezing their DB plans.

The focus on liability management appears to be supported by market forces, with traditional demographic trends pushed at least temporarily to the back burner. With the aging Baby Boomers staying in the workforce longer primarily due to financial necessity, Early Retirement Risk continues to rank relatively low in importance at 16th. We also note that Longevity Risk remains low relative to other risks at 13th, reflecting plan sponsors' focus on more immediate concerns. It is, however, interesting to note that this risk continues to rank consistently higher than both its more current cousin, Mortality Risk, and Quality of Participant Data.

At the very bottom of the importance rankings for the 18 risk factors is Inappropriate Trading – down from 14th last year and seventh in 2010. Since plan sponsors believe they are successfully managing this risk (it ranked third in success this year), they may no longer feel that it poses the same threat it had appeared to when it rose in the importance rankings from 2009 to 2010 in the midst of unexpected liquidity problems that developed for a variety of asset classes and investment practices in the wake of the economic crisis.

*"We are much more cognizant of the balance sheet and income statement impact of fluctuations in plan assets and liabilities."*

# Perceived Success in Managing Pension Risk

## SELF-REPORTED SUCCESSFUL MANAGEMENT OF PENSION RISKS AT HIGHEST LEVEL

In 2012, the self-reported successful management of pension risks is at its highest level. Each respondent was asked to rate on a scale of 1 to 5 how strongly they agreed with each one of the 18 risk statements that describe successful management of that specific risk. The rating was then used as an indicator of how successfully the plan sponsor believes his or her organization is managing each risk. As with the prior U.S. PRBI studies, since this is a self-reported rating, success ratings are expected to be high, reflecting a natural bias inherent in self reporting. These ratings should be considered in conjunction with the analysis in the sections that follow for a more balanced view. That said, in 2012, 83% of all ratings indicated success, compared to 79% in 2011, 80% in 2010 and 75% in 2009. Given these high self-reported ratings, the exceptions to the self-reported success ratings for certain risk factors are of particular interest.

## LIABILITY MEASUREMENT RETAINS TOP SUCCESS SPOT

Liability Measurement, which moved from seventh to fifth in importance, retained the number one success ranking for the third year in a row. It also achieved a new high for its *Average Success Rating* – landing at 4.86 and surpassing last year's 4.77 maximum success rating, which had been the previous record in the history of the survey. As the old adage goes – you can only manage what you have measured – so it seems intuitive that plan sponsors feel they are successfully reviewing the liability valuations and understand the drivers that contribute to their plans' liabilities and changes to these over time.

Liability Measurement is followed by Plan Governance, Inappropriate Trading and Asset Allocation, which took the remaining success ranking spots to round out the top four. These four risk factors also held the top four success ranking spots in 2011, although in a slightly different order.

In 2012, Inappropriate Trading and Asset Allocation kept their relative success rankings. Of interest was the increased success for Plan Governance, which moved up from fourth to second and had an *Average Success Rating* of 4.70 (which, coupled with its medium relative importance ranking – it ranked eighth out of the 18 risk factors – might suggest that sponsors feel they have adopted sufficiently strong models for plan governance and are maintaining them). However, it is interesting to note that a recent report by Towers Watson found that 40% of retirement plan sponsors from the Fortune 1000™* and *Pensions and Investments'* P&I 1000 are planning to spend more time on governance issues in the next two years, with 86% citing "regulatory complexity" as a driving force behind the increased attention.[12] We also note that the Plan Governance results are belied by the continued low ranking of both importance (12th) and success (16th) of Decision Process Quality, which ought to be a primary driver of good governance.

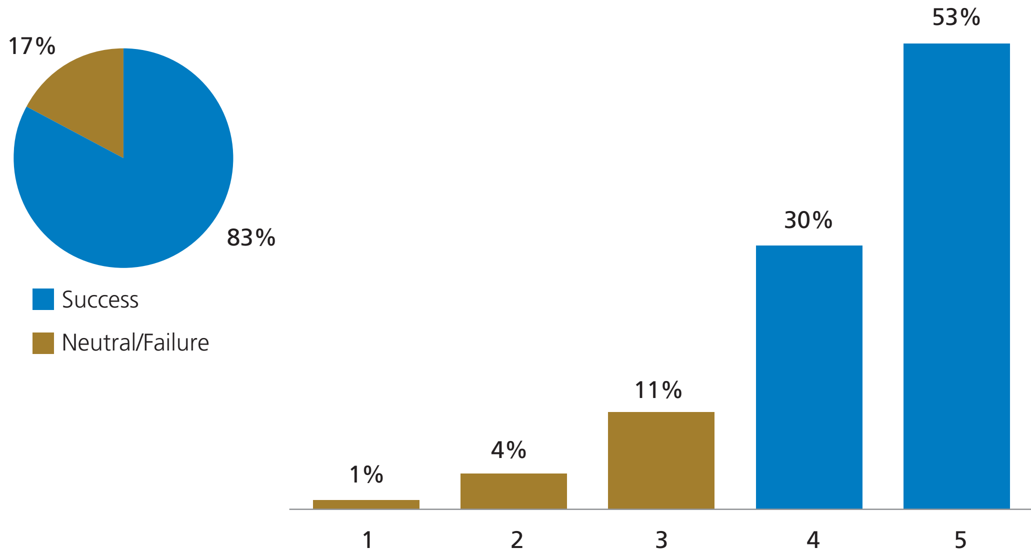
Another way to measure the degree to which plan sponsors believe they are successfully managing the risks facing their plans is to look at

[12] "The New Governance Landscape," Towers Watson, December 2011.

* Fortune 1000™ is a registered trademark of the FORTUNE magazine division of Time Inc.

**Chart 2:** Success Rating Frequency (2012)

How often respondents rated themselves on each point in the "Success" scale
1 and 2 = "Failure," 3 = "Neutral," 4 and 5 = "Success"




Note: Due to rounding, percentages in the bar graph above do not equal 100%.

**Table 2**: Success Rankings (2009–2012)

| Risk Item | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|
| Liability Measurement | 1 | 1 | 1 | 3 |
| Plan Governance | 2 | 4 | 2 | 2 |
| Inappropriate Trading | 3 | 2 | 4 | 9 |
| Asset Allocation | 4 | 3 | 8 | 1 |
| Investment Valuation | 5 | 6 | 5 | 6 |
| Advisor Risk | 6 | 4 | 3 | 4 |
| Meeting Return Goals | 7 | 7 | 6 | 5 |
| Accounting Impact | 8 | 9 | 10 | 8 |
| Quality of Participant Data | 9 | 10 | 9 | 7 |
| Investment Management Style | 10 | 8 | 7 | 11 |
| Underfunding of Liabilities | 11 | 11 | 15 | 10 |
| Asset & Liability Mismatch | 12 | 13 | 11 | 15 |
| Ability to Measure Risk | 13 | 12 | 12 | 14 |
| Mortality Risk | 14 | 14 | 14 | 13 |
| Fiduciary Risk & Litigation Exposure | 15 | 15 | 13 | 12 |
| Decision Process Quality | 16 | 16 | 16 | 16 |
| Early Retirement Risk | 17 | 17 | 17 | 18 |
| Longevity Risk | 18 | 18 | 18 | 17 |

**Table 3:** Average Success Ratings (2009–2012)

| Risk Item | Change from 2011 to 2012 | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|---|
| Liability Measurement | 0.09 | 4.86 | 4.77 | 4.72 | 4.51 |
| Plan Governance | 0.16 | 4.70 | 4.54 | 4.58 | 4.58 |
| Inappropriate Trading | 0.07 | 4.69 | 4.62 | 4.56 | 4.22 |
| Asset Allocation | 0.04 | 4.59 | 4.55 | 4.36 | 4.60 |
| Investment Valuation | 0.07 | 4.56 | 4.48 | 4.45 | 4.28 |
| Advisor Risk | 0.01 | 4.54 | 4.54 | 4.57 | 4.44 |
| Meeting Return Goals | 0.11 | 4.51 | 4.39 | 4.44 | 4.35 |
| Accounting Impact | 0.16 | 4.50 | 4.34 | 4.25 | 4.25 |
| Quality of Participant Data | 0.21 | 4.49 | 4.28 | 4.29 | 4.26 |
| Investment Management Style | 0.01 | 4.37 | 4.36 | 4.39 | 4.04 |
| Underfunding of Liabilities | 0.33 | 4.32 | 3.99 | 3.89 | 4.17 |
| Asset & Liability Mismatch | 0.20 | 4.19 | 3.99 | 4.06 | 3.69 |
| Ability to Measure Risk | 0.14 | 4.13 | 3.99 | 4.06 | 3.76 |
| Mortality Risk | 0.06 | 4.01 | 3.95 | 3.98 | 3.93 |
| Fiduciary Risk & Litigation Exposure | 0.11 | 3.98 | 3.87 | 4.00 | 3.98 |
| Decision Process Quality | 0.25 | 3.92 | 3.66 | 3.74 | 3.50 |
| Early Retirement Risk | 0.06 | 3.57 | 3.51 | 3.57 | 3.30 |
| Longevity Risk | 0.06 | 3.26 | 3.20 | 3.48 | 3.37 |

Note: All figures shown, including the calculation of changes from 2011 to 2012, were rounded to two decimal points.

the median *Average Success Rating*. In 2012, the median *Average Success Rating* is 4.43, essentially unchanged from 2011's 4.31 and 2010's 4.27 and well ahead of 2009's 4.19. The 2012 U.S. PRBI study also found that the *Average Success Rating* for each risk item this year had a range of 1.60 (from 3.26 to 4.86), up slightly from last year's range of 1.57 (from 3.20 to 4.77) and well ahead of 1.24 in 2010 (3.48 to 4.72) and 1.30 in 2009 (3.30 to 4.60).

Additional evidence of plan sponsor confidence in their success in managing pension plan risks is found in the *Probability of Failure,* a value that measures the number of risk items that received a rating of 1 or 2 expressed as a percentage of the total number

**Table 4:** Probability of Failure (2009–2012)

| Risk Item | Change from 2011 to 2012 | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|---|
| Liability Measurement | 0% | 1% | 1% | 1% | 2% |
| Plan Governance | -2% | 1% | 3% | 1% | 0% |
| Inappropriate Trading | 1% | 1% | 0% | 2% | 8% |
| Asset Allocation | 0% | 1% | 1% | 7% | 2% |
| Advisor Risk | 1% | 1% | 0% | 1% | 2% |
| Accounting Impact | -5% | 1% | 6% | 6% | 4% |
| Quality of Participant Data | -2% | 1% | 3% | 4% | 4% |
| Investment Valuation | 0% | 2% | 2% | 2% | 6% |
| Investment Management Style | -5% | 3% | 7% | 2% | 10% |
| Meeting Return Goals | 1% | 3% | 3% | 2% | 4% |
| Underfunding of Liabilities | -5% | 3% | 8% | 11% | 7% |
| Fiduciary Risk & Litigation Exposure | -4% | 7% | 11% | 10% | 7% |
| Asset & Liability Mismatch | -4% | 8% | 11% | 12% | 18% |
| Decision Process Quality | -5% | 8% | 13% | 13% | 15% |
| Ability to Measure Risk | -3% | 8% | 11% | 10% | 15% |
| Mortality Risk | -2% | 12% | 14% | 9% | 11% |
| Early Retirement Risk | -8% | 15% | 23% | 18% | 24% |
| Longevity Risk | -3% | 28% | 31% | 21% | 23% |

Note: All figures shown, including the calculation of changes from 2011 to 2012, were rounded to the nearest whole number.

of plan sponsors who rated that risk item. No risk item had a 0% *Probability of Failure* in 2012, and only seven risk items had a 1% *Probability of Failure.*

Longevity Risk, one of the least important and least successfully managed risks, was again given the greatest *Probability of Failure* rating at 28%, only a slight improvement from the 31% rating last year. It also ranked 18th for *Probability of Success* three years in a row, down slightly from 17th in 2009.

*"Recently the market has been volatile so we are putting more effort into monitoring [our pension] plan."*

# Pension Risk Importance and Success

Ideally, there should be consistency between the importance that plan sponsors ascribe to each of the 18 risks, and how successfully they believe they are managing those risks. In general, both resources expended and perceived results contribute to self-reported success. This would translate into all 18 risk factors landing within quadrants on a graph that correspond to the degree of both importance and success ascribed to them by respondents.

This chart may be both insightful and prescriptive for plan sponsors. For example, risks deemed high in importance that fall into the high success quadrant might indicate that sponsors should stay the course; risks deemed high in importance and low in success would suggest areas of increased focus for sponsors; risks identified as low in importance that fell within the high success area would prompt sponsors to be sure they were not expending more resources than needed for the risk; and, risks in the low importance, low success quadrant should be reviewed to be sure that they are not being inappropriately overlooked.

In 2012, plan sponsors have made additional progress in closing the gap between the importance they ascribe to each risk area and how successful they believe they are at managing those risks.

**Chart 3:** Consistency of "Importance" and "Success" Rankings (2012)

Risk items with the same importance and success rankings would lie along the diagonal blue line

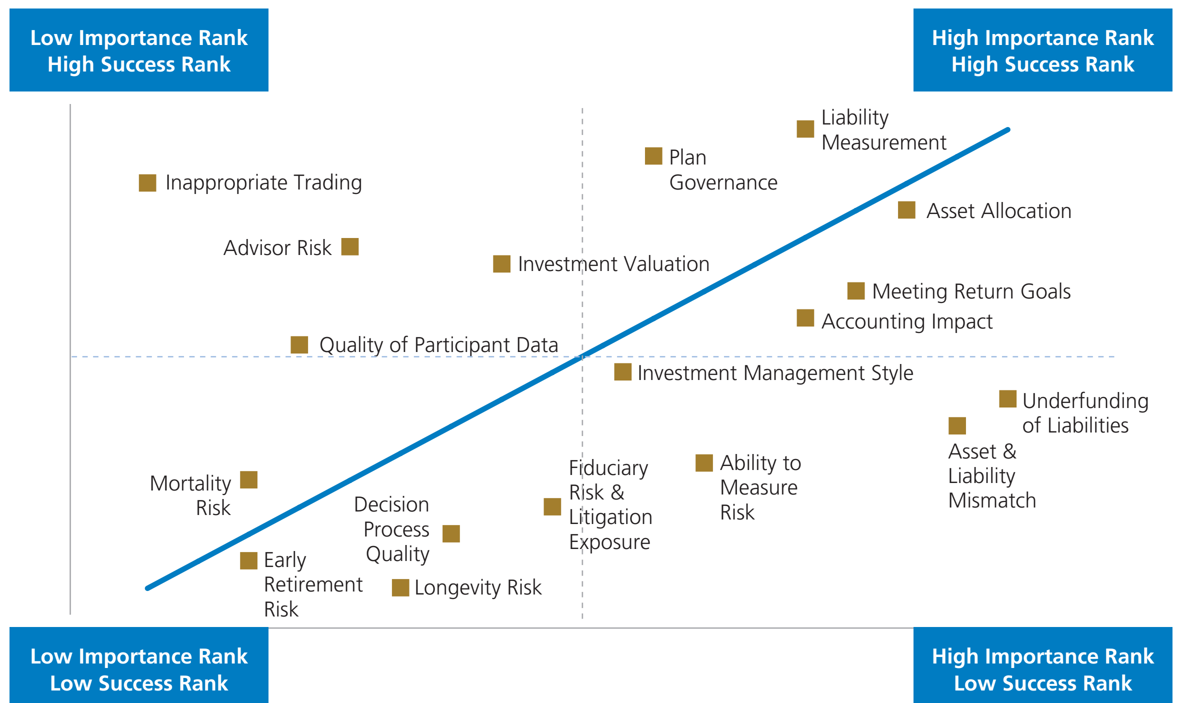


**Chart 4:** Consistency of "Importance" and "Success" (2009–2012)

| Risk Item | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|
| Asset Allocation | | | | |
| Liability Measurement | | | | |
| Plan Governance | | | | |
| Decision Process Quality | | | | |
| Longevity Risk | | | | |
| Mortality Risk | | | | |
| Early Retirement Risk | | | | |
| Accounting Impact | | | | |
| Meeting Return Goals | | | | |
| Fiduciary Risk & Litigation Exposure | | | | |
| Quality of Participant Data | | | | |
| Inappropriate Trading | | | | |
| Advisor Risk | | | | |
| Investment Valuation | | | | |
| Underfunding of Liabilities | | | | |
| Asset & Liability Mismatch | | | | |
| Ability to Measure Risk | | | | |
| Investment Management Style | | | | |

Note: The color of the dots in this chart indicates whether or not a risk item is in a consistent quadrant in a given year. Green means that a risk item is in a consistent quadrant (e.g., High Importance/High Success or Low Importance/Low Success). Red means that it is in an inconsistent quadrant (e.g., High Importance/Low Success or Low Importance/High Success).

An analysis revealed that nine of the risk items are in exactly the same quadrants as last year. Additionally, ten risk items in 2012 fell within the corresponding quadrants (i.e., high importance/high success or low importance/low success) – as we had seen in all prior years that MetLife has commissioned this study. Interestingly, for the first time no risk factor had exactly the same importance and success ranking, which would have indicated that there is 100% consistency between the importance that plan sponsors ascribe to a certain risk and how successfully they manage that risk.

Although, in general, consistency has increased when looking at the full complement of risk factors, there are some notable inconsistencies. The top two risk factors, Underfunding of Liabilities and Asset & Liability Mismatch, while ranked first and second in terms of importance, respectively, are ranked 11th and 12th in terms of success. Even though their *Average Success Ratings* improved slightly to 4.32 from 3.99 and to 4.19 from 3.99, respectively, year-over-year, the continued inconsistency reflects the effect of market forces beyond respondents' control that are constraining their ability to implement plans to address these risks.

Three measurements or tests have been devised to determine the consistency with which individuals are successfully managing the risks to which they pay the greatest attention for their respective plans:

1) *Importance-Weighted Average Success Rating* – This weighted-average rating can range from 1 to 5, and indicates the extent to which risk items that receive the most attention from respondents also received a high rating for success in implementing comprehensive risk management measures. Ideally, every risk item that has a positive *Importance Selection Rate* should have a success rating of 4 or 5 so that the weighted average rating would be in excess of 4.5.

2) *Ratio of the Importance-Weighted Average Success Rating to the Simple Unweighted Average Success Rating* – This measurement provides some control for the observed upward bias in the success ratings provided by respondents. If a respondent is more successfully managing the risks which they consider more important and vice versa, this ratio will be greater than 100%. A ratio of less than 100% indicates poor alignment of success and importance.

3) *Quadrant Consistency Rate* – This is the percentage of risk items that combine either above-average importance with above-average success or below-average importance with below-average success. Either combination indicates consistency between importance and success. A result below 50% indicates significant inconsistency.

The percentage of respondents who passed all three consistency tests improved compared to last year with 29% passing all three tests, compared to 17% in the 2011 study, 15% in the 2010 study and 31% in the 2009 study. Likewise, fewer respondents failed all three consistency tests in 2012. Only 12% failed all three tests, compared to 23% in 2011, 30% in 2012 and 15% in 2009, respectively.

**Table 5:** Results of Three Tests for Consistency Between Importance and Success (2009–2012)

| Test Measurement | Number of Respondents | | | | Percentage of Respondents | | | |
|---|---|---|---|---|---|---|---|---|
| | 2012 | 2011 | 2010 | 2009 | 2012 | 2011 | 2010 | 2009 |
| Test 1: Importance-Weighted Average Rating < 4.50 | 79 | 99 | 118 | 96 | 51% | 66% | 72% | 63% |
| Test 2: Ratio of Average Ratings < 100% | 40 | 51 | 73 | 41 | 26% | 34% | 45% | 27% |
| Test 3: Consistency Rate < 50% | 69 | 71 | 84 | 41 | 44% | 48% | 51% | 27% |
| Failed All Three Tests | 18 | 34 | 49 | 23 | 12% | 23% | 30% | 15% |
| Passed All Three Tests | 45 | 25 | 24 | 48 | 29% | 17% | 15% | 31% |

| | Test Measurement | | |
|---|---|---|---|
| | Importance-Weighted Average Rating | Ratio of Average Weightings | Consistency Rate |
| | **Maximum** | | |
| **2012** | 5.00 | 123% | 78% |
| **2011** | 5.00 | 131% | 75% |
| **2010** | 5.00 | 115% | 89% |
| **2009** | 5.00 | 145% | 94% |
| | **Median** | | |
| **2012** | 4.46 | 103% | 50% |
| **2011** | 4.28 | 102% | 50% |
| **2010** | 4.28 | 100% | 45% |
| **2009** | 4.39 | 104% | 56% |
| | **Minimum** | | |
| **2012** | 2.61 | 76% | 25% |
| **2011** | 2.72 | 68% | 17% |
| **2010** | 2.44 | 65% | 11% |
| **2009** | 2.47 | 56% | 28% |

> *"The continued low interest rate environment and low asset return levels are negatively affecting our pension expenses and liabilities and are leading us to rethink how we invest plan assets."*

# Qualitative Interviews

To assess how the changing legal, market and regulatory environments are impacting DB pension plans, MetLife complemented its quantitative research with several open-ended questions. The interviews allowed for additional insight into the pension risk management practices and behaviors of the plan sponsor respondents. Specifically, it looked at:

- the external market forces that are having the greatest impact on how plan sponsors manage their pension plans;
- the advancements plan sponsors have made in developing a targeted plan to manage pension plan risk;
- whether and to what extent they distinguish between Plan Governance and Decision-Making Process; and,
- the performance measures they use to assess plan success.

## HOW EXTERNAL FORCES ARE IMPACTING PENSION PLAN MANAGEMENT

Without question, the continued low interest rate environment and the current economic conditions are either having, or are expected to have, the greatest impact on how plan sponsors are approaching pension plan management. Foremost in many plan sponsors' minds, as captured by one plan sponsor's comment, is ensuring that there is "no loss of benefits to participants in the plan."

In terms of continued low interest rates, a majority of plan sponsors surveyed believe that low rates will mean further pressure on funding ratios. Increased liability valuations are viewed as likely to translate into additional and, in some instances, significant plan contributions and a longer time horizon until funding can be improved and full funding can be achieved. As contradictory as this may seem, even as investing rates of return increase, the low interest rate environment is impacting investment decisions with many plan sponsors shifting assets out of equities and into fixed income – at least in the short term. Some of these fixed income investments are focused on extending the duration of the portfolio to better manage assets and liabilities.

One plan sponsor stated that the "continued low interest rate environment and low asset return levels are negatively affecting [their] pension expenses and liabilities and are leading [them] to rethink how [they] invest plan assets." Another plan sponsor predicts that the "current economic conditions imply a low growth potential for investment returns for the future" – a sentiment noted by several plan sponsors.

Overall, one theme that appears to be emerging is that: "increased volatility of financial markets requires a more dynamic approach to asset allocation." This is also leading some plan sponsors to explore longer-term de-risking solutions, such as immunizing the plan through asset allocation. Only about one quarter of respondents expect to restructure their plan in the next three years – and half of these expect to freeze their plan.

Accounting changes are having a somewhat lesser impact on pension plan management, but they are important nonetheless. These changes have made plan sponsors "much more cognizant of the balance sheet and income statement impact of fluctuations

in plan assets and liabilities" and are prompting quite a few to consider "mark-to-market accounting to obtain a clearer annual picture of where [they] stand" – an action already taken by several major blue-chip corporations. The move to mark-to-market accounting is in anticipation of the adoption of an International Accounting Standards Board (IASB) proposal, under which U.S. companies would adopt certain international accounting standards. For companies that have already made this switch, rather than smoothing large pension assets gains and losses over a five to 15 year time horizon, they will now account for pension gains and losses in the same year they are incurred – making their DB pension obligations much more transparent. This has been coupled with other accounting changes that identify these results separately from core operating results.

Responding to a question about how the proposed changes to the definition of "fiduciary" by the Department of Labor would impact the framework or approach they now take to the management of their plan, one plan sponsor said "The proposed and soon-to-be-implemented governance rules about who is and is not a fiduciary…brings into question whether the CEO, the HR Director or anyone like them should be involved as a fiduciary." Another said that "[they] are…considering taking executive management out and limiting [plan management] to staff. A lot of these decisions are very sophisticated…so, to ensure that wise decisions are made, [they] are considering also bringing in outside consultants."

When asked about how President Obama's proposal to allow the Pension Benefit Guaranty Corporation (PBGC) to set its own premiums would impact the framework or approach they now take to managing their plan, one plan sponsor predicts that "The fact that the PBGC premiums that [they] are paying have recently doubled and that they could potentially double again would be the last straw for pension plans everywhere." Another plan sponsor echoed that sentiment by stating that "if [the PBGC] increase[s] the premiums substantially, it could lead to [their] plan's termination to avoid the premium," while another ominously predicts that "it will bankrupt [their] company."

The Pension Protection Act's (PPA) 2012 lump sum provision is also expected to impact the approach that at least some plan sponsors take to managing their plan. As one noted, "[they] expect the provision to result in the company's adoption or offering lump sums that [they] currently don't offer," and as another commented, "If [they] allow the more prevalent lump sum distribution, it will affect [their] funding strategy. More money would leave the plan and affect [their] funding and investment decisions up until this point."

## REDUCING RISK REQUIRES A TARGETED STRATEGY

The majority of plan sponsors say that they have a targeted approach for systematically identifying and addressing risk reduction or risk management in their pension plans. Among those who say they don't yet have a targeted plan, three in four say they will be developing one in the near future with a wide range of activities being contemplated. These range from conducting a formal asset/liability study, to implementing a liability-driven investing (LDI) or dynamic asset allocation program, to the hiring of new investment consultants/advisors.

## PLAN GOVERNANCE AND DECISION-MAKING: NOT MUTUALLY EXCLUSIVE

The manner in which a pension plan is governed can have significant implications for its long-term success. All four of the U.S. PRBI studies show an interesting pattern. Plan Governance falls within the high importance/high success quadrant, while Decision Process Quality falls within the low importance/low success quadrant, so we asked plan sponsors how they distinguish between Plan Governance and Decision Process Quality. The predominant answer was that Decision Process Quality is a component of Plan Governance. One plan sponsor's comment sums this up: "The plan governance creates the framework that enables us to make appropriate decisions as to how the funds will be managed. It starts with the governance mandate and then everything flows from there." In view of this, the results may suggest that, even when the connection is understood, effectiveness in the first does not necessarily translate to success in the second.

While the majority stated that Plan Governance provides the framework for effective decision making, it is also notable that quite a few plan sponsors appeared to find it difficult to distinguish between these two risk factors, which may also help to explain the apparent inconsistency in the study results regarding these two risk factors. On a positive note, however, the *Average Success Ratings* increased for both Plan Governance and Decision Process Quality year-over-year. Taken together, all of these observations suggest that this may be an important area of focus in the future for plan sponsors.

## ASSESSING THE SUCCESS OF THE PLAN

The majority of respondents believe a plan's funded status is the most important success measure for the plan, with more sophisticated and engaged plan sponsors also commenting that they assess "funded status volatility, interest rate hedge ratio, [and] contribution volatility," as well as "perform[ing] sensitivity analysis around contribution amounts and pension expense and funded status." Performance of their pension portfolios relative to a benchmark also appears to be a key success measure, with nearly half of plan sponsors saying that they measure success in both absolute terms and relative to a benchmark. Slightly fewer say they measure it only relative to a benchmark, and far fewer indicate that they opt to measure it in absolute terms only.

Over the past several years, we have seen a shift away from plan sponsors equating success with outperforming external market benchmarks and toward success equaling the maintenance or improvement of the plan's funded status. The qualitative interviews suggest that plan sponsors appear to have almost entirely accepted the notion that managing against the liabilities of their plans is at the core of what they do.

# Conclusion

Extreme market volatility and a persistently low interest rate environment have made managing the risks and liabilities associated with pension plans very challenging for plan sponsors. An uncertain legislative and regulatory environment fueled by the potential impact of Dodd-Frank, a move to "mark-to-market" accounting in anticipation of the adoption of an IASB proposal and potential additional PBGC premium increases, to name a few, have further increased plan sponsors' awareness of the risks associated with their plans. These are the issues that are keeping plan sponsors up at night, and it does not look like there is any rest in sight.

To some extent, perhaps some of these challenges could have been avoided. While no one could have predicted the far-reaching impact of the financial crisis following the collapse of Lehman Brothers, regulators had warned plan sponsors that they would not be able to ride the asset gains of a sustained bull market to fund their pension plans indefinitely.[13] Well before the 2008 financial crisis, they cautioned that sponsors should fund their plans on an ongoing basis like they did for every other corporate expense. Unfortunately, it appears that far too few plan sponsors heeded these warnings.

With the heyday of overfunded pension plans a distant memory today, plan sponsors' governance committees and their colleagues in the C-suite are struggling to maintain adequate funding to meet their plans' obligations. They are focused on reducing the unpredictability of the plan in order to ease the financial strain that many plans have placed on corporate balance sheets and income statements. They are also searching for a strategy that will enable these plans to operate with an acceptable level of volatility. This has resulted in heightened interest in gaining a better understanding of the pension plan environment and its relationship to the overall financial performance of their businesses. In fact, if there is a silver lining in the otherwise dark cloud hovering over private pension plans, it is the understanding that plan sponsors and other senior financial executives now have about their pension plan liabilities.

## AS VOLATILITY PERSISTS, PLAN SPONSORS WILL REMAIN ATTENTIVE

As funding levels continue to fluctuate, many sponsors are understandably more concerned about meeting their future liabilities. As a result, they have become more attentive in their approach to pension plan management. They are more carefully monitoring their plans. They are also looking at their asset allocations more closely – and more frequently – as they seek stronger and more predictable performance from their pension investments. Increasing numbers are moving away from an asset-only focus to a more balanced approach that takes into account a plan's assets relative to its liabilities. What remains to be seen is the extent to which – and how – recent market forces will impact plan sponsors' risk profiles for their plans. For the most underfunded plans, this includes whether and to what extent these plan sponsors will diversify into riskier investments in the short term in an effort to try to close pension funding gaps and return plans to full funding status. For the most well-funded plans, this includes whether – and at what trigger point – they will decide in favor of strategies with lower absolute returns

[13] "Pension Tension," Workforce Management, September 22, 2005.

but which, in return, produce a higher funded status with less volatility. At the heart of both is a question of whether it is possible for this new framework for understanding, assessing and acting on pension risks to lead to an ability to combine long-term management and current volatility controls.

Without question, the requirements to maintain minimum funding levels set by statute have been a burden – one that is impacting pension expenses, including the timing and amount of future contributions. Although the Pension Relief Act of 2010 allows plan sponsors to elect to extend the shortfall amortization from the seven years required under the PPA to either nine years or 15 years, with some restrictions, this will not be enough in most cases to help plan sponsors avoid larger funding obligations as the PPA provisions continue to be phased in during 2012, as long as the economic recovery remains slow and uneven. This, along with the effects of unstable markets and the persistence of the low interest rate environment, will likely sustain the emphasis on the top two liability-related risk items, Underfunding of Liabilities and Asset & Liability Mismatch, well into the next several years.

## AS PENSION RISK MANAGEMENT BECOMES MORE IMPORTANT, EXPECT DE-RISKING STRATEGIES TO BECOME MORE COMMONPLACE

Managing pension liabilities can be a difficult challenge for even the most sophisticated financial executive. That is why so many sponsors cite developing a solid pension risk management framework – one that is carefully devised and frequently reviewed – as so important.  In the coming year, faced with another challenging investing and regulatory environment, MetLife predicts a more prudent and integrated approach to funding strategies, investment policy decisions and de-risking activity than has ever been seen before.

We also believe that Plan Governance will become increasingly important for most plan sponsors. Since the governance structure creates the framework that enables plan fiduciaries and managers to make appropriate decisions on behalf of plan participants, we further believe that it is increasingly important for sponsors to reflect not only on their governance framework but also on the decisions that it produces.

As plan sponsors better understand their plans' liabilities and try to determine how best to fund those liabilities over the long term, more of them are expected to formulate and adopt a de-risking strategy. Immediately before and after the passage of the PPA, many sponsors froze their plans on the assumption, albeit incorrect in many cases, that doing so would reduce their risk. Unfortunately, what they found was that they did not have the de-risking effects that had been anticipated – the volatility of their funded status and cash flow stayed essentially the same. Being in a position to implement a de-risking strategy requires thorough preparation. It is just as important for a company to understand the specific financial outcomes it hopes to achieve as it is to understand the many ways to reduce or lower a plan's risk. The real difficulty is finding the risk-reduction strategy that is most appropriate and will be most effective for each particular plan sponsor.

For example, one approach that has been discussed conceptually in recent years is LDI. Broadly defined, this could include any strategy that seeks to reduce volatility of a plan's funded status by linking the interest rate responsiveness of the plan's assets and liabilities. Sponsors' actual LDI actions range from modest duration lengthening in an existing fixed income allocation to adopting strategies that separate investments into those designated as "liability hedging" that seek to match estimated cash flows and "return seeking" that seek to focus on returns. Many plan sponsors acknowledge that the environment is making it difficult to translate their interest in LDI into action. Others have adopted a dynamic asset allocation policy to de-risk the plan's investment profile by, as an example, increasing their long bond fixed income allocation while decreasing their equity allocation once the market conditions permit. Overall, plan sponsors may be well-served to consider an entire spectrum of options as part of their risk mitigation strategy over time, rather than thinking of "de-risking" as a once-and-done transaction.

## GOING FORWARD, DEMOGRAPHIC TRENDS WILL TAKE ON INCREASED IMPORTANCE AND CONVENTIONAL WISDOM MAY NOT PREVAIL

The impact of changing demographics will become more of a front-and-center issue for plan sponsors in the years ahead. Longevity Risk will likely take on increased importance because, as people live longer, plan sponsors must decide how best to ensure adequate cash flows for each additional year that participants will receive benefits. And, when the markets improve and retirement-eligible workers who delayed their retirement start to recoup their losses, Early Retirement Risk may again begin to appear on the radar screens of plan sponsors.

It is unclear how these dynamics will interact with the PPA's lump sum provisions that will make pension plan payments in lump sum form less expensive than streams of income from plan sponsors, assuming no change in the rate environment. In the past, there was little doubt that plan participants offered a lump sum would accept it in the belief that it was the more advantageous financial arrangement for them. Two factors may act to change this conventional wisdom. First, as retirement income education and awareness continue to rise among plan participants, in many cases driven by defined contribution (DC) plan developments, this assumption may no longer hold true to the same degree as it once did. Second, tomorrow's retirees will in general be older due to delayed retirement patterns and will also have longer life expectancies than previous generations of retirees. Therefore, they may be more likely to value – and select – a pension benefit paid in an income form.

As a final observation, in order to ensure accurate actuarial as well as participant behavior assumptions, plan sponsors who have not done so may be well advised to begin focusing now on Quality of Participant Data to ensure that census information on participants is accurate and complete.

## SUSTAINED DB FUNDING CHALLENGES MAY IMPACT THE FUTURE QUALIFIED PLAN LANDSCAPE

Nearly 140 years since the American Express Company established the first private employer-sponsored pension plan, managing a pension plan may never have been as difficult as it is today. The effect of the PPA, in and of itself, will never be known – its phased implementation collided directly with a set of extraordinary market conditions that could not have been foreseen when the legislation was enacted.

If market uncertainty is protracted and regulations are not moderated, concerns about the ongoing design, affordability and overall "difficulty factor" of DB pension plans will continue to be sustained. At the same time, the broader qualified plan landscape is undergoing new levels of scrutiny and evaluation which are introducing new complexities, fiduciary sensitivities and disclosure requirements for plan sponsors of these programs as regulators increasingly seek to add rules and requirements designed to bring elements long associated with DB plans into the DC environment.

While it remains to be seen what the future pension landscape, or the environment in which it will operate, will look like, plan sponsors can be certain that some level of uncertainty and change can be expected over at least the intermediate time horizon. Addressing that uncertainty will require continued thoughtful analysis and deliberate actions, along with recognition that tomorrow's solutions will increasingly be as unique as the sponsors themselves. While the halcyon days of total rate of return and standardized investment policy statements may be in the past, along with one-size-fits-all asset allocations, we believe that, by proactively managing the risks most likely to affect their particular pension plan, developing a strategy to address them and keeping a clear view on both short-term and long-term outcomes, plan sponsors can effectively be prepared to ensure that their plan's objectives are met and benefit promises are kept.

# Study Methodology

As part of this comprehensive quantitative and qualitative research for 2012, Greenwich Associates conducted interviews with 156 corporate plan sponsors from September through December 2011. Interviews were completed by telephone with a web-assisted option, i.e., respondents had the ability to view the risk factors and questions online while answering the survey via telephone. Consistent with previous years' research, respondents were primarily executives responsible for pension investments, risk management or employee benefits, in addition to corporate management. Chart 5 gives the distribution of respondents by plan asset size, while Table 6 provides a breakdown of the respondent companies by DB assets for all four years that the study has been conducted.

**Chart 5:** Distribution of Respondents by DB Plan Asset Size (2009–2012)

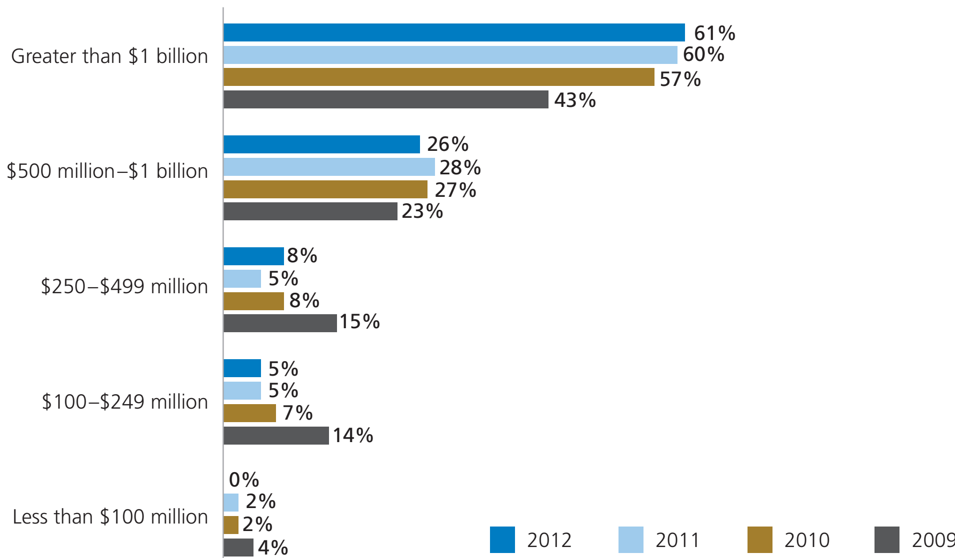



**Table 6:** Number of Respondents by DB Plan Asset Size (2009–2012)

| DB Plan Asset Size | 2012 | 2011 | 2010 | 2009 |
|---|---|---|---|---|
| Greater than $1 billion | 95 | 90 | 94 | 73 |
| $500 million–$1 billion | 40 | 41 | 45 | 39 |
| $250–$499 million | 13 | 8 | 13 | 26 |
| $100–$249 million | 8 | 7 | 11 | 23 |
| Less than $100 million | 0 | 3 | 3 | 7 |
| **Total:** | **156** | **149** | **166** | **168** |

# Appendix A

CALCULATING THE INDEX

> Step 1: Calculate an *Average Success Rating* for each respondent that incorporates the plan sponsor's self-reported success at managing each of 18 risks, weighted by the relative importance that sponsor ascribed to each risk.

In Section 1 of the survey each respondent provided a self-assessment of how successfully they are managing each of 18 different investment, liability and business risks. This assessment took the form of a rating on a scale from 1 to 5, with 5 indicating the highest level of perceived risk management success.

The importance-weighting is derived from responses to Section 2 of the survey. We first calculate each risk item's *Importance Selection Rate*. This is the number of times each risk item was selected by the respondent as receiving the most attention, expressed as a percentage of the number of times it was included in all the choice sets that were shown to that respondent. Each *Importance Selection Rate* can range from 0% to 100% and their sum across all 18 risk items can therefore range from 0% to 1800%. Next we divide each *Importance Selection Rate* by the sum of all Selection Rates for that respondent. We call the resulting value a risk item's *Share of Importance.* The total *Share of Importance* across all risk items always equals 100%.

Furthermore, if each risk item is considered equally important the *Share of Importance* for each item would be the same and would equal 1/n, where n is the total number of risk items. (In the case of this survey, n = 18 and each risk item's *Share of Importance* would equal 1/18 or 5.56%).

We then multiply the success rating a respondent gave to each risk by its corresponding *Share of Importance* and sum the results across all 18 risk items. We call this number the respondent's *Importance-Weighted Average Rating.*

This value will range from 1 to 5. A value of 1 or 2 indicates that important risks are not being successfully managed. A value of 3 indicates that the plan sponsor is neither particularly successful nor unsuccessful at managing important risks. Values of 4 or 5 indicate successful management of important risk items.

Table 7 illustrates how an *Importance-Weighted Average Rating* is calculated for a survey respondent, assuming that the survey addressed five risk items.

> Step 2: Calculate an equal-weighted industry *Average Success Rating* across all respondents.

The individual *Importance-Weighted Average Success Ratings* for each respondent are summed and the total is divided by the number of respondents. Table 8 illustrates how this is calculated, assuming that the survey had five respondents.

In the inaugural study, the industry average was weighted by the relative asset size of each respondent's DB plan(s). This added complexity to the calculation, and required subjective judgments of plan asset size due to inconsistencies among the assets reported by different data sources. It also potentially exposed the Index to random swings due to whether or not any particularly large plan(s) participated in the survey, which would make year-to-year comparisons more difficult. With the benefit of several years of survey data and after carefully considering different options,

it was therefore decided not to asset-weight the results and instead to assign an equal weight to every respondent. This simplifies the methodology, eliminates the difficulties of determining asset size and improves inter-survey comparison of results.

> Step 3: Convert the industry *Average Success Rating* into the final Index value.

The rating results obtained in both Step 1 and Step 2 are on an arbitrary scale of 1 to 5. The final Index value takes the industry *Average Success Rating* and converts it into its corresponding value on a standardized scale from zero to 100.

In order to standardize the rating we subtract 1 from the raw value and multiply the result by 25. This provides the final Index value.

Calculating *Risk Importance Concentration:*

*Risk Importance Concentration* measures the extent to which a plan sponsor is overly concentrating on a relatively small number of risk items rather than paying attention to the full range of risks. This measurement takes account of both the number of risk items and the relative level of importance ascribed to each. The *Risk Importance Concentration* value equals 0.00% if equal importance is attributed to all 18 risk items and equals 100.00% if all importance is being ascribed to just one risk item.

*Risk Importance Concentration* is based on the Herfindahl-Hirschman Index, a well-established measurement of market concentration used by U.S. regulators to determine the competitive effect of proposed corporate mergers. The Herfindahl-Hirschman Index is equal to the sum of the squared market shares of the firms in an industry. The *Risk Importance Concentration* value used in this study is the standardized reciprocal of the Herfindahl-Hirschman Index where a weighting called *Share of Importance* replaces the usual market share weighting in the original Herfindahl-Hirschman calculation.[14]

*Risk Importance Concentration* is derived from responses to Section 2 of the survey. We first calculate each risk item's *Importance Selection Rate*. This is the number of times each risk item was selected by the respondent as receiving the most attention, expressed as a percentage of the number of times it was included in all the choice sets that were shown to that respondent. Each *Importance Selection Rate* can range from 0% to 100% and their sum across all 18 risk items can therefore range from 0% to 1800%.

We then divide the *Importance Selection Rate* for each risk item by the total *Importance Selection Rates* for all 18 risk items. We call the resulting value a risk item's *Share of Importance.* The total *Share of Importance* across all risk items always equals 100%.



[14] The idea and approach to use the inverse of the Herfindahl-Hirschman Index is a result of seeing such inverse approach applied in a research study by the Brandes Institute in conjunction with global wealth allocation. *Concentrated Portfolios: An Examination of Their Characteristics and Effectiveness,* The Brandes Institute, September 2004. It should be noted that the issues considered in the U.S. PRBI study are different and completely unrelated to the issues in the noted study by the Brandes Institute.

**Table 7:** Example of the Calculations Used in Step 1 of PRBI Construction

| Row # | Description | | | | | |
|---|---|---|---|---|---|---|
| 1 | Risk Item Number | 1 | 2 | 3 | 4 | 5 |
| 2 | Success Rating for each risk item (directly from Section 1 of survey) | 1 | 3 | 5 | 4 | 5 |
| 3 | Number of times risk item was included in choice sets shown to the respondent | 4 | 4 | 4 | 4 | 4 |
| 4 | Number of times respondent selected risk item as most important within a choice set | 1 | 0 | 2 | 2 | 3 |
| 5 | Selection Rate for each risk item (row 4 divided by row 3) | 0.25 | 0.00 | 0.50 | 0.50 | 0.75 |
| 6 | Sum of Selection Rates across all risk items (add the values in row 5 for risk items 1 through 5) | 2.00 | | | | |
| 7 | Share of Importance (each value in row 5 divided by the total in row 6) | 0.125 | 0.00 | 0.25 | 0.25 | 0.375 |
| 8 | Multiply each value in row 2 by its corresponding value in row 7 | 0.125 | 0.00 | 1.25 | 1.00 | 1.875 |
| 9 | Importance-Weighted Average Rating (sum of the values in row 8 for risk items 1 through 5) | 4.25 | | | | |

**Table 8:** Example of the Calculations Used in Step 2 of PRBI Construction

| Row # | Description | | | | | |
|---|---|---|---|---|---|---|
| 1 | Respondent ID | A | B | C | D | E |
| 2 | Importance-Weighted Average Rating (calculated from Step 1 for each respondent) | 4.25 | 3.94 | 2.75 | 4.78 | 3.09 |
| 3 | Sum of Row 2 | 18.81 | | | | |
| 4 | Total Number of Respondents | 5 | | | | |
| 5 | Industry Average Success Rating (Row 3 divided by Row 4) | 3.762 | | | | |

**Table 9:** Example of the Calculations Used in Step 3 of PRBI Construction

| Row # | Description | |
|---|---|---|
| 1 | Industry Average Success Rate (calculated from Step 2) | 3.762 |
| 2 | Subtract 1 from the value in row 1 | 2.762 |
| 3 | U.S. PRBI value (multiply the value in row 2 by 25) | 69 |

**Table 10:** Example of How to Calculate Risk Importance Concentration

| Row # | Description | | | | | |
|---|---|---|---|---|---|---|
| 1 | Risk Item Number | 1 | 2 | 3 | 4 | 5 |
| 2 | Number of times risk item was included in choice sets shown to the respondent | 4 | 4 | 4 | 4 | 4 |
| 3 | Number of times respondent selected risk item as most important within a choice set | 1 | 0 | 2 | 2 | 3 |
| 4 | Selection Rate for each risk item (row 3 divided by row 2) | 0.25 | 0.00 | 0.50 | 0.50 | 0.75 |
| 5 | Sum of Importance Selection Rates across all risk items (add the values in row 4 for risk items 1 through 5) | 2.00 | | | | |
| 6 | Share of Importance (each value in row 4 divided by the total value in row 5) | 0.125 | 0.00 | 0.25 | 0.25 | 0.375 |
| 7 | Equal Weight Equivalent (square each value in row 6, sum the results and take the reciprocal) | 3.56 | | | | |
| 8 | Risk Importance Concentration (subtract the value in row 7 from 18 and divide the result by 17) | 85% | | | | |

Next we square each *Share of Importance,* sum the results and take the reciprocal. This provides a single number (which we call an *Equal Weight Equivalent* or *EWE*) that expresses the actual distribution of *Importance Selection Rates* across the 18 risk items as an equivalent number of items, assuming each had an equal importance. In general, this value can range from 1 to n, where n is the total number of risk items. As a final step, we therefore standardize this value to make it independent of the number of risk items. The standardized *Risk Importance Concentration* value equals the total number of risk items minus the *EWE* value, expressed as a percentage of the total number of risk items minus one.

# Appendix B

## COMPLETE LIST OF RISK ITEMS, ASSOCIATED RISK MANAGEMENT STATEMENTS AND OPEN-ENDED QUESTIONS

| Risk Item | Risk Management Statement |
|---|---|
| **Question Block 1: Investment Risks** | |
| 1 Ability to Measure Risk | We routinely use analytical tools that allow us to measure the level, volatility, correlation and effects of multiple risk factors at the investment portfolio level, and, where appropriate, within and across different investment fund managers, investment styles and asset classes. |
| 2 Inappropriate Trading | We have designed and proactively review compliance with clear investment guidelines for all investment managers to avoid inappropriate use of leverage, shorting, illiquid instruments, inadequate collateral, or other risk exposures to boost investment returns. |
| 3 Asset Allocation | We use disciplined rebalancing to implement a documented strategic asset allocation policy. |
| 4 Investment Management Style | We have policies to determine whether we use passive investment managers to track indices or retain active managers, and to the extent we retain active managers, we have processes for systematically measuring and enforcing performance standards. |
| 5 Meeting Return Goals | We have policies and procedures in place to determine our return goals, to identify the reasons for any deviation between actual results and goals, and to take appropriate action in a timely manner. |
| **Question Block 2: Liability Risks** | |
| 6 Asset & Liability Mismatch | We carry out regular studies that have proven accurate and effective in managing mismatches between the duration of plan assets and liabilities. |
| 7 Underfunding of Liabilities | We have successfully designed and put into place investment strategies that have proven effective in enabling us to comfortably manage our funding contribution levels. |
| 8 Mortality Risk | Distinct from the risk that plan beneficiaries will live longer than expected, we have modeled and understand how the expected mortality of our participants affects our plan cash flows and funding requirements. |

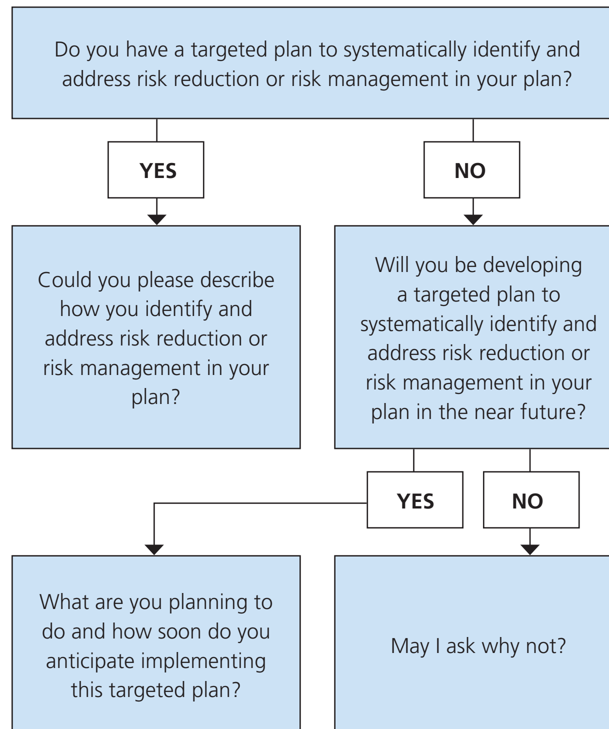
| Risk Item | | Risk Management Statement |
|---|---|---|
| 9 | Longevity Risk | Distinct from the risk that participants will die before obtaining full benefits, we implement and regularly review the effectiveness of procedures to mitigate, transfer or actively manage the risks associated with increasing longevity among plan beneficiaries. |
| 10 | Early Retirement Risk | We actively implement and regularly review the effectiveness of procedures to manage the impact of early retirement risk on the level and timing of future liabilities. |
| 11 | Quality of Participant Data | We implement a procedure to ensure that census information on plan participants is correct and complete. |
| **Question Block 3: Business Risks** | | |
| 12 | Plan Governance | Those responsible for plan governance exercise effective, independent oversight, supported by internal controls within all areas and at all levels of plan management. |
| 13 | Advisor Risk | Plan trustees and internal plan managers have sufficient knowledge, experience and training to assess the quality of advice and the effectiveness of services provided by third parties. |
| 14 | Accounting Impact | We are able to forecast and we regularly monitor the impact on the sponsor's balance sheet, income statement and cash flow of fluctuations in pension assets and liabilities. |
| 15 | Fiduciary Risk & Litigation Exposure | We explicitly manage fiduciary risk and related litigation exposure based on careful monitoring of litigation trends, including claims, costs and decisions. |
| 16 | Investment Valuation | We clearly document, systematically implement and periodically review procedures that ensure the complete, accurate, timely and independent valuation of all plan investments, including non-USD investments or any illiquid or complicated positions such as derivatives, hedge funds or private equity. |
| 17 | Liability Measurement | We routinely review liability valuations and understand the drivers that contribute to our plan's liabilities and changes in these over time. |
| 18 | Decision Process Quality | We periodically assess the effectiveness of our decision-making processes by explicitly considering the links between the way in which we make decisions and the outcomes of those decisions. |

## Open-Ended Questions

| | |
|---|---|
| Question 1A | There have been, over the past several years, and continue to be, a number of external factors that significantly affect pension plans. Which of the following factors have had, or are likely to have, the greatest impact in terms of leading you to change the way you are approaching pension plan management? (You may select up to three options.)<br>• Current economic conditions<br>• A continued low interest rate environment<br>• Standard & Poor's recent downgrade of U.S. debt to AA+<br>• Recent/potential changes in accounting, i.e., IFRS (International Financial Reporting Standards); mark-to-market (accounting calculations tracking the current market value of an asset); etc.<br>• Pension Funding Relief Bill (2010)<br>• President Obama's proposal to allow the Pension Benefit Guaranty Corporation to set its own premiums<br>• Proposed changes to the definition of "fiduciary" by the Department of Labor<br>• The Pension Protection Act's 2012 lump sum provision<br>• Other (specify)__________ |
| Question 1B | (Displayed separately for each factor mentioned in Q1A)<br>How did/does/will (factor mentioned) impact the framework or approach you now take to managing your plan?<br>Respondents who selected "Current economic conditions" were also asked: What impact, if any, did the period of economic instability during 2008-2009 have on the framework or approach you now take to managing your plan? |

## Open-Ended Questions

Question 2




| | |
|---|---|
| Question 3 | In the prior three U.S. Pension Risk Behavior Index studies, the Plan Governance risk factor has consistently ranked high in importance and high in success, while Decision Process Quality has consistently ranked low in importance and low in success. With regard to your DB pension plan, how do you distinguish between your decision-making process and your plan governance? |
| Question 4A | What key performance metrics, if any, do you use to assess success of the plan? |
| Question 4B | Do you measure success in absolute terms or relative to a benchmark? |

# Appendix C

## GLOSSARY OF TERMS

Throughout this report, MetLife worked with its research partners to analyze and interpret plan sponsor responses. What follows is an alphabetized list of the measurements we used, together with an explanation of each measurement.

| | |
|---|---|
| *Average Success Rating:* | When applied to a risk item this means the average of all ratings for that item across respondents who provided a rating.<br><br>When applied to a respondent this means the average rating across all risk items to which that respondent assigned a rating.<br><br>The rating scale is from 1 to 5 reflecting the degree to which each respondent disagreed (1 or 2), was neutral (3), or agreed (4 or 5) that they are successfully implementing certain risk management measures. |
| *Risk Importance Concentration:* | When applied to a risk item this measurement indicates the extent to which a disproportionate importance is being ascribed to just a few risk items.<br><br>The concentration factor equals (the number of risk items *minus* *EWE* value)/(number of risk items *minus* 1), expressed as a percentage.<br><br>The *Concentration Factor* can range from 0% to 100%. A value of 0% would indicate that all risk areas are being ascribed equal importance (no concentration). A value of 100% would indicate all importance being placed on just one risk area (total concentration).<br><br>See **Appendix A** for a full explanation and worked example of how this measurement is calculated. |
| *Consistency Rate:* | This is the percentage of risk items that combine either above average importance with above average success or below average importance with below average success. Either combination indicates consistency between importance and success.<br><br>This is a broad measurement of consistency that controls for any bias in the underlying ratings. A result below 50% would indicate significant inconsistency. |

| Term | Definition |
|---|---|
| *Importance-Weighted Average Rating:* | In respect of each respondent, multiply the rating assigned to each risk item in Section 1 of the survey by its *Share of Importance* and total the results.<br><br>This weighted average rating can range from 1 to 5. It indicates the extent to which risk items that receive the most attention from respondents also received a high rating for success in implementing comprehensive risk management measures. |
| *Probability of Failure:* | In respect of a risk item, this is the number of plan sponsors who gave the risk item a rating of 1 or 2, expressed as a percentage of the total number of respondents who rated that risk item.<br><br>In respect of a respondent it is the number of risk items to which that respondent assigned a rating of 1 or 2, expressed as a percentage of the total number of risk items to which the respondent assigned a rating. |
| *Ratio of Weighted to Unweighted Average Success Rating:* | This is the ratio of the average rating to the *Importance Weighted Average Rating*, expressed as a percentage.<br><br>A ratio close to 100% indicates that the respondent was successfully implementing risk management measures in respect of items that were deemed important. A ratio close to 0% indicates that the respondent was not successful in implementing risk management measures in respect of risk items that were receiving the most attention.<br><br>This ratio measures consistency between success and importance while controlling for any general upward or downward bias in the scores assigned by each respondent in the Section 1 of the survey. |
| *Importance Selection Rate:* | The number of times each risk item was selected in Section 2 of the survey as receiving the most attention, expressed as a percentage of the number of times it was included in the choice sets. |
| *Share of Importance:* | Each risk item's *Share of Importance* equals its *Importance Selection Rate* divided by the sum of the *Importance Selection Rates* for all risk items.<br><br>The result is a percentage value between 0.00% and 100.00% and provides a standardized relative importance of each risk item compared to the other risk items. The sum of the *Share of Importance* values for all risk items always equals 100.00%. |

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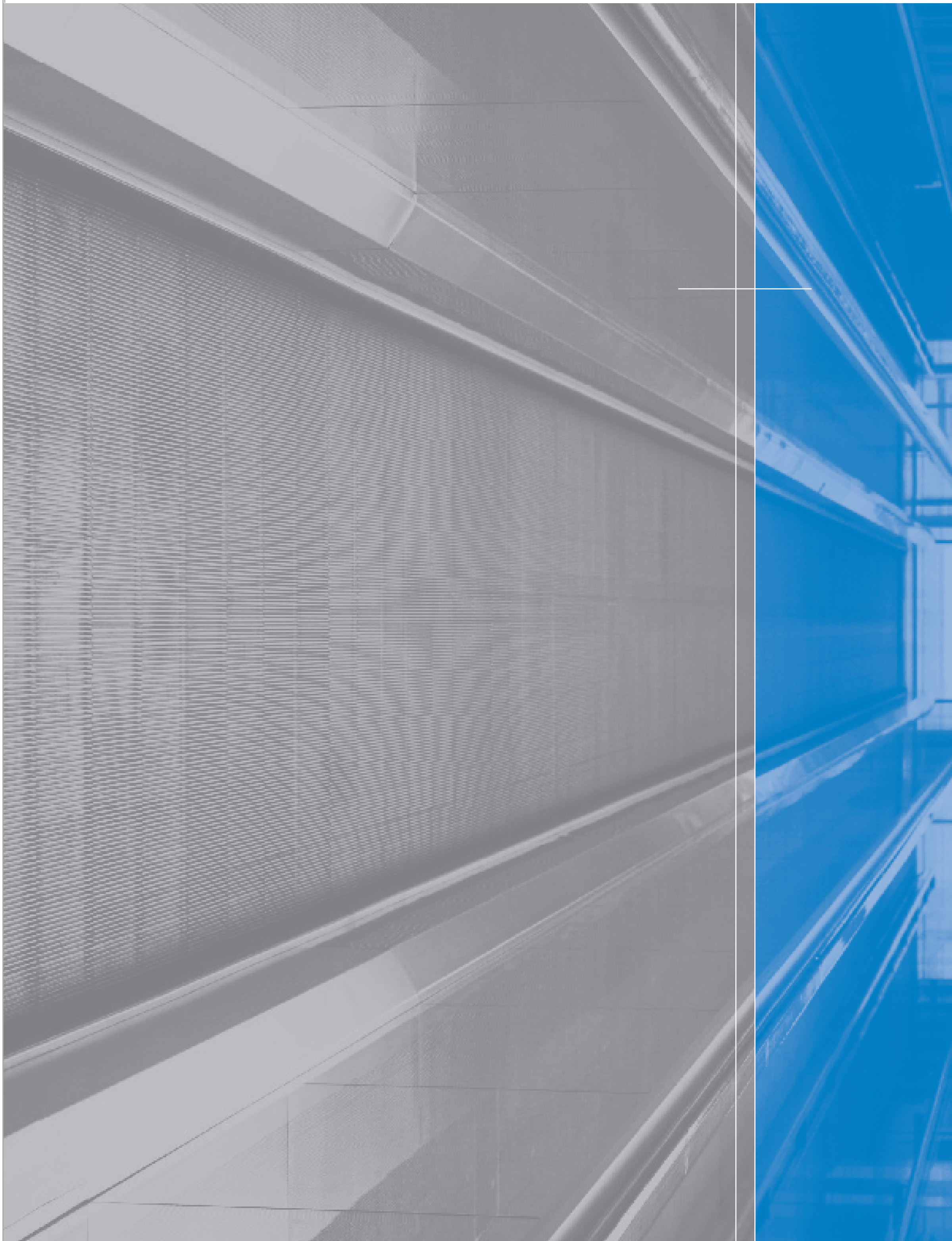

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