# Pension Risk Transfer

Evaluating Impact and Barriers for De-Risking Strategies

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## Executive Summary

Pension risk is top of mind for many organizations, as defined benefit plan obligations continue to grow, in both absolute terms and with respect to the overall size of plan sponsors. Pension plans are exposed to market volatility, with interest rate movements affecting plan liabilities and volatile market returns impacting asset performance. Because of these factors, alongside large companies making headlines for significant pension risk transfer ("PRT") activity, other plan sponsors have begun to explore options available to mitigate pension risk exposure.

Increased pension risk awareness and activity has emerged as a result of unpredictable economic variables coupled with a changing regulatory environment. Beginning with the origins of ERISA through the most recently proposed extension of the Moving Ahead for Progress in the 21st Century Act ("MAP-21") updates, legislative changes continue to provide employers with the impetus for pension risk management. Plan funding requirements and increasing pension insurance costs (i.e., PBGC premiums) have provided both opportunities and barriers for the pension risk transfer market. As a result, today's pension plans are no longer solely in the domain of a company's human resources function, but have become a priority for a company's finance function. The costs and risks associated with a plan must be carefully assessed and quantified for potentially large impacts on the organization.

There are various alternatives available along the pension de-risking spectrum, falling under three main categories:

- Plan Design
- Funding & Investment Policy
- Liability Management

Plan design is an initial option for plan sponsors and includes actions like freezing benefit accruals under a plan and/or closing a plan to new entrants, which many plan sponsors have already done. Funding and investment policy actions include minimizing interest rate risk by matching the asset and liability durations. Liability management often takes the form of offering lump sums to certain groups of participants and/or purchasing group annuity contracts, which are both forms of risk settlement. The ultimate pension risk transfer is a full plan termination, which involves settling all plan liabilities. The pension risk is fully transferred to a third-party through the purchase of annuity contracts.

The cost of transferring pension risk is not simply equal to the payment of the projected benefit obligation (PBO), which is the present value of all plan participants' pension benefits, assuming future salary increases, which is held on the corporate balance sheet. The balance sheet obligation generally does not reflect additional risks and costs associated with sponsoring and maintaining a pension plan, such as the risks of credit defaults and downgrades, mortality risk, plan administrative expenses, investment fees and PBGC premiums. The plan's true economic liability is


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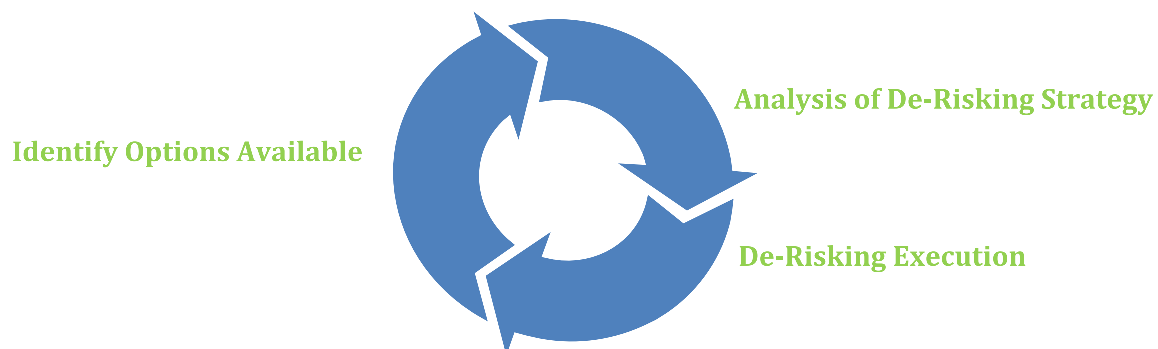
determined by including these additional risks and costs, and only then serves as a point of comparison to the cost of purchasing group annuity contracts.

Continued changes in the economic and regulatory environments provide both barriers and opportunities impacting the demand for pension risk transfer. Many plan sponsors have decided to defer pension risk transfer activity due to funding relief in 2012 which specified a higher interest rate, decreasing the regulatory obligation to fund. Other legislation and recent external activities may increase the appetite amongst organizations to transfer pension risk including increases in PBGC premiums, expected mortality improvements and movement to other accounting standards. Significant increases to PBGC premiums will increase the cost of maintaining a pension plan. Expected updates to mortality tables and mortality projections reflect significant longevity improvements and are expected to increase US GAAP obligations by 4% to 8%. Mark-to-market accounting approaches will require plans to immediately reflect plan gains or losses, increasing the pension plan volatility on both the balance sheet and income statement. All of these may spur a company to engage in pension risk transfer.

In order for a plan to prepare to evaluate pension risk transfer opportunities, the plan sponsor needs to have a sufficient plan governance structure for making and implementing both settlor and fiduciary decisions. The company's obligation to protect both the plan sponsor and the participants must be taken into account. Plan sponsors also need to remain aware of the key factors that impact the negotiation of a group annuity contract deal, including the participant demographics, deal structure and asset portfolio.

This paper develops a framework plan sponsors can use to assist in determining their "de-risking readiness". The framework contains three major, often iterative, stages:

- Identify Options Available
- Analysis of De-Risking Strategy
- De-Risking Execution





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Plan sponsors must consider their overall business objectives and explore the options available for pension risk management within that context. Throughout each stage of the proposed framework, the economic environment will impact the viability of pension risk management alternatives. The current environment, as well as the various other risks the organization is exposed to, must be understood and considered at each stage of the process. Availability and alternative uses for any funds required to effect a risk reduction strategy may also prove important.

In addition to the classic risk transfer strategies of using cash from plan assets to pay lump sums or purchase annuities, there are other innovations which may be utilized during pension risk transfer implementation. These strategies include asset in-kind transfers, guaranteed separate accounts, annuity buy-ins, longevity swaps and reinsurance. Some sponsors may even evaluate the current economic environment and their company's individual situation and determine a re-risking strategy is appropriate for their remaining pension obligations. Not all of these strategies have gained traction; however, they provide feasible alternatives for consideration.

Plan sponsors' awareness of pension risk continues to grow and the risk transfer marketplace continues to evolve. With new entrants to the insurer marketplace, more clarity around plan governance, and increased plan sponsor education, plan sponsors will have more resources to engage in pension risk transfer. Instead of managing growing and unpredictable legacy liabilities, pension risk transfer may ultimately allow organizations to focus more on their core business issues.

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## Background and Purpose

Many US corporations are experiencing the pressure of escalating costs and financial volatility brought on by significant pension benefit obligations. An evolving market and a renewed focus on risk management have caused employers to take a closer look at the effect defined benefit ("DB") plans have on their business results including income, cash flow and balance sheet impact. Pension plan risk management has remained a top concern for companies, investors and analysts.

In a typical DB plan, the promise to provide a certain level of retirement income is nearly fully borne by the employer. The employer establishes a benefit formula which generally provides a fixed amount of retirement income for the duration of the employee's retirement. The employer bears a number of risks associated with this promise including uncertainty of interest rates and other investment returns, an unknown payout period based on the employees' future termination, retirement and career decisions in addition to changing and unknowable life expectancies.

Pension risk transfer, in a general sense, entails action by the sponsor to move some or all of these risks to another party. Certain actions, such as an annuity purchase, primarily transfer the risk from one corporate entity to another while other PRT solutions transfer many or all of these risks to the employees. One important principle to understand with respect to PRT is that it is a transfer of risk, not the elimination of risk. The risks inherent in retirement planning cannot be eliminated; they can only be shifted to others.

Actions by three major corporations in 2012, Ford, General Motors and Verizon, generated an unprecedented year for pension risk transfer. Moreover, each of the three organizations implemented different and individually historic PRT strategies.

### Ford PRT Strategy: Bulk Lump Sum Offering

Ford bolstered its de-risking efforts through offering lump sum pension distributions in bulk to approximately 98,000 white-collar retirees and former employees. Ford's de-risking path continued by increasing its debt assets from 55% in 2012 to 70% in 2013 with an ultimate target of 80% fixed income in future years.

### General Motors PRT Strategy: Bulk Lump Sum Offering & Group Annuity Buy-out

General Motors ("GM") engaged in a multi-faceted approach to pension risk transfer. The company first offered lump sums to approximately 42,000 retirees and surviving beneficiaries. For those retirees who were not offered or did not elect a lump sum, it subsequently purchased a group annuity contract. The risk transfer tactics served to significantly reduce GM's pension obligations.

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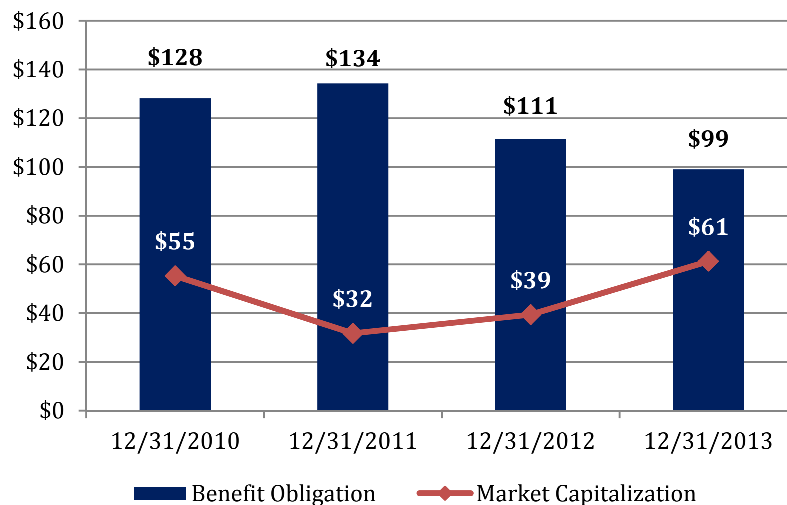
### Verizon PRT Strategy: Group Annuity Buy-out

Verizon sought an alternative pension risk transfer tactic – bypassing the earlier lump sum offers and directly acquiring a group annuity contract from Prudential. The annuity buy-out allowed Verizon to transfer the obligation for certain Verizon management retirees.

The significant amount of press and attention dedicated to these transactions sparked a growing curiosity about pension risk management amongst other plan sponsors throughout the US. Many plan sponsors gained knowledge and insight into the strategies deployed and identified the overall business need for pension de-risking. A review of the defined benefit plan impact on many long-standing companies shows substantial, additional leverage generated by pension liabilities; in many cases, the size of the pension liabilities represents a significant portion of overall enterprise value (and in the case of GM and Ford, exceeded it by a wide margin). Significant exposure to pension risk hinders a company's fundamental business strategy by shifting the focus from core business objectives to managing the costs and risks associated with operating large pension funds. Many think it adversely affects the company's cost of capital and increases the stock's Beta, which measures the volatility of the stock compared to the market.

Figure 1 below demonstrates the size of GM's pension benefit obligations relative to its market capitalization, following its bankruptcy reorganization:

**Figure 1 - General Motors Financial Results ($ in billions)**




Source: GM 10-K Annual Reports and Yahoo Market Data

Note that by the end of fiscal 2011, GM's exposure to pension liabilities had grown to more than four times its post-bankruptcy market capitalization. PRT activities during 2012 have helped GM reduce its pension obligation, which has allowed the organization to re-focus efforts on its core business, making automobiles. Through PRT implementation and positive economic conditions, GM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has significantly bridged the gap between its pension liabilities and assets and reduced pension risk and volatility.

## Pension Risk Transfer Study & Objectives

Recently, many large companies took major steps toward transferring risk by offering lump sum payouts or by purchasing annuities for participants, thereby eliminating a large portion of their benefit obligations. In light of these recent events and the increasing prevalence of employers' electing to freeze their pension plans, the Society of Actuaries engaged Deloitte to complete a research study on the pension risk transfer market. The primary objectives of this study include:

- Developing a historical view on pension regulations and risk transfer origins
- Identifying pension de-risking measures and understanding the factors that drive plan sponsors toward pension risk transfer
- Evaluating the current marketplace and factors that impact the key stakeholders
- Identifying any pitfalls or barriers in a changing economic and regulatory environment
- Exploring future opportunities for innovation and solutions to help make the PRT market more efficient
- Developing a framework to allow plan sponsors to identify and analyze factors to be considered when deciding whether to transfer pension risk

The development of the pension risk transfer study required various view-points and a deep understanding of many participants and stakeholders in the market. At the core of the study is the data collected and feedback gathered from a host of industry participants and experts. The following includes a portion of the sources for the study's data collection:

- Insurance product providers
- Plan sponsors
- Rating agencies
- Academia
- Consulting firms
- Publicly available data
- Other risk transfer participants

This paper seeks to discuss pension risk transfer in depth and to lead toward identification of key de-risking measures, alternatives and triggers that impact PRT strategies. Each strategy presents its own opportunities and barriers. The paper provides high-level summaries of various de-risking methods and deconstructs each, allowing those who wish to engage in PRT the appropriate information to evaluate and identify potential risk mitigation strategies. This paper primarily focuses on pension risk from the employer's perspective and the SOA intends to sponsor other research related to the individual participant's point of view on pension risk transfer and a Decision Brief on lump sums. A developed framework for plan sponsors is included to help a sponsor self-navigate an organization through the rationale for pension risk management.

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## ERISA Origins

The Employee Retirement Income Security Act of 1974 ("ERISA") is a federal law which was enacted to set minimum standards for pension plans. Many ERISA provisions became effective for plan years beginning on or after January 1, 1975. The primary purpose of ERISA was to provide protection to millions of pension plan participants so that the funds allocated to retirement plans will be available when participants retire. While ERISA does not require an employer to establish a pension plan, it does require employers who establish pension plans to meet certain minimum standards.

ERISA requires plan sponsors to provide participants with information about their defined benefit plan, including important information about plan features and funding requirements. ERISA also established minimum standards for participation, vesting, benefit accrual and funding. It created detailed funding rules which require plan sponsors to contribute a minimum amount to their pension plans each year, with the minimum required contribution based on a variety of factors. Today, funding regulations continue to be an integral part of corporate decision-making, as they impact both the balance sheet composition of the organization as well as corporate cash flow.

### Pension Benefit Guaranty Corporation

ERISA established the Pension Benefit Guaranty Corporation ("PBGC") to guarantee payment of benefits should a pension plan terminate without sufficient funding. The PBGC is essentially insurance for pension plans. By law, PBGC may take action on its own to terminate a pension plan if a termination is needed to protect the interests of plan participants or the PBGC insurance program. The PBGC guarantees basic employer-provided pension benefits as defined in the plan up to a legal maximum, indexed each year for inflation. Employers are currently required to pay an annual premium equal to a specified dollar amount per plan participant, as well as a variable amount based on the underfunded position of the pension plan. In the event of a standard or distress termination, the PBGC absorbs the excess loss from the plan and spreads the loss over the remaining insured plans.

### TRA' 86 / OBRA '87

The Tax Reform Act of 1986 ("TRA '86") reduced incentives for employers to maintain their DB plans by imposing a 10% excise tax on contributions in excess of the maximum tax-deductible amount. Previously, employers were allowed to carry-forward to future years contributions made in excess of the maximum for deductibility. Furthermore, the Omnibus Budget Reconciliation Act of 1987 ("OBRA '87') impacted the funding rules by changing the maximum funding limit to 150% of the plan's current liability[1], increasing minimum funding standards for plans, adding quarterly contribution requirements and adding additional components onto PBGC premiums (it increased the rate per participant and

[1] Silverman, 1994.


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introduced the variable-rate premium). A study by the American Academy of Actuaries showed that increased government regulation was the major factor in 44% of plan terminations in the late 1980s.[2]

### Reversion Tax Legislation

When a pension plan terminates, the surplus plan assets can revert to the plan sponsor. During the 1980's these assets were only subject to regular corporate taxes, thus leading many plan sponsors to use the surplus assets after plan terminations for acquisitions or other capital expenditures. During the late 80's and early 90's, legislation was passed to impose an additional tax on those reversion assets due to a concern over how terminations affect plan participants. A 10% nondeductible excise tax was added with the Tax Reform Act of 1986, and increased to 15% with the Technical and Miscellaneous Revenue Act of 1988.[3] This skyrocketed to a 50% nondeductible excise tax on reversion assets in the Omnibus Budget Reconciliation Act of 1990, which remains in place today. The significant increases in the reversion tax rate discouraged plan terminations for those employers who were interested in terminating primarily for the use of the surplus plan assets for purposes other than retirement programs and indirectly discouraged sponsors from pre-funding retirement benefits for fear of creating a "trapped surplus."

### RPA '94

The Retirement Protection Act of 1994 ("RPA '94"), signed into law on December 8, 1994, amended ERISA and IRS regulations impacting key areas as follows:[4]

- Strengthened pension funding through changes in deficit reduction methodology
- Increased PBGC premiums
- Required further reporting of underfunded plans to the PBGC
- Established concurrent authority for PBGC to go to court to enforce certain missed funding contributions to PBGC-covered plans
- Enhanced pension disclosure to better inform employees and retirees

### The Pension Protection Act of 2006 ("PPA")

The Pension Protection Act of 2006 ("PPA") served as possibly the most significant overhaul to US pension funding regulations since ERISA. PPA responded to growing system-wide pension deficits and was designed to increase minimum funding standards and bolster the PBGC. PPA affected numerous funding measures, PBGC premiums and IRS reporting requirements.

[2] Gebhardtsbauer, 2004
[3] Modugno, 2007
[4] Pension Benefit Guaranty Corporation Publication, 1995.

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**Interest Rate Reform:** Pension liabilities valued for IRS funding purposes were historically calculated using an average of US 30-year Treasury Bonds as the interest rate basis. The Pension Funding Equity Act of 2004 ("PFEA") was implemented for a brief period of time prior to PPA, introducing an interest rate based on a four-year average of high-quality corporate bond indices.[5] Beginning in 2008, PPA required plans to value benefit obligations using three separate duration-segmented interest rates.[6] The rates are determined on a monthly basis by the Secretary of the Treasury. Segment interest rates are developed based on a hypothetical yield curve of investment-grade corporate bonds averaged over the most recent 24 months.

**Pension Deficit Funding:** PPA requires the amortization of the pension shortfall over a seven year period. Prior to PPA, pension funding regulations allowed plan sponsors the ability to pay off their funding deficits with interest over periods as long as 30 years. The impact of PPA ultimately led to a significant increase in contributions made to defined benefit plans.

### 2010 Pension Funding Relief

The Preservation of Access to Care for Medicare Beneficiaries and Pension Relief Act of 2010, signed into law on June 25, 2010, eased some of the burden brought on by the more stringent funding requirements triggered by PPA and the recent economic downturn.[7] In certain circumstances, plan sponsors were given the option to elect alternative methods of funding pension deficits. Two options, in addition to the standard 7-year amortization schedule, were made available to sponsors for amortizing pension deficits; sponsors could elect to amortize a deficit over "2 + 7" years or a 15-year period. In the former option, sponsors were given the opportunity to pay interest only on the unfunded liabilities for 2 years, followed by a 7-year pay-off period, or sponsors could choose to amortize unfunded liabilities over 15 years.

### Moving Ahead for Progress in the 21st Century Act

The Moving Ahead for Progress in the 21st Century Act (referred to as "MAP-21") was signed into law on July 6, 2012. While the primary purpose of MAP-21 was not pension reform, it contained significant provisions in two main areas of pension law.

**Additional Funding Relief:** One of the provisions of MAP-21 allowed for pension funding relief through a reformed interest rate methodology, which in turn generated, at least temporarily, a higher effective discount rate under which to value plan liabilities. As a result of measuring liabilities with significantly higher interest

[5] Romano, 2004.
[6] Purcell, 2006.
[7] Buck Consultants Publication, 2010.


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rates, pension obligations per IRS funding standards decreased substantially. Correspondingly, contribution requirements were also reduced for many US employers. Note that contributions made to pension plans are generally tax-deductible. Companies who contributed less to their pension plans effectively reduced their available tax deductions, thereby increasing taxable income and providing additional revenue for the government. This additional tax revenue was intended to help fill a shortfall between current gas taxes and projected highway spending.

On August 8, 2014, the Highway and Transportation Funding Act of 2014 ("HTFA") was signed into law. The law's pension funding stabilization provision changes the MAP-21 pension smoothing provision (effective retroactively to the 2013 plan year). The law extends the narrowest part of the interest rate corridor established through MAP-21, thereby increasing the number of years at which liabilities will be measured with significantly higher interest rates, and thereby reducing contribution requirements. The same revenue-raising motive underlying the creation of MAP-21, discussed in the paragraph above, is also applicable for the HTFA.

**PBGC Updates:** MAP-21 legislated a further increase in PBGC premium rates. The flat-rate premium increased from $35 in 2012 to $49 in 2014. The variable-rate premium also increased from $9 per $1,000 of unfunded vested benefits in 2012 to $14 in 2014. The PBGC premium structure had not changed since PPA increased fixed premiums, introduced indexed adjustments to those fixed premiums and eliminated the funding- based exceptions for the variable-rate premium. In addition, MAP-21 provided a premium cap of $400 per participant, indexed each year by the national average wages.

MAP-21 also established a "Participant and Plan Sponsor Advocate" at the PBGC.[8] The advocate was established to act as a liaison between the PBGC and participants in terminated pension plans and ensure that participants receive all of the benefits they are entitled to receive under the law. Each year, the Advocate is to provide a report on its activities to key congressional committees, summarizing the issues raised by participants and plan sponsors and making recommendations for changes to improve the system.

On December 26, 2013, the Bipartisan Budget Act of 2013 ("BBA") was signed into law which further increased PBGC premiums for future years. Fixed costs for maintaining pension plans through PBGC flat-rate premiums will nearly double and

[8] Pension Rights Center Publication, 2014.

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premiums for unfunded vested benefits (variable-rate premiums) are scheduled to more than triple from 2012 to 2016.[9]

## Relevance to Multi-employer Plans

A multi-employer plan is a collectively bargained plan maintained by more than one employer and one or more labor organization. Most plans are governed by a Board of Trustees that consists of equal representation from the employers and labor unions. The contributions for a multi-employer plan are collectively bargained, and the plan benefit structure is decided by the Board of Trustees. Due to the multiple parties involved in decision-making for a multi-employer plan, this paper and our framework are not intended for companies participating in these plans.

In a multi-employer plan, if a single company wants to exit sponsorship of the plan, it is subject to a withdrawal liability. This was set forth in the Multi-employer Pension Plan Amendments Act of 1980 ("MPPAA").[10] The withdrawal liability requires that an employer who withdraws from a multi-employer pension plan pay a proportionate share of the plan's unfunded vested liabilities. This was intended to provide plans with financial stability and encourage contributing employers to remain in the plan. The costs for a single employer plan to transfer all plan risk to an insurance company in a pension risk transfer parallel the withdrawal liability costs for an employer removing itself from a multi-employer plan. Note that many multi-employer plans use a higher-than-market interest rate in determining the withdrawal liability, potentially underpricing the cost to the plan of the employer's exit. Furthermore, most multi-employer plans determine their funding obligations based upon a long-term assumed rate of return on assets. Thus, a decision to purchase annuities would significantly erode the plan's funded status based on a comparison of the cost of the annuities to the funding liability. For those two reasons, the use of annuities in a multi-employer framework is rare.

## Emergence of Pension Risk Transfer – Our Perspective

Pension risk is a distinct and complex business issue for plan sponsors, especially those sponsors for whom the pension plan has grown significantly relative to the size of the plan sponsor (as noted with GM). Some plan sponsors maintain the same asset allocation strategy that they were using in the mid to late 1990s, even though the characteristics of the liabilities have changed radically, often with a larger proportion of liabilities attributed to former employees and retirees. Over the past couple of decades, shocks in the economic environment accelerated the perception of the need for pension risk management. Through the years, plan sponsors took on significant equity risk, and were punished severely in 2000, 2003 and 2008 as equity markets performed poorly. However, in spite of market volatility, many plan sponsors have still not taken significant action toward managing market risk. The inertia of plan sponsors may be due to behavioral tendencies, belief in "beating the market", or US GAAP accounting rules which can encourage risk taking. A number of

[9] Towers Watson Publication, 2014.
[10] Conference of Consulting Actuaries Presentation, 2014.


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client-specific factors also influence decisions, but many of these reinforce the inertia of maintaining the current investment and risk management approaches.

The current pension regulatory environment and uncertainties in capital markets have led other plan sponsors to actively monitor pension risk on an on-going basis. Some plan sponsors have used the correlation of pension assets and liabilities to economic factors, such as interest rates and inflation, to drive decisions.

### Defined Benefit Plans – From HR Focused to Finance-Driven

The paternalistic defined benefit plan became increasingly popular in the Post-World War II era amidst wage freezes which prohibited general increases in workers' pay. Defined benefit plans provided employees with long-term benefits in exchange for years of dedicated service to an organization. Employers had taken on the obligation of providing benefits to their current and former employees in their retirement years. Over time plans have grown in size and, consequently, plan sponsors have taken on a significant amount of market and interest rate risk. In recent years, the corporate focus on pension plans in many companies has shifted from a human resources focus on talent management to a finance-driven operation.

With the emergence of the defined contribution plan, employers found an attractive alternative for providing employees with financial support in retirement. Under this arrangement, the employer allows an employee to defer a portion of his or her own income to a retirement account and, depending on the plan, calls for additional employer-provided contributions. Defined contribution plans are viewed by sponsors as low-risk alternatives to defined benefit plans, as they transfer the long-term risk, otherwise embedded in defined benefit plans, from the employer to the employee.

While many US companies have moved away from the defined benefit model for some or all of their employees, significantly fewer companies have fully exited the pension business. There are a number of actions which are associated with a pension plan exit strategy, ranging from plan design to voluntary plan termination. The table below illustrates examples from the spectrum of de-risking alternatives. The main focus of this paper is around liability management, but it will also touch on other de-risking strategies as part of the overall framework.


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**Table 1 – De-risking Alternatives**

| Plan Design | Funding / Investment Policy | Liability Management |
|---|---|---|
| -Reduce or eliminate future benefit accruals<br><br>-Shift from defined benefit focus to defined contribution focus<br><br>-Close plan to new entrants<br><br>-Offer hybrid plan design<br><br>-Change plan provisions to encourage retention and reduce volatility<br>• Review early retirement factors<br>• Offer phased retirement design | -Borrow money to fully fund pension plan and de-risk investments to achieve cost certainty<br><br>-Implement liability-driven investment (LDI) strategy<br><br>-Continue reducing equity price risk by reducing exposure to equities<br><br>-Reduce interest rate risk (asset liability mismatch) through long bond funds or synthetics<br><br>-Immunization or duration-matching strategies | -Risk transfer — liability settlement through purchase of annuities from insurance company<br><br>-Risk settlement — settle terminated vested liability by amending plan to allow lump sums<br><br>-Risk control — Offer lump sums to actives upon termination<br><br>-Risk settlement — settle retiree liability by amending plan to allow lump sums |

## Plan Design

Traditional pension plans were designed as benefits determined by an employee's final years of compensation and service. These plans were created with a paternalistic mindset, where employees were rewarded for long service to employers via retirement income. However, plans such as these are often the most expensive to operate and maintain while carrying significant long-term risk, particularly when assets are heavily invested in equities. The market has seen employers shift focus from defined benefit plans to defined contribution plans as employers took preliminary de-risking measures in the form of plan design.

Hybrid plans are popular alternatives for employers who still desire to use the defined benefit structure to provide employees with a benefit but want a benefit value which is easier to communicate. Cash balance, pension equity and stable value plans are a few of the account-based alternatives which employers gravitated toward in the 1990's. Each of these designs allocates a portion of the employees' earnings into a hypothetical account which may (or may not) grow with interest, depending on the plan. Hybrid plans serve as a de-risking measure by reducing some variability with respect to interest rate risk. Accrued obligations are based on hypothetical account balances which provide some modest protection against economic volatility. Many employers moving away from the traditional pay and service-based formula experienced a reduction in anticipated benefit obligation using account-based formulas.

Plan closures and freezes are the next logical step along the plan design de-risking spectrum and often occur in stages. Closing pension plans to new entrants is typically the precursor to other actions ultimately leading toward a complete plan freeze, where all benefit accruals cease.

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Plan sponsors also can elect to freeze just compensation or service accruals, but for a plan to truly be frozen ("hard freeze"), all future benefit accruals must cease. Figures 2 and 3 below illustrate the increasing prevalence of plan freezes amongst defined benefit plans. In Figure 2, the trend shows that in addition to the decrease in total number of active employees participating in pension plans (a 26% decrease in five years of active participants in plans that aren't frozen), the number of active participants included in frozen pension plans is increasing. Figure 3 highlights the decrease in cost of annual benefit accruals for plan sponsors, where the target normal cost represents the present value of benefits accrued in a given year. Experts believe that these trends will continue.

**Figure 2 – Number of Active Participants (millions)**

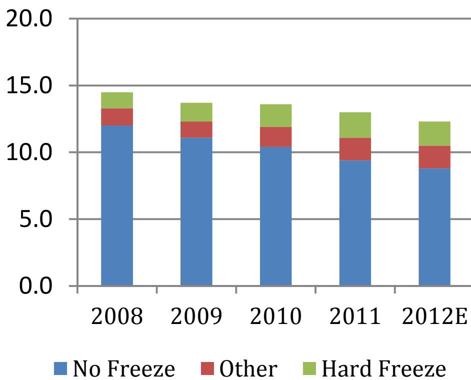
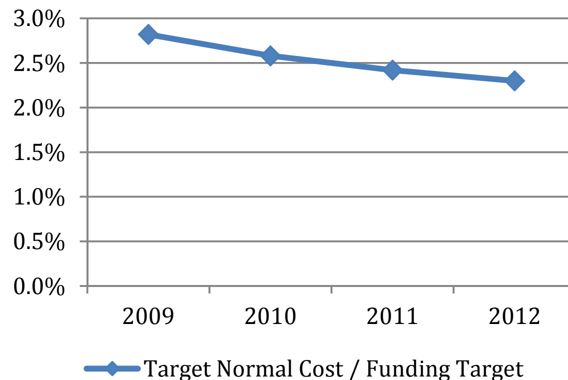



**Figure 3 – Ratio of Target Normal Cost to Funding Target**




Source: PBGC Single-Employer DB Plan Freeze Study[11]; DOL Form 5500 Information 2009-2012

Changes to plan provisions such as early retirement subsidies and phased retirements also serve to encourage retention and reduce volatility. In the same sense, adding a prospective lump sum option to a plan allows participants to elect to receive their traditional, on-going plan benefit in a single distribution which helps arrest or reverse the growth in the liability as terminating employees are "cashed out" completely. However, it is important to note that permanent lump sum options are generally irrevocable once in place and that early retirement subsidies may be "protected benefits." The potential risks associated with lump sum options when terminating a plan are discussed later.

## Funding or Investment Policy

Improving funding has been another step in a de-risking strategy (in particular for frozen plans). Once a plan is completely or nearly fully funded, plan sponsors may look to immunize the asset portfolio and remove excess investment and interest rate risk. The idea of "borrowing to fund" is another form of improving funding where the employer replaces the pension underfunding (essentially a form of variable debt) with other debt that is locked in at a fixed rate, thus removing the volatility. Funding, however, can increase risk by raising funded status volatility unless changes are made to the asset allocation or the additional funding is utilized to transfer risk. Figure 4 below illustrates the trend in increased plan funding since 2005, prior to PPA. Contributions increased

[11] Enrolled Actuary Meeting Presentation, 2013.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significantly in 2011 due to the implementation of PPA, which was fully phased-in by 2012, and the economic downturn which significantly increased funding deficits.

As plan sponsors freeze pension plans, it is common practice to use liability-driven investing ("LDI") to hedge volatility associated with interest rate risk, especially as funded status improves. Over time, funding levels would be expected to rise based on required and discretionary contributions to the plan. As shown in Figures 5 and 6 below, historical trends show that companies are moving away from riskier return-seeking assets and investing more in fixed income securities. Figure 4 below identifies the increase in funding based on aggregate pension contributions. These trends further illustrate that US corporate entities are already headed down the de-risking path. Note that these graphs may somewhat understate these risk reduction trends, as liabilities, and supporting assets, that have been settled through lump sum payments or purchase of annuities are no longer reflected.

Note that LDI strategies are often implemented for frozen pension plans whereby the asset portfolio is essentially duration-matched with the pension liabilities. The portfolio is predominately weighted toward fixed income and invested in a manner such that as changes occur in the economic environment, liability interest rate movements are hedged by the asset returns, resulting in a relatively stable funded status. As an example, all else being equal, if interest rates fall and liabilities increase, then asset returns and assets will increase, resulting in a parallel movement of assets and liabilities.

**Figure 4 – Pension Contributions ($ in billions)**

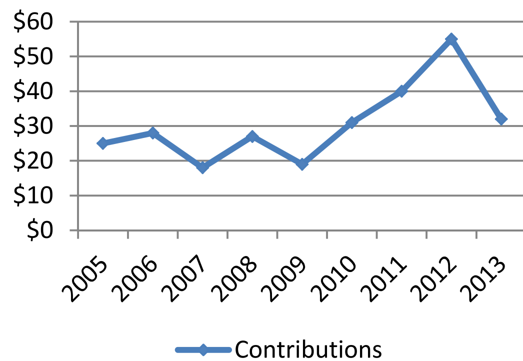
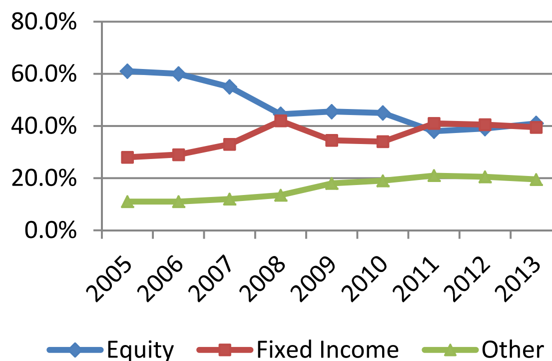



**Figure 5 - Pension Trust Asset Allocation**




Source: Milliman Corporate Pension Funding Study


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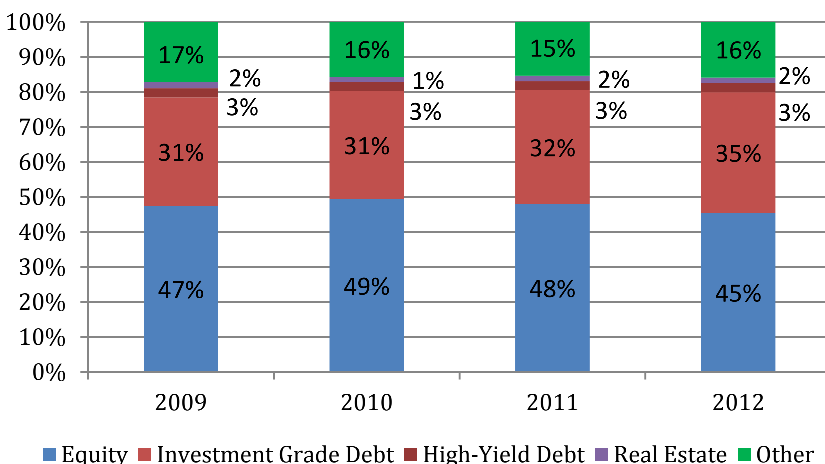
**Figure 6 - Schedule R Reported Asset Allocation**




Source: DOL Form 5500 Schedule Information

## Liability Management

The two major liability management strategies are lump sum offerings and group annuity purchases. Bulk lump sum offerings typically occur when traditional plans allow a group of participants a one-time, limited opportunity to elect to receive their benefits in the form of a lump sum distribution (usually referred to as a "window election"). Such plans may not offer participants the option to receive their retirement benefits as a lump sum after the defined window. For many sponsors, a lump sum window may be a way to begin a PRT strategy or can be simply a point solution to eliminate a certain amount of risk and liability on a relatively inexpensive basis.

A group annuity purchase (commonly referred to as a "buy-out") is another common PRT strategy. A plan sponsor enters into a contract with an insurer to take on the remaining pension obligations for some or all of the plan's population. When terminating a plan, these two PRT strategies are generally combined in a phased approach. First, lump sums are offered to the population to remove some liability and then annuities are purchased for the remainder of the population.

### Lump sum offerings

Bulk lump sum offerings to non-annuitants are considered by many industry experts the most attractive and easiest settlement strategy available for plan sponsors. The speed and ease at which benefit obligations can be released make this PRT solution valuable for shrinking the plan size and reducing fixed costs. A significant uptick in lump sum offerings was apparent in 2012 due to interest rate volatility coupled with the full phase-in of PPA interest rates.

As discussed earlier, one of the critical outcomes from PPA was the new interest rate basis used to value pension obligations for IRS minimum funding purposes; those changes were extended to lump sum payments as well. Prior to PPA, minimum lump sum distributions were calculated using the one-month average interest rate on US 30-year Treasury Bonds.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Under PPA, the interest rates used to calculate the minimum lump sum payments, otherwise known as the 417(e) rates after the Internal Revenue Code section which prescribes them, are based on a time-segmented interest rate structure derived from high-quality corporate bonds, similar to the method used to determine the rates for minimum funding. Note that for minimum funding purposes the segmented interest rates are based on a 24-month average, whereas the 417(e) rates are computed without regard to a 24-month average and are therefore more reflective of the current economic environment in which benefits are distributed although, for administrative simplification, the rules do permit a sponsor to maintain interest rates for lump sums for up to a year (a "stability period"). In an environment of volatile interest rates, the use of a stability period can create situations where the lump sum interest rate differs from prevailing market rates because it has yet to reset.

For lump sum distributions made at any point during 2012, plan sponsors were eligible to utilize lump sum interest rates based on corporate bond yields from as early as August 2011. The Citigroup Pension Liability Index, a commonly used reference point for measuring pension obligations, dropped approximately 110 basis points from August 2011 to December 2012.[12] This enabled plan sponsors to use a significantly higher interest rate to determine lump sum payment amounts than the rates used to determine the benefit obligation. In other words, the decrease in interest rates created an opportunity for plan sponsors by which the benefit obligation could be settled for less than the current amount of obligation held. Obviously these conditions can change as they are dependent on the economic environment at distribution as compared to the economic environment during the period in which interest rates for lump sum payments are determined. However, the opportunity to settle the benefit obligation proved the effectiveness of this PRT strategy in purely shrinking the plan and absolving the employer of the risks and costs associated with maintaining the obligation.

### Group Annuity Purchases

Group annuity purchases or buy-outs allow the full responsibility of pension benefits to be transferred from the plan sponsor to an insurer. The plan sponsor enters into an agreement with an insurer to transfer part or all of the existing pension liability for a single premium. The insurer's group annuity contract is usually sold at a higher cost than the pension obligation under US GAAP, most commonly referred to as the PBO. In return, the plan no longer has responsibility for future benefits payments to plan participants and corresponding fees associated with maintaining the liabilities. Plan sponsors are then able to fully remove the pension obligations from their books. Group annuity contracts can be purchased as part of a phased settlement approach, starting with a specific portion of a plan's population. Annuity buy-outs are common for retiree populations only, as was the case for GM and Verizon. Full plan terminations generally end with a final group annuity

[12] "Citigroup Pension Liability Index." Citigroup, 2014.


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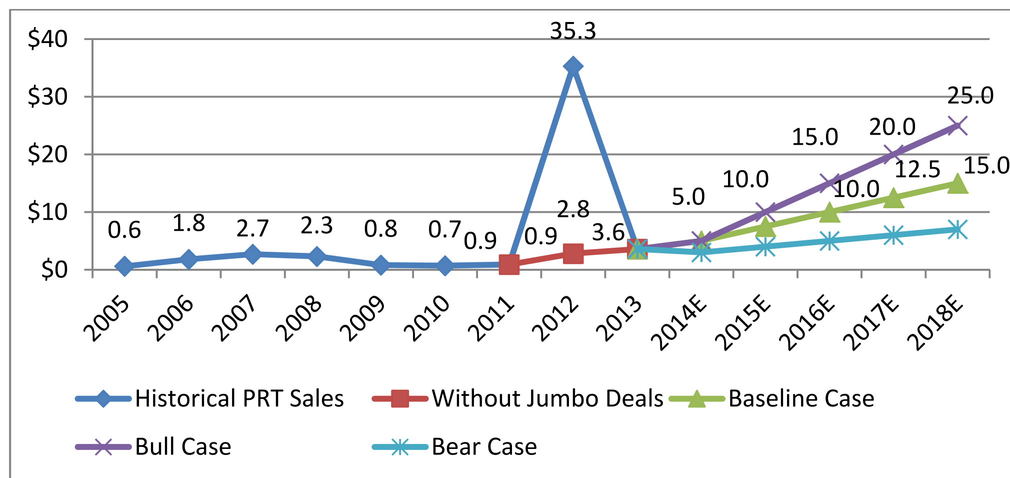
purchase for the remaining participants in the plan (active employees, former employees with deferred benefits and any retired participants remaining). Even in the case of a full termination, liabilities for actives and deferred vested participants are generally settled to a large extent by lump sum offers prior to a final annuity purchase.

Figure 7 below illustrates the increasing prevalence of group annuity purchases. Most of the transactions occurred in the small to mid-sized market. However, as discussed earlier, 2012 was a record-setting year with the occurrence of two of the largest transactions in history. Experts believe that the market will continue to see an increase in demand for group annuity contracts in 2014, 2015 and beyond. A general consensus exists among research participants interviewed that the expectations are for increases in group annuity contract sales in both the short-term and long-term.

**Figure 7 – Group Annuity Contract Sales ($ in billions)**




Source: Wells Fargo Securities, LLC[13]

## Plan Termination

Regardless of whether or not an organization chooses to de-risk its plans now, the ultimate end-game for pension de-risking is plan termination. Voluntary (or standard) terminations are allowed after the plan sponsor can show the PBGC that the plan has enough money to pay all benefits owed to participants (i.e., full funding capability). Plan terminations often consist of a phased de-risking approach whereby lump sum distributions are offered to terminated vested and active participants. Group annuity contracts are purchased for the remaining participants. A plan termination can be a long process. Many plan sponsors choose to file for a determination letter with the IRS to receive a favorable determination stating that the plan is qualified through the termination of the plan and that termination will not adversely affect its qualification. Receipt of this letter may impact the

[13] Wells Fargo Equity Securities Publication, 2014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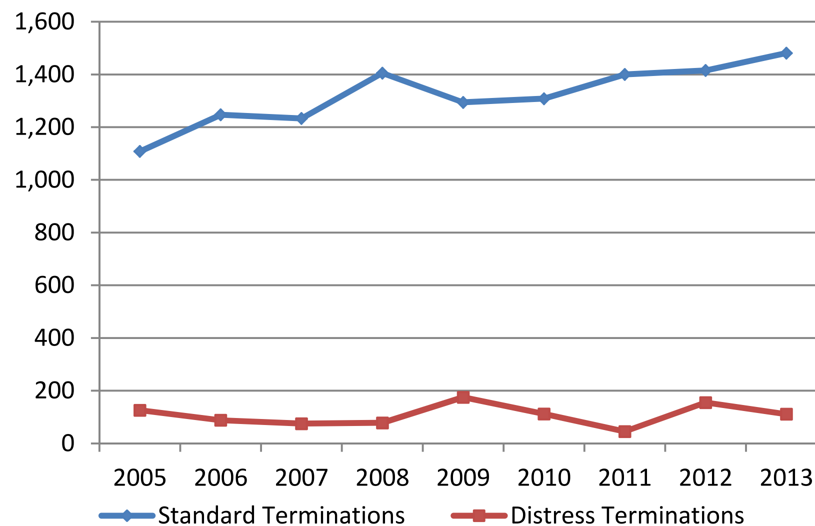
timing of lump sum distributions and annuity purchases. From the time the participants are provided with a notice of the plan sponsor's intent to terminate the plan through when all plan assets are distributed, typical plan terminations can take anywhere from 12 to 18 months to complete, depending on how quickly an IRS determination letter is received.

It is important to note that there are a number of regulatory processes required for both full plan terminations and other pension risk transfer activities. Similarly, both plan terminations and pension risk transfer activities often require identical operational processes. Organizations must carefully consider the implications of certain de-risking actions. Certain de-risking actions may appear to circumvent plan termination regulatory processes. As such, plan sponsors may refer to DOL guidance on plan terminations (Interpretative Bulletin 95-1, which is described later) even if the annuity purchase it is undertaking is not part of a plan termination.

The data contained in Figure 8 below, from the PBGC, may be indicative of a growing trend amongst employers electing to terminate their pension plans. Although there may not be a strong correlation between the number of voluntary plan terminations and the number of participants and assets removed from the defined benefit ecosystem, it appears to be in line with other expert projections on the growth of the PRT market. Market sentiment indicates that there will likely be a higher volume of voluntary plan terminations in both the short-term and long-term. Note that distress terminations are for under-funded plans where the employer is in financial distress. The employer must prove to a bankruptcy court or to the PBGC that the employer cannot remain in business unless the plan is terminated. Distress terminations are outside the scope of this document as they are generally not considered part of a pension risk transfer strategy.

**Figure 8 – Number of Plan Terminations**




Source: PBGC Data Table Listing (2011) [for 2005-2011]; PBGC Annual Reports [for 2012-2013]

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## Costs Associated with Pension Risk Transfer

The cost of fully transferring pension risk will generally exceed the benefit obligation held on the corporate balance sheet. However, those balance sheet liabilities do not reflect the full cost of maintaining and operating the plan. In order to reflect those additional "hidden" costs, many pension risk transfer market participants refer to a concept dubbed the economic liability.

### Buy-out Premium – Consider the "Economic Liability"

As noted earlier, the cost of purchasing group annuity contracts typically exceeds the US GAAP liability measure, PBO. The PBO is calculated using assumptions prescribed under US GAAP, which reflect only the participants' anticipated future benefit payments.

A number of additional (or hidden) liabilities and risks held by the plan sponsor as a result of maintaining the pension plan are not included in the balance sheet liability. Primarily, the balance sheet liability is the plan's funded status which is the difference between the assets and liabilities (PBO) – the net liability. While a number of accounting changes have led companies to show a market value of the unfunded expected benefit obligation, the netting of liabilities against the assets belies the financial leverage involved. As an example of comparing net versus gross accounting, it would be akin to a company borrowing $100M to purchase a machine which is only worth $90M, and therefore shows only a $10M liability on its books.

Beyond the basic deficiency in using the net liability, the focus on only the benefit payment outflows ignores additional liabilities associated with the plans, including the present value of plan operating fees and mandatory insurance levies (such as PBGC premiums). These additional exposures relate largely to benefits already earned. The associated costs are impossible to escape except through a plan termination, in which case the cost of administration is built into the cost the insurer charges the plan sponsor. Because of the items not included in the calculation of the liability, the PBO shown in the footnotes to the financial statements is not the plan's true economic liability.

Furthermore, the discount rate permitted for use in measuring the pension liability under US GAAP may be overly optimistic. The use of a corporate bond measure rather than a risk-free interest rate has merits and limitations. US GAAP seeks a rate at which "pension benefits could be effectively settled."[14] According to US GAAP (specifically ASC 715-30-35-44), "the objective of selecting assumed discount rates . . . is to measure the single amount that, if invested at the measurement date in a portfolio of high-quality debt instruments, would provide the necessary future cash flows to pay the pension benefits when due." The risk-free rate is limited because Treasury yields are likely bid down for tax, liquidity and other reasons which may overstate the cost of settling an obligation. However, some portion of the higher yield granted on "high-quality" corporate bonds is due to default or

[14] Deloitte Financial Reporting Alert 09-5, 2009


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credit risk. Insurers may make an adjustment to the discount rate for this potential credit risk and other risks related to the certainty of the repayment of the bond. In addition, insurers will recognize that, even after adjusting for credit risk and other risks, simply taking yields out of the bond market and applying them to cash flows ignores the reality that managing a portfolio demands resources. Thus, some level of investment management expenses is likely to be included in determining the pricing of group annuity contracts.

Furthermore, at the current time, there is evidence of longevity improvements[15], which are not captured in the mortality tables and improvement scale most commonly used by plan sponsors to determine their accounting liabilities. Insurers, however, have access to significant, up-to-date mortality data, and have been incorporating higher rates of longevity improvement within their annuity contracts. Although the additional settlement premium can appear as significant conservatism, it likely represents, at least in part, a more realistic view on mortality as compared to publicly available mortality studies. Plan sponsors would see the reflection of better mortality improvements as an additional cost of termination, although, in fact, that additional liability will likely find its way to their balance sheet if and when sponsors begin to reflect the observed, higher rates of mortality improvement in the next few years.

The true economic liability of the plan can be thought of as the PBO plus all additional liabilities hidden from the balance sheet position. Taking into account the value of the true economic liability, the settlement (buy-out) premium is essentially normalized to reflect the premium paid to the insurer for taking on the uncertainty or risk associated with the defined benefit plan. Figure 9 illustrates that the actual settlement premium is often much lower than initially perceived, once the PBO has been adjusted to reflect the true economic liability. The size of the settlement premium is largely dependent on the population of participants for whom annuity contracts are being purchased. For example, if the population were strictly retirees, the premium would generally be lower than if the population included active and terminated vested participants.

[15] SOA Mortality Exposure Draft


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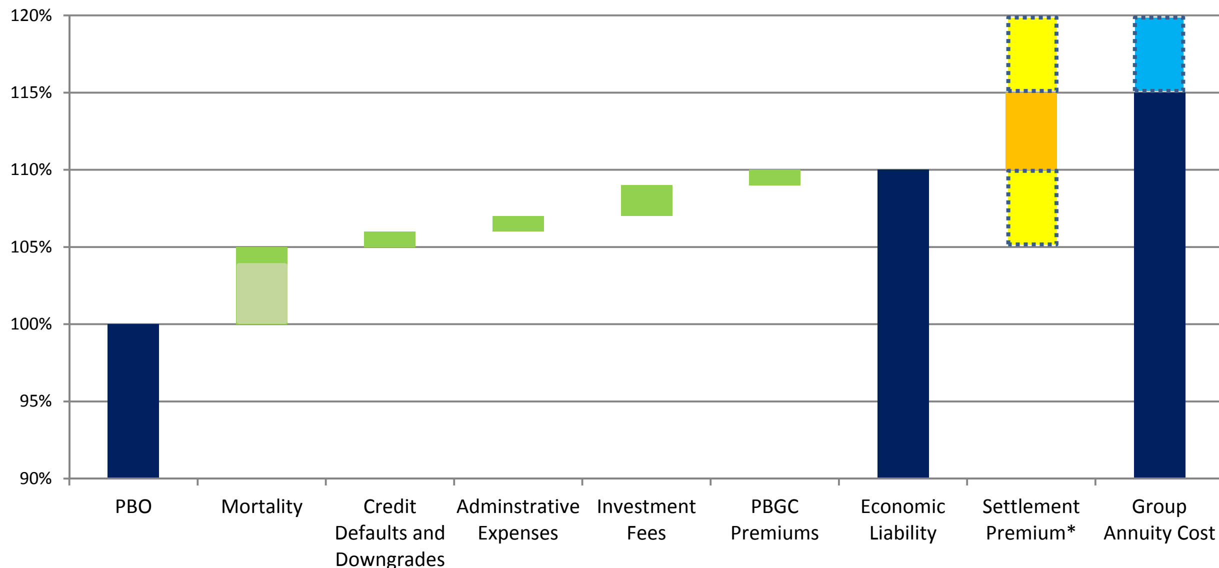
**Figure 9 - Illustration of Settlement Premium Components for Group Annuity Pricing**




* Settlement premium shown is illustrative for this example, but this value will vary depending on the situation and the underlying population for whom annuities are being purchased. The settlement premium could be greater than or less than the amount shown, and in some cases even negative. An illustrative possible range of settlement premium and group annuity cost values are represented by the yellow and blue boxes in the figure above. For example, if the participant population consisted of retirees only, the settlement premium and group annuity cost would be less expensive, and if the participant population consisted of actives only, those costs would be more expensive.

## Accounting (Settlement) Charges – Impact on Profit & Loss ("P&L")

PRT activities often involve the settlement of a large portion of a plan's total benefit obligation. Under US GAAP accounting, companies are not required to reflect the full impact of economic and demographic changes (gains or losses) in the pension expense each year. Unrecognized gains/losses are initially recorded to Accumulated Other Comprehensive Income (or "AOCI") and are scheduled to be amortized into the Profit and Loss Statement ("P&L") in the future—if, in total, they exceed a corridor amount. However, settlement accounting is required under US GAAP when the total obligation settled exceeds the sum of the service cost and interest cost components of pension expense associated with the fiscal year in which the settlement occurs. Settlement accounting requires the immediate recognition of a portion of the accumulated unrecognized gains or losses in the fiscal year's pension expense, in proportion to the amount of obligation settled. As an example, if a company triggers a settlement by releasing 25% of its pension obligation and it has unrecognized losses of $40 million accumulated, then the company needs to record a one-time settlement charge of $10 million. In other words, the company will need to record a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$10 million loss, above the line, on its consolidated income statement as part of the pension expense.

**Table 2 – Settlement Accounting Illustration**

| ($ in millions ) | Results Prior to PRT | PRT Settlement | Results After PRT |
|---|---|---|---|
| PBO | $100 | ($25) | $75 |
| Assets | $90 | ($25) | $65 |
| Funded Status | ($10) | $0 | ($10) |
| AOCI | $40 | ($10) | $30 |
| Net (Asset)/Liability in Retained Earnings | $30 | ($10) | $20 |
| | | | |
| On-going Pension Expense | $2 | | $2 |
| Settlement Charge | $0 | $10 | $10 |
| Total Pension Expense | **$2** | **$10** | **$12** |

Note that many companies have large unrecognized PBO losses accumulated on their balance sheets due to the long-term decline in discount rates and equity price volatility. As a result, PRT activities will most likely have an adverse one-time impact on profit and loss, namely the recognition of a settlement charge. Settlement strategies may be structured in a way such that the settlement threshold is avoided. This may be done by staggering lump sum payouts over multiple fiscal years. Note that the accounting implications do not change the true economic liability of the plan and, while many experts agree that settlement accounting should not influence pension risk transfer decision-making, most market participants agree that the accounting implications do discourage sponsors with large actuarial losses from pursuing PRT.

## Demand for Pension Risk Transfer – Barriers and Opportunities

Since the passage of MAP-21 in 2012, there have been continued legislative changes and proposals in Congress, creating both impediments and opportunities for the pension risk transfer market. While the specific provisions of each change are different, the simple existence of constant change within the regulatory environment impacts decision making. The lack of legislative certainty may discourage pension risk transfer action by some plan sponsors, as the uncertainty may impede confident decision-making. Others may be more compelled to act simply to resolve ambiguity or because regulatory change may make future action more expensive or difficult.

### Barrier for PRT – Continued Funding Relief

Subsequent to the passage of MAP-21, Congress has on multiple occasions proposed extending the act's funding relief, and did so through a law passed on August 8, 2014. The most recent legislation caused interest rates used for minimum required funding calculations to remain higher, thereby artificially lowering the pension obligations used to determine funding requirements. With lower contribution funding requirements, plan sponsors may not look to PRT as they may have an opportunity to benefit from lower cash

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contribution requirements and deploy the cash for other corporate purposes. Lower funding obligations may discourage PRT.

### Opportunity for PRT – Improved Benefit Restriction Metrics

The prospect of further funding relief, while discouraging PRT by delaying funding requirements, may encourage some forms of PRT by increasing plans' apparent funding percentages above lump sum or plan amendment restriction thresholds (generally a plan with an Adjusted Funding Target Attainment Percentage that is lower than 80% is subject to benefit restrictions and restricted lump sum payments). This temporary increase may not only enable sponsors who would otherwise be unable to execute a lump sum program to transact but also may increase urgency as the provisions of MAP-21 and a number of proposed extensions include a corridor which eventually widens and thus dissipates the relief.

### Opportunity for PRT – PBGC Premiums

MAP-21 was just the beginning of significant changes to increase plans' expenses through PBGC premiums. On December 26, 2013, the Bipartisan Budget Act of 2013 ("BBA") was signed into law which further increased PBGC premiums.[16] Fixed costs for maintaining pension plans through PBGC flat-rate premiums, which are premiums paid per pension plan participant, will nearly double from $35 in 2012 to $64 in 2016. In addition, the premium paid for carrying unfunded vested benefits ("UVB"), otherwise called the PBGC Variable-Rate Premium, is scheduled to more than triple from $9 per $1,000 of unfunded vested obligations in 2012 to $29 in 2016. Both the flat-rate and variable-rate premiums will increase beyond 2016 based on the national average wages. Table 3 below illustrates the historical and future rates for PBGC Premiums.

**Table 3 – PBGC Premium Rates**

| Year | Per Participant Rate for Flat-Rate Premium | Variable-Rate Premium Per $1,000 UVB |
|---|---|---|
| 2007 | $31 | $9 |
| 2008 | $33 | $9 |
| 2009 | $34 | $9 |
| 2010 | $35 | $9 |
| 2011 | $35 | $9 |
| **2012** | **$35** | **$9** |
| 2013 | $42 | $9 |
| 2014 | $49 | $14 |
| 2015 | $57 | $24 |
| **2016** | **$64** | **$29** |

Source: www.pbgc.gov/prac/prem/premium-rates.html

[16] Aon Hewitt Publication, 2014.


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## Opportunity for PRT – Evolution of Accounting Approaches

For many years, there has been discussion surrounding the convergence of US GAAP toward the International Financial Reporting Standards ("IFRS") accounting standards. While convergence may not be likely in the foreseeable future, some plan sponsors have taken action in adopting alternative accounting policies and methods which are not dissimilar from the IFRS standards in accordance with International Accounting Standard 19 ("IAS 19") (Revised 2011) accounting. Note the two major differences between US GAAP and IFRS are the mark-to-market accounting and elimination of expected returns.

**Mark-to-Market Asset Method:** While the balance sheet under both US GAAP and IFRS now reflects a mark-to-market approach, companies are allowed to use a smoothed "market-related value of assets" when calculating annual pension expense under US GAAP. Asset smoothing allows plan sponsors to spread the impact of any gains or losses over time, gradually reflecting any deviations from the company-selected expectations. Mark-to-market accounting requires plan sponsors to use the actual fair market value of assets as of the measurement date which potentially introduces significant volatility in pension expense. This increase in pension expense volatility could harm earnings quality (stability) and potentially erode the price investors are willing to pay for a plan sponsor's securities. Sponsors seeking to improve the dependability of earnings may turn to PRT transactions to reduce overall pension exposure.

**Mark-to-Market Immediate Recognition of Gains/Losses:** As discussed earlier, US GAAP allows companies to accumulate gains or losses over time and gradually recognize them in pension expense. In fact, under the minimum amortization method which US GAAP allows (and most sponsors utilize), the standard does not require any amortization of gains and losses remaining inside a corridor equal to 10% of the greater of the plan's PBO and assets. Some US companies have begun moving away from amortizing under the minimum schedule by immediately recognizing annual asset and liability gains / losses directly in pension expense. Sponsors who have adopted these immediate recognition policies experience significant annual fluctuations in pension expense which may cause them to seek out PRT opportunities.

Under the recent changes to IAS 19 (from 2011), IFRS does not require sponsors to recognize gains and losses through profit and loss. IFRS filers recognize gains and losses immediately in OCI in a similar way to US GAAP. However, unlike US GAAP, IFRS provides for no further amortization (commonly called recycling) from AOCI into the profit and loss. If the Financial Accounting Standards Board (which establishes US GAAP standards) took steps to adopt a similar approach for US GAAP, the enticement to PRT may actually be reduced, as direct P&L volatility would be crimped.

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Electing to use mark-to-market accounting under US GAAP allows pension gains and losses to flow into earnings sooner. Companies that switch to valuing assets at up-to-date market prices may incur more volatility in their earnings, but they can offer a more current representation of a plan's funded status. A low interest rate environment in 2011 and 2012 caused companies using mark-to-market to incur fourth-quarter losses, or charges to earnings, as a result of the immediate loss recognition.[17] However, the fourth-quarter earnings in 2013 provided a boost to net income due to rising interest rates and strong market performance.

**Table 4 – Examples of Mark-to-Market Accounting Changes Taken by High-profile Plan Sponsors**

| Company | Approach[18] |
|---|---|
| **AT&T; Verizon; UPS** | Fully recognize any gains or losses annually, all changes flow through corporate profit & loss |
| **Honeywell** | Recognize gains or losses in excess of a 10% corridor in corporate profit & loss. Defer unrecognized amounts that fall within the corridor. The corridor is equal to the greater of the market-related value of plan assets or the plans' projected benefit obligation. |

**Elimination of Expected Return:** Under US GAAP, plan sponsors determine pension expense factoring in expectations of future asset returns. This assumption setting process allows a sponsor to directly boost near-term profitability by taking on additional pension risk through allocation to riskier assets with expectations of higher returns. This near-term profitability improvement does not depend upon any track record of outperformance; it merely requires justifiable expectation of higher returns (usually based upon expert opinion from asset managers or investment consultants).

Under IAS 19, pension expense includes a "Net Interest Cost" component which is based on the net funded position of the plan, adjusted for payables and receivables. In the simplest terms, the expected long-term rate of return is replaced by the discount rate. Because most plan sponsors assume that the long-term rate of return will exceed the discount rate, this change would lead to an increase in pension expense. The elimination of the expected return on assets assumption encourages PRT through the removal of the moral hazard associated with increasing corporate earnings by taking on additional pension risk. Many market participants have referenced sponsors' distaste for an increase in pension expense due to the loss of expected return as a significant disincentive to PRT under the current US GAAP structure.

[17] Rapoport, 2014.
[18] Burr, 2011.


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### Opportunity for PRT – Mortality Improvements

The Society of Actuaries' Retirement Plans Experience Committee ("RPEC") is currently working on a significant study of uninsured pensioners' mortality. The report will likely present two updated mortality tables, RP-2014 with mortality improvement using the newly developed Scale MP-2014. Many market participants expect that this new mortality table and projection scale will be adopted by plan sponsors as soon as year-end 2014 for US GAAP and, possibly 2016 for funding purposes. Expectations are that benefit obligations will increase by approximately 4% – 8% for most plans.

A movement by plan sponsors to reflect the new mortality tables in accounting valuations and, subsequently, a requirement by the IRS to calculate minimum funding based on the updated mortality tables might spur PRT activities in at least two ways. Primarily, for sponsors considering pursuit of PRT, a change in the mortality table used to develop accounting figures would move the currently carried balance sheet liability closer to the cost of an annuity purchase transaction. Furthermore, traditional wisdom convinced sponsors that the vast majority of the premium that insurers charged for taking on pension risk transferred directly to their shareholders through overly conservative assumptions, in addition to explicit profit loading. The realization that, at least with respect to mortality, insurers' assumptions may be more realistic rather than conservative could work to change the perceptions (or misperceptions) of pension risk transfer through annuity purchases. For example, consider if under current mortality assumptions the difference between the PBO and cost of annuity purchase is 15%, however, after reflecting the new mortality tables, this difference drops to 9%. The smaller difference may make the annuity purchase cost seem more reasonable and feasible than prior to reflecting the new mortality tables.

Secondly, there will likely be a lag between when the new tables are implemented under US GAAP accounting and when adoption of those tables will be mandated by the IRS for determining minimum lump sum values. That lag will offer sponsors a window of opportunity in which to offer participants lump sums which might be lower than the liability recorded on the balance sheet, thereby creating an arbitrage for the plan sponsor to offload a dollar of liability for less than a dollar in assets. This may serve as a compelling reason for plan sponsors to accelerate de-risking actions.

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## Is Your Pension Plan "PRT Ready"?

Plan sponsors started to experience the benefits of a positive economic environment in 2013. Rising interest rates and strong equity markets decreased pension liabilities and increased asset values, which improved the funded status of most plans. Although asset values and interest rates have been volatile in 2014, most plans saw a significant net gain during 2013. The PBO funded status of the 100 largest corporate defined benefit plans improved from 77% as of fiscal year-end 2012 to 88% as of fiscal year-end 2013, based on the Milliman 100 Pension Funding Index.[19] These favorable results have minimized the need to raise additional cash to transfer obligations and have supported an increase in PRT activities. Although interest in PRT strategies is at an all-time high, many plan sponsors still hesitate to move forward with these transactions while interest rates remain at or near perceived "historical lows".

### Funding Adequacy

As discussed earlier, the benefit obligation may not reflect the true economic liability of the plan. Furthermore, the interest rate stabilization provided by MAP-21 and extended by HFTA artificially lowers a plan's liability on a funding basis, manufacturing an even greater disconnect between the plan's liability on a funding basis and its true economic liability. For plan sponsors who wish to engage in pension risk transfer without full plan termination, they must consider the adequacy of their current funding strategy. Although some plans may be 100% funded on an IRS basis, there is a good chance that the same plans may be underfunded on a PBO basis and even further underfunded on an economic basis. Plan sponsors, therefore, must consider the implications of settling the benefit obligation. Fully settling a component of the liability requires payment of assets at least equal to the amount of the liability (and usually considerably more), thus deteriorating funded status. This phenomenon is exaggerated in underfunded plans which would see a diminished funded status even if liabilities could be paid out dollar-for-dollar at their current carrying level.

The group annuity purchase price will usually exceed the accounting benefit obligation, or PBO. The group annuity is purchased directly with plan assets causing a potential reduction in funded status absent additional contributions to the plan. Plan sponsors will likely have to make contributions to the plan in order to settle all liabilities.

### Plan Governance

Executing a PRT strategy presents risks if plan sponsors do not have the proper plan governance structure in place. Plan governance is essential for keeping the participants and sponsors abreast of the risk transfer process. Experts believe that plan sponsors need to better understand the delineation between the settlor and fiduciary functions.

[19] Milliman Publication, 2014.


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**Settlor Decisions:** Settlor decisions are company decisions which are not subject to a fiduciary standard of care. These decisions are made on behalf of the plan sponsor and are mostly related to plan design.

**Fiduciary Decisions:** Fiduciary decisions are made on behalf of the plan participants. Selecting an annuity provider is a fiduciary decision. Department of Labor's Interpretive Bulletin 95-1 ("DOL 95-1") guides fiduciary obligations with respect to PRT transactions where the fiduciary is to select the safest available annuity based on the provider's investment portfolio, size relative to the contract, level of surplus and capital and the availability of additional protection through state guarantee associations to name a few.

Table 5 - Examples of Governance Decisions

| Settlor | Fiduciary |
|---|---|
| Amending the plan | Hiring an independent fiduciary |
| Implementing Lump Sum Window | Deciding on investment allocation |
| Providing discretionary contributions | Deciding whether to pay plan expenses from plan assets |
| Deciding on Plan Termination | Filing appropriate notices |
| | Selecting an annuity provider |

Understanding the settlor and fiduciary roles is essential to helping a sponsor navigate pension risk transfer. Many experts believe that plan sponsors need the aid of independent advisors or consultants to assist in the governance structure, helping plan sponsors to understand the process and the responsibility of the parties involved in pension de-risking and in some cases assisting them in the annuity provider selection.

## De-risking and PRT Considerations, Risks and Other Barriers

When considering a group annuity contract purchase, plan sponsors need to remain aware of key factors that shape the deal. Factors which impact the pricing of the transaction as well as those which affect the participants themselves are among the key factors. Other important factors include reputational impact and potential litigation.

### Weighing Factors that Impact Annuity Purchase Price

Purchasing annuities for some or all of the defined benefit plan's population comes with inherent challenges and complexities. As previously discussed, there is a significant difference between the funding liability, the accounting liability (PBO), the economic liability and the annuity purchase price. The gap between the economic liability and the purchase price may be seen as the sponsor's true view of the settlement premium or cost of certainty. From the plan sponsor's perspective, part of the settlement premium includes


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costs only borne by the plan sponsor and not the insurer such as PBGC premiums and consulting fees. Although these costs contribute to the economic liability of the plan, from the insurer perspective, these costs can be avoided and can be a source of profit without driving the cost of the contract above the plan sponsor's economic liability. In general, capturing the settlement premium accurately can be tricky. The value of a plan's economic liability can be perceived differently by different plan sponsors, but a framework can be designed for evaluating operating costs, longevity and other potential risks associated with group annuity pricing.

### Plan Demographics & Longevity Risk

Active and terminated vested participants increase the payout period of the pension plan's obligations, adding to the uncertainty around expected longevity. Insurers may more easily construct liability-based models for retirees due to the shorter tail of retiree obligations. There are also more high-quality, fixed income securities available to match the shorter liability durations. Depending on the underwriter, if the plan sponsor chooses to purchase annuities for the retirees prior to terminating the plan, they may lose efficiency in pricing on actives and deferred vested participants due to the longevity structure of the remaining contract. Group annuity contracts written for non-annuitants (actives and deferred vested employees) will generally be sold at a higher price relative to GAAP due to the elevated level of longevity and investment risk.

### Anti-Selection and Optionality

Retiree lump sum offerings are an alternative risk transfer strategy explored by many plan sponsors. However, many insurers have indicated that providing lump sums to retirees prior to annuitization poses an anti-selection risk for the insurer. Insurers may assume that the retirees who elect to receive their benefits in the form of a lump sum are likely less healthy than those who choose to continue receiving their benefits in the form of a monthly payment. Insurers may charge a higher premium for the remaining population based on the assumed greater longevity of that group. Whether or not it is cost effective to offer a lump sum in advance of an annuity purchase often depends upon the percentage of the population that elects a lump sum, which is impossible to know beforehand. In order to attempt to quantify the potential anti-selection premium, plan sponsors and their advisors may ask an insurer for illustrative annuity pricing with and without a prior lump sum offering.

Insurers also tend to charge a higher premium for pension plans that offer complex optional forms. In particular, account balance plans or plans that have permanent lump sum features may increase the cost of a group annuity contract. Being able to take a lump sum at any point adds significant uncertainty for the insurer due to the unpredictable timing of future cash flows. Many insurers may charge a premium for


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adding a permanent lump sum option. Because permanent lump sum options are generally irrevocable, sponsors should consider their long-term intentions for the pension plan before implementing such a feature as a means of controlling liability growth.

### Asset Portfolio and Plan Size

Although it is common, especially for smaller transactions, for a sponsor to purchase group annuity contracts with cash (where the plan sponsor liquidates the asset portfolio and pays cash for the remainder of the cost), interest in in-kind asset transfers is growing. In-kind asset transactions involve transferring a portion, or all, of a plan's assets to the insurer without liquidating them. In order for an annuity provider to be willing to transact through an in-kind asset transfer, the asset allocation must be appealing to the insurer.

Plan sponsors should understand what the optimal asset portfolio for the insurance carriers looks like. Insurers typically use high-quality corporate bonds to duration-match the benefit obligations. A plan sponsor with a carefully constructed portfolio may be able to obtain more attractive pricing than if the sponsor had to liquidate its assets and use cash to purchase the annuities because significant transaction costs may be avoided. Also, the cost to the sponsor and the insurer of being "out of the market", namely holding all cash, are reduced.

Overall plan size can work in multiple facets to impact pricing. Although not all insurers may agree, some believe that larger deals may be annuitized at a higher price point relative to GAAP. Insurers are taking on a bigger – and less diversified – risk and therefore may have additional capital requirements and fear the concentration of mortality risk for a given, large population.

### Participant Advocacy

As noted earlier, ERISA established a number of protective policies for the benefit of plan participants and to ensure benefit guarantees. In the event that a participant's benefits are transferred to a group annuity contract, the participant's benefits would no longer be subject to ERISA and no longer protected by the PBGC. However, in lieu of PBGC insurability, state guaranty associations provide protection of benefits for participants when contracted through a group annuity.

Revenues for the state guaranty associations are based on assessments when a participant in the association fails (i.e., the organizations are not pre-funded with revenues prior to insolvency). In contrast, the PBGC collects premiums from plan sponsors on an annual basis. The PBGC provides a guaranteed maximum benefit regardless of plan or jurisdiction whereas the State Guaranty Associations guarantee a lifetime minimum and can potentially provide greater benefits than under the PBGC.[19] The first aspect of benefit protection is based on the financial strength of the entity that is actually making the annuity payments, namely the plan sponsor or insurance company.[19] In many cases, the creditworthiness of

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the insurer from whom the annuities are purchased may be greater than the creditworthiness of the plan sponsor.

State guaranty associations exist in all 50 states. For any state in which an insurance company conducts business, the insurer is required to be a member of that state's guaranty association.[20] Participant protection under state guaranties includes a three-prong approach: State Insurance Solvency, Receivership Process Focused on Protecting Policyholders and Guaranty Association Protection.[21] Benefit protections are not uniform across all states depending on state law. Similar to the PBGC, high-dollar value benefits are likely not fully recovered. However, in most cases, pension benefits are restored in full.[20]

### Reputational Impact

Pension de-risking strategy has been shown to bolster organizations. As an example, well publicized PRT activities by Verizon and GM led to immediately favorable reactions from investors. Credit rating agencies also responded positively to companies who have actively managed pension risk.

However, plan sponsors must be careful in transferring pension risk. Clarity of communications around the annuity amounts, timing and process are essential in avoiding litigation. Litigation often arises when the plan participants do not feel the support from the plan sponsor in effectively understanding the risk transfer process. For instance, a recent suit was filed by retirees against their former employer after the purchase of annuities for them. The retirees claimed that their former employer failed to provide required disclosures, breached fiduciary duties and discriminated against them.[22] The lawsuit has subsequently been dismissed.

### Enterprise Risk Management

Pension risk can contribute appreciably to the overall level of enterprise risk. A company's credit rating may be used as a good measure, or proxy, for enterprise risk. Pensions are only one of many factors that are considered in the rating process. De-risking, or lack thereof, is unlikely to be the sole reason an agency decides to downgrade or upgrade a company's rating; however, for companies with large pension exposure, the company's approach to de-risking may constrain its rating.

Credit rating agencies may view unfunded pension liabilities as debt.[23] Many long-standing sponsors of pension plans have pension obligations which represent a significant part of their company's overall debt. Much of this pension debt, the portion which is funded, does

[20] National Organization of Life & Health Insurance Guaranty Associations Website
[21] Keating Written Testimony, 2013.
[22] Investment News, 2013.
[23] Moody's Analytical Approach Presentation, 2013.


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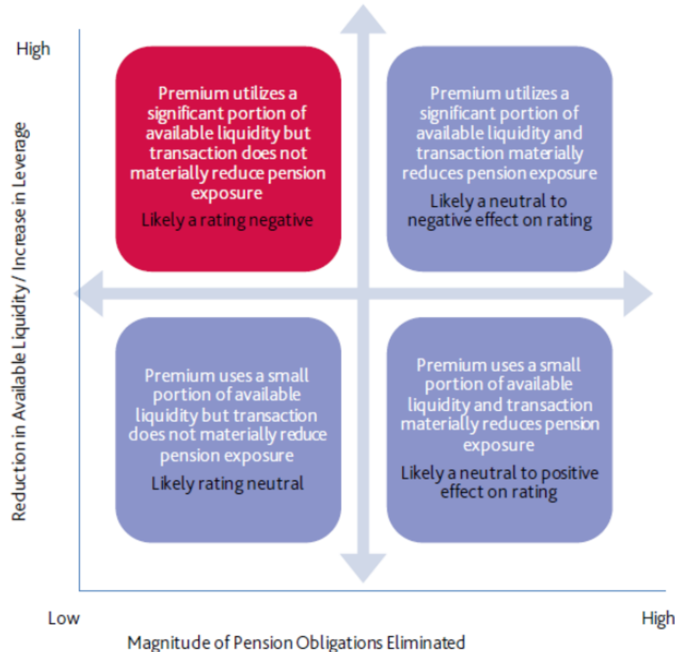
not appear on the balance sheet, and thus, may not be directly recognized by all investors. The figures below reflect a rating agency perspective on the credit implications of de-risking strategies. As seen in the table below presented by Moody's, de-risking and/or PRT generally results in neutral to positive outcomes, however, Moody's analysts factor in other considerations such as leverage and liquidity when evaluating the PRT. As an example, if a company has to pay a substantial premium to offload its liabilities, then it may see a reduction in liquidity and an increase in its leverage which may outweigh the move away from pension underfunding to a more efficient form of debt.[21] A negative outcome may occur when a company's financial position is drastically affected, specifically when a PRT affects a significant portion of the company's liquidity.

**Table 6 – Credit Implications of De-risking Strategies**

| Strategy | Description | Credit Implication |
|---|---|---|
| **Plan Freeze** | Freeze future benefit accruals | Positive |
| **Increase Funding** | Contributions in excess of minimum required | Positive if not significantly affecting liquidity |
| **Liability-Driven Investing** | Duration-match assets and liabilities | Neutral to Positive |
| **Lump Sum Offering** | Cash out terminated vested or retired Participants | Positive (depending on cash out amounts compared to carried benefit obligation) |
| **Annuitization** | Purchase group annuity contracts | Neutral |

Source: Moody's Analytical Approach Presentation 2013.

**Figure 10 – Credit Impact Matrix**




Source: Moody's Investor Service Publication 2012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### Capacity Constraints

A large influx of group annuity purchases may pose a risk to an insurer from both a human capital and asset availability perspective. Currently, there are a limited number of insurers who compete in the PRT space. The available personnel with sufficient experience and expertise to run these deals are limited. This may result in lost efficiency should a significant percentage of plan sponsors decide to transact simultaneously. In such circumstances, the market may experience a strain in the availability of long-duration high-quality, corporate bonds. Insurers may be forced to hold more Treasury bonds than they would ideally like while waiting for longer-dated corporate issuances to emerge. As a result, insurers may adjust group annuity contract pricing to reflect the scarcity of debt suitable for backing those contracts. Although these constraints are potential risks for consideration, the length of the process to annuitize or terminate a plan may mitigate the risk of debt scarcity, by allowing time for current providers to increase their debt capacity. Asset in-kind transfers may reduce investment availability concerns.

### Labor Union Considerations

Collective bargaining agreements and organized labor may introduce other important considerations for many companies when completing pension risk transfer deals. The benefit structure for active employees is a large portion of the bargaining process for labor unions, and labor unions may also need to weigh in on any pension risk transfer activity. Even though both Verizon and General Motors have substantial union pension obligations, they only targeted non-union liabilities in their 2012 jumbo transactions. Completing a pension risk transfer deal involving a union plan may be more difficult due to labor union negotiations. As a result, many companies have, thus far, seemed to shy away from involving labor union pension liabilities in their pension risk transfer activities.

### Top-25 Restrictions

Per Treasury Regulations, if an employee is one of the top-25 compensated employees, the employee cannot receive a full lump sum distribution from the plan. There are a few exceptions to this rule, including if the plan assets are greater than 110% of plan liabilities, if the value of the employees' lump sum is less than 1% of the plan liabilities, or if the lump sum does not exceed $5,000. Many pension formulas are based on compensation, which in turn will lead to larger pension benefits for a top-25 employee. For bulk lump sum offerings, a top-25 employee who elects a lump sum may have the total lump sum amount put in a restricted account and each year the restricted amount, which must remain in an escrow account, is reduced. These restrictions still apply with respect to a lump sum offering, if a top-25 paid employee is in the target population. When a plan undergoes plan termination, these restrictions go away.


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## Potential Alternatives & Innovations

The bulk of this report focuses on settlement strategies involving the use of cash from plan assets to effect lump sum distributions or purchase annuities. While these are the most common practices when exploring PRT implementation, they are certainly not the only de-risking solutions. There are variations and alternative solutions for effective risk management as discussed below.

### Asset-in-kind transfers

As discussed above, the asset portfolio may impact the purchase price for annuity contracts. Asset-in-kind transfers would be ideal for executing an annuity buy-out in that the ease of transfer reduces the transactional fees that occur when the plan sponsor sells their assets, and the insurer purchases new assets. Plan sponsors can transfer the plan assets to the insurer with little to no investment or liquidity risk. Annuity buy-outs are more likely to be done as partial in-kind because it is very difficult to transfer all the plan assets to the insurer. This difficulty arises because the assets a plan sponsor holds likely do not match the assets that the insurer views as appropriate to back the obligations. Asset-in-kind transfers are more likely among larger deals but many insurance company experts have provided indications that they are open to the option for small and mid-sized plans as well.[24]

### Guaranteed Separate Accounts

Some of the larger PRT transactions have made use of guaranteed separate accounts in connection with the purchase of group annuities. The separate account structure segregates the pension plan assets from the corporate assets of the insurer, providing additional protection from insolvency. The structure provides additional assurance for fiduciary decisions. While guaranteed separate accounts have been around for quite some time, they have only been more prevalent among the larger deals with significant, perceived fiduciary risk.

### Annuity Buy-ins

The annuity buy-in, which is the counterpart to the annuity buy-out, is a way to mitigate the plan's volatility and risks without actually transferring the formal responsibility to make payments to the insurer.

In a buy-in transaction, a group annuity contract is purchased by the plan sponsor and is held as an asset within the plan.[25] The annuity contract serves as a vehicle which provides guaranteed cash flow within the plan. The plan sponsor makes a single purchase for the group annuity contracts and then the contract makes aggregate monthly benefit payments

[24] Penbridge Advisors Survey, 2013.
[25] MetLife Publication, 2014.


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back to the pension trust. The plan continues to administer the benefit payments to the annuitants.

The strategy is effective for risk-mitigation; however, the buy-in still comes at a comparable level of premium to a buy-out. One of the touted advantages to holding an annuity contract within the plan is that a buy-in contract generally contains a surrender provision so that it is not irrevocable. Consequently, the transaction does not, typically, trigger settlement accounting.[26] However, plans holding a buy-in annuity continue to pay the operating expenses (including PBGC premiums) associated with managing the plan. Experts believe that buy-ins could be used as a first step prior to a full buy-out. Annuity buy-ins are popular in the UK but have not received significant adoption in the US.

### Longevity Swaps

Another popular strategy used in the UK is the longevity swap. Longevity swaps are frequently constructed by a financial services provider who agrees to make the actual benefit payments to the trustee in return for an agreed upon fixed stream of payments. Longevity swaps may be attractive for a pension plan that provides indexed benefits (such as cost-of-living adjustments) to their participants, since indexing benefits lengthens the duration of exposure and increases longevity and inflation risk. Many plan sponsors in the UK provide indexed benefits, and therefore longevity swaps may be more attractive to plan sponsors in the UK.

### Reinsurance

As the need for capacity in the marketplace is increasing, there may be a potential role for reinsurance to emerge to help meet market demand. The evolution of pension legislation and the changing regulatory environment may require plan sponsors to reinsure the risk of holding group annuity contracts. Most research participants agreed that material reinsurance participation in the US is unlikely in the near term. Some believe that the reinsurers will play a role in mitigating excessive risk for other insurers.

### Re-risking

Although 2013 produced positive investment returns, plan sponsors retain caution with respect to the investment allocations. There have been very few plan sponsors who, having taken steps to de-risk, subsequently reallocated assets back to return-seeking investments. Experts do not believe that there will be a future movement toward equity-like instruments, or in simpler terms, "re-risking" in asset portfolios. Although a couple of plans have chosen

[26] The FASB Codification Master Glossary defines a settlement as a "transaction that is an irrevocable action, relieves the employer (or the plan) of primary responsibility for a pension or postretirement benefit obligation, and eliminates significant risks related to the obligation and the assets used to effect the settlement."


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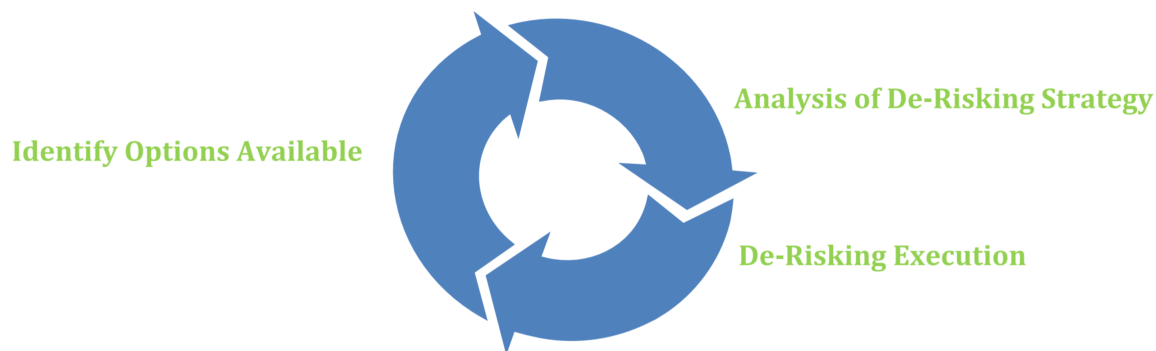
to re-risk, most plan sponsors (if they are adjusting asset allocation strategies) are continuing the shift to liability hedging assets.

## Pension Risk Evaluation – A Guided Framework for Plan Sponsors

Why consider pension risk management? In order to better understand what drives certain plan sponsors to action and others to inaction, a broad review of the organization's situation is needed. Plan sponsors must review essential business objectives and identify the "pain points" created by the defined benefit plan. Pension de-risking has proven to be an effective way for organizations to manage the costs and risks associated with their plans.

A pension de-risking framework can be utilized by plan sponsors as a tool in managing pension risk. The plan sponsor should ascertain whether they are ready to engage in pension plan risk management by first identifying their overall business objectives, assessing how pensions are a concern for them (e.g. is cash flow uncertainty or earnings per share impact a bigger concern?), and identifying the options available. Upon identifying a potential need for pension de-risking, plan sponsors should analyze the de-risking options available and decide whether or not to take action. Executing the strategy or not, the plan sponsor comes full circle, reassesses the situation and re-evaluates the business objectives. Potential for further plan de-risking may be needed, entering the framework once again.




The following sections walk through a potential framework for plan sponsors. The framework will help assist in identifying and analyzing the key factors a company should consider when deciding whether to transfer pension risk. The framework is general in nature but allows plan sponsors to determine how their priorities line up in today's market. The intention is to support plan sponsors' decision-making by providing a high-level understanding of de-risking. By building their knowledge of pension risk, plan sponsors will have a better sense around the optimal analysis in determining if pension risk transfer is appropriate. The framework is built with the goal of assisting plan sponsors (and also advisors to plan sponsors) in understanding pension risk transfer steps in more detail.

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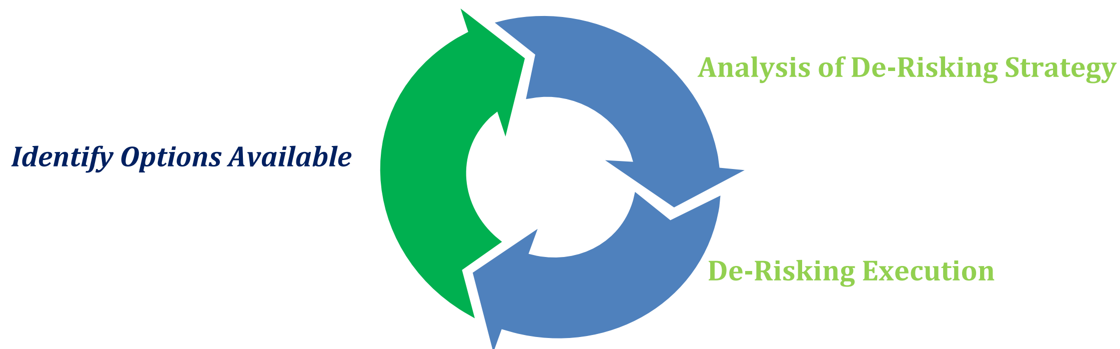
### Identify Options Available

Entering the framework, plan sponsors must consider their overall business objectives and explore the options available for pension risk management. Understanding how the pension plan fits into an organization's business model will assist plan sponsors in determining which course of action, if any, they should pursue. Plan sponsors should evaluate the pension impact on other corporate functions. Using measurable financial metrics, the plan sponsor needs to understand why pension risk management is being considered in the first place, and what the corporate objectives are for pension risk management.




In terms of relevant metrics, the plan sponsor must work with both finance and human resources to understand how the pension plan advances or hinders the organization.

#### Talent Management

Retirement benefits can contribute to a company's success by serving as an important talent management tool. Plan sponsors should engage human resources to understand any talent management implications of executing a pension risk management transaction. Prior to engaging in plan de-risking, the organization must consider how the de-risking action will affect employees' benefits and how the pension plan currently fits into its benefits and rewards structure. If the PRT strategy will materially affect employees' benefits, the sponsor will need to provide adequate replacement for those benefits. Detailed communications and education for affected employees are essential.

Understanding the implications of retirement benefit changes is important for talent retention strategies. Many participants may initially respond negatively to an action to transfer risk regardless of whether the participants' benefits are directly impacted by the transaction. An effective communication and education strategy can reduce the likelihood of talent management challenges associated with the controversy surrounding pension risk transfer.

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### Income Statement

Under US GAAP, a corporation is required to report pension expense annually on its consolidated income statement. Active, ongoing pension plans tend to have a larger impact on the corporate financials primarily due to the cost of annual benefit accruals. Plan sponsors should include finance representatives on working teams to aid in understanding the impact pensions have on profit and loss. Previous research has shown that the inherent volatility associated with pension liabilities may negatively impact shareholder value. Pension de-risking can reduce the volatility of pension expense and mitigate the impact on shareholder value.

### Balance Sheet Position and Credit Rating

Another finance-based consideration surrounds the size of the pension plan and its funded position. As noted earlier, the PBO as a percentage of the company's market capitalization may be a good measure to understand the size of the pension plan relative to the organization.[27] US GAAP requires a company to recognize the net funded position of the plan on its balance sheet. Pension obligations can be thought of as "pension debt" that increases the leveraged position of the organization.[21] Large, underfunded pension plans weigh down an organization and can also impact an organization's credit rating. Some analysts think PRT has a positive action on an organization's credit rating. Others, however, do not believe that pension actions alone are significant enough to move credit ratings, but that they are only one of an organization's potential levers which can affect creditworthiness.

As plan sponsors consider pension impact on corporate functions, they can start to identify the options available to them for pension risk management. For ease and simplicity, pension risk can be broken out into three generic alternatives: maintain the plan's status quo, initiate in-plan risk management, or engage in pension risk transfer.

### Maintain Status Quo

Take no action and continue to manage the existing plan.

### In-Plan Management

Plan design, along with strategic funding and investment policies, are ways for plan sponsors to maintain their current plans without fully transferring the pension liabilities. Plan design strategies ranging from account-based alternatives to plan closures and freezes are ways to reduce costs and eliminate significant growth of pension liabilities. LDI strategies allow plan sponsors to mitigate exposure to interest rate risk and longevity risk.

[27] Long, 2011.


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### Pension Risk Transfer

Bulk lump sum offerings and group annuity purchases are two general approaches to transferring pension obligation. As discussed, offering lump sums to retiring actives and terminated vested participants is the fastest, easiest alternative for plan sponsors to transfer pension obligation but participants must elect to receive benefits as a lump sum. Group annuity purchases are a guaranteed approach to removing the intended liability and not subject to employees' election. Terminating the plan is the ultimate form of PRT and usually takes place using both risk transfer approaches (lump sums for active and terminated vested participants and possibly retirees followed by the annuity buy-out).

## Analysis of De-Risking Strategy

Once options are identified, plan sponsors must evaluate and quantify the pension risk alternatives in order to gain an understanding of the costs and benefits of engaging in some form of pension risk management.

### Evaluate the Pension Liability

Plan sponsors do not need to understand the complexities in measuring pension obligations. However, they should understand that pension obligations are measured differently for purposes of funding and accounting. One measure cannot be substituted for the other. As previously discussed, the true economic liability of the plan differs from both the funding and accounting measures of the liability. Plan sponsors should seek to understand variables that comprise a true view of the pension plan's economic liability. Nevertheless, their analysis should also include any risks to cash flow or financial statements resulting from the required measurements of those individually distinct liabilities, along with an understanding of sensitivities to key economic variables.

**Additional Risks:** There are multiple risks a plan sponsor is exposed to, including mortality risk, default risk and downgrade risk, among others.


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More often than not, insurers include a premium for the mortality risk they assume when writing the annuity contracts. When pricing the benefit obligation, an insurer uses an assumption for mortality that may be more conservative than that used for either funding or accounting. An insurer does not have the opportunity to revalue the annuity contracts to reflect actual experience once the contracts have been written, and therefore additional conservatism is imperative in order for an insurer to be able to write the contracts. Recent studies of pension mortality experience amongst private pension plan sponsors indicates mortality improvement has been significant over the past decade, which brings the economic liability closer to the settlement premium.

Another important risk is interest rate risk. The value of the plan liabilities are directly tied to the interest rate environment and the interest rate assumption selected. The PBO is determined by selecting a discount rate equivalent to a current market (duration-matched) hypothetical yield curve, based on high-quality corporate bonds. If the market experiences a default or downgrade in the corporate bond market, then the index replaces the default or downgraded bond with a new bond or simply removes that bond from the index. However, a real asset portfolio constructed to back a pension obligation would still own that downgraded bond and, thus, suffer a loss associated with the default or downgrade. Group annuity providers price in the exposure to default risk of the bonds held to back the pension liabilities.

**Additional Costs:** Pension risk transfer strategies immediately transfer or eliminate the fixed costs of operating the plan. Operating costs include administrative expenses, PBGC (flat-rate) premiums and investment management fees. Each of these costs can be viewed as a liability to the organization. Once the present value of the fixed costs associated with operating the plan is determined, plan sponsors can add that to their PBO and start building out the true economic liability of the plan.

### Understand Group Annuity Pricing

Whether purchasing annuities to carve out a portion of the population or fully terminating the plan, plan sponsors need to understand the factors which impact annuity pricing. As previously discussed, there are multiple drivers of the difference between the settlement premium and the economic value of the obligations.

**Plan Demographics & Longevity Risk:** Large groups of actives and terminated vested participants increase the duration of the portfolio, adding to longevity risk. Because there are fewer debt instruments with sufficient duration to match the length of the liabilities and more uncertainty as to the


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future mortality of the population, longevity risk increases the difference between the economic value of the obligation and the group annuity cost.

**Anti-Selection and Optionality:** Offering lump sums, especially to retirees already in payment status, introduces anti-selection risk, which also increases the difference between the economic value of the obligation and the group annuity cost. Although in reality anti-selection risk may not actually increase the gap between the economic liability and the group annuity cost, it does increase what the employer likely perceives as that gap, as plan sponsors do not have sufficient information to set a mortality assumption that includes anti-selection. Complex optional forms of payment, including permanent lump sum features available to active and terminated vested participants, also increase the difference between the economic value of the obligation and the group annuity cost.

**Asset Portfolio and Plan Size:** Understanding the overall size of a transaction and the potential impact of investment holdings of an asset in-kind transaction are crucial to evaluating the total cost to the plan sponsor.

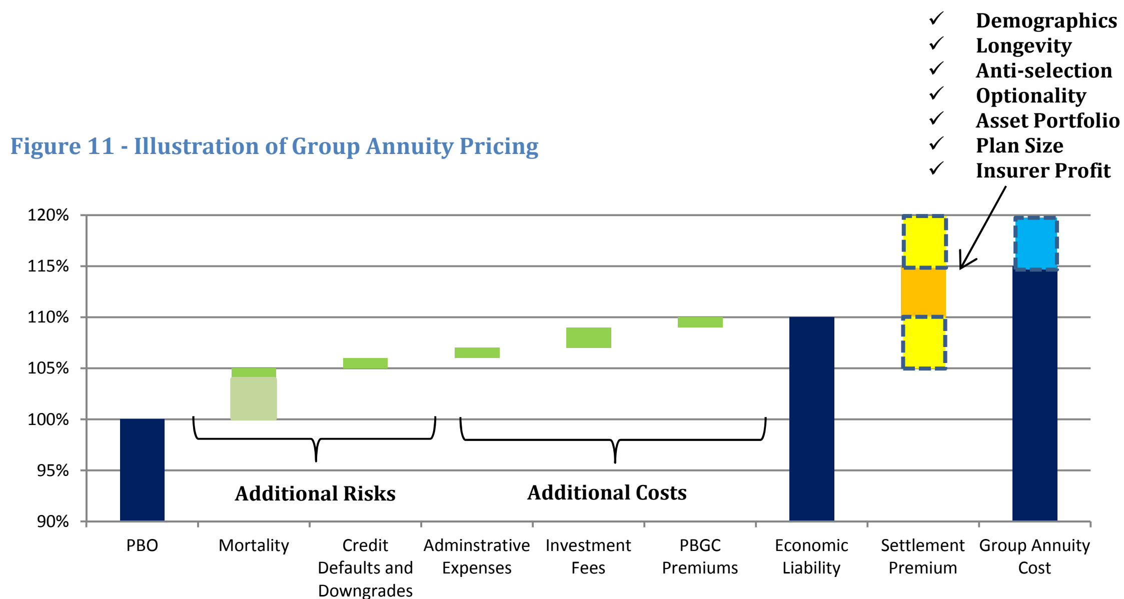


Figure 11 - Illustration of Group Annuity Pricing

## Financial Modeling and Determination

Plan sponsors may rely on actuarial advisors to perform financial modeling of the pension risk alternatives, weighing the costs and benefits to each approach. Financial analysis may help weigh the relative merits of various pension risk management options, in particular lump sum offerings or annuity purchases.

Plan sponsors must understand the relative impact each de-risking measure has on the key financial metrics. Each strategy comes with an associated present or future


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cash outlay and corresponding risk reduction. Similarly, the impact on the balance sheet and income statement must be considered when choosing a de-risking strategy. As noted before, credit ratings are likely influenced by de-risking activities and must also be taken into account both on their own merits as well as the impact they have on the organization's cost of capital. Several techniques are often used to model the expected costs and risks associated with de-risking. Techniques include stochastic modeling, used to analyze the impact and likelihood of possible future outcomes, and deterministic stress testing, which tests the plan's sensitivity to extreme scenarios.

> **Stochastic Forecasting:** Stochastic forecasting is common for understanding how the expected future economic environment may impact each pension risk alternative. Typically stochastic models produce 10 to 20 years of projections under approximately 1,000 (or more) different economic scenarios. Each scenario is ranked, providing a probability distribution of expected outcomes of future costs and contributions for the pension plan. Stochastic modeling is a valuable tool to compare the expected value of the current on-going plan with the cost of pension risk alternatives such as lump sums and group annuity buy-outs. This type of modeling is especially useful in identifying reasonably possible but outlying scenarios which could have a substantially negative impact on the overall organization.
>
> **Deterministic Stress Testing:** Deterministic stress testing is an important tool for understanding the impact of key economic variables in isolation. Holding all other variables constant, deterministic stress tests can show the relative sensitivity of the pension plan to individual levers. Stress testing is especially important for testing highly adverse scenarios. While stochastic modeling may provide a fuller understanding of plan risks, deterministic modeling is both simpler and less expensive and may be a first step towards a more complete understanding of the plan's risks.

After performing the appropriate financial analysis, the plan sponsor should determine the best approach for its circumstances. Often the outcome of the analysis depends upon the current economic environment and timing of the transaction. A company may choose to "right-size" the plan, or reduce the plan's liability within the boundaries of the overall company risk tolerance. While in theory transferring the obligation and reducing the plan's liabilities within the boundaries of the overall company risk tolerance may make financial sense, financial modeling may demonstrate that in-plan management could be more cost effective. For example, a large financially solid firm with a relatively small, frozen, but very complex, plan may find in-plan management more cost effective than termination, at least temporarily.


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Regardless of any financial modeling results, the plan sponsor ultimately must decide the most advantageous solution. Plan sponsors may choose to defer action due to the expected sentiment or concern raised by other parts of the organization. Alternatively, the plan sponsor may choose to terminate the plan right away as a result of an immediate need for financial risk mitigation.

### De-Risking Execution

Prior to engaging in pension risk management activities, a plan governance structure must be in place to approve the company's recommendations. A proper governance structure will help the sponsor make decisions and undergo appropriate actions in a timely manner. The governance structure as it relates to both the settlor and fiduciary functions is quite significant, as previously discussed. Taking action and eliminating the benefit obligation through lump sums or annuities is ultimately the responsibility and decision of the settlor. The responsibility of handling the annuity provider and investment decisions lies with the fiduciary. The impact on plan participants must be considered when acting in a fiduciary or settlor capacity.

### Data Readiness

Regardless of what pension risk management strategy is undertaken, data readiness and preparedness is crucial for implementation. This includes having clean data and support for benefit amounts for all participants. Clean data encompasses small but critical items such as having a current address, as well as more complex items, including appropriately certified calculations for all participants. Locator services are available to assist sponsors in locating terminated vested participants with whom the sponsor has not had recent contact or for whom the sponsor does not have a current address. Many sponsors spend significant resource time reviewing documentation and electronic information on benefit amounts to confirm the sufficiency of the data to support final distributions. The data required is more than


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what is needed to manage an on-going plan. Many consultants suggest that sponsors begin the process of data clean-up even if the decision on when to execute a settlement has not yet been made, as it can be surprisingly time-consuming.

### Lump Sum Strategy

If lump sums are offered, effective communications to participants will assist with better participant engagement and may contribute to higher participant election rates. The plan sponsor should identify various available risk transfer groups within its plan's population and decide whether or not to offer each group a lump sum. A sponsor should understand why a lump sum should or should not be offered to each group. For example, carving out a subset of terminated vested employees with small benefits may help reduce the general population and administrative costs, especially relatively "fixed" costs per participants such as PBGC Flat Rate Premiums, while possibly avoiding the adverse income statement impact of a settlement charge.

### Annuity Placement Strategy

If a group annuity is to be purchased, the plan sponsor needs to identify the implications of targeting a specific population. The plan sponsor will likely work with an intermediary and undergo a bidding process with various insurers. Provider selection will identify the "safest available annuity" offered (consistent with DOL 95-1) and optimize pricing for that purchase. The fiduciary must also comply with ERISA law, provide all required notices to participants and submit all required filings to ensure compliance. As with any fiduciary action, proper documentation is essential.

Completing the de-risking strategy is not always the end-game for the framework. After going through the process and executing a PRT tactic, the organization needs to re-evaluate its business objectives. The pension risk management strategy may be one of many steps toward completely de-risking the pension plan. De-risking can take many shapes and forms, including phased approaches. Success in transferring pension obligation onto either the participant or the insurer may result in additional rounds of PRT which help satisfy the organization's needs.

## Framework summary

A general framework is essential for allowing plans sponsors to effectively evaluate the costs and risks associated with defined benefit plans. The framework previously covered addresses pension risk evaluation in three main threads. The organization's overall business objectives need to remain in check when evaluating the opportunity to right-size the pension plan. Plan sponsors can, and should, continuously revisit the framework until all concerns relating to pension risk have been addressed. The figure below, Figure 12, summarizes the plan sponsor framework described above.


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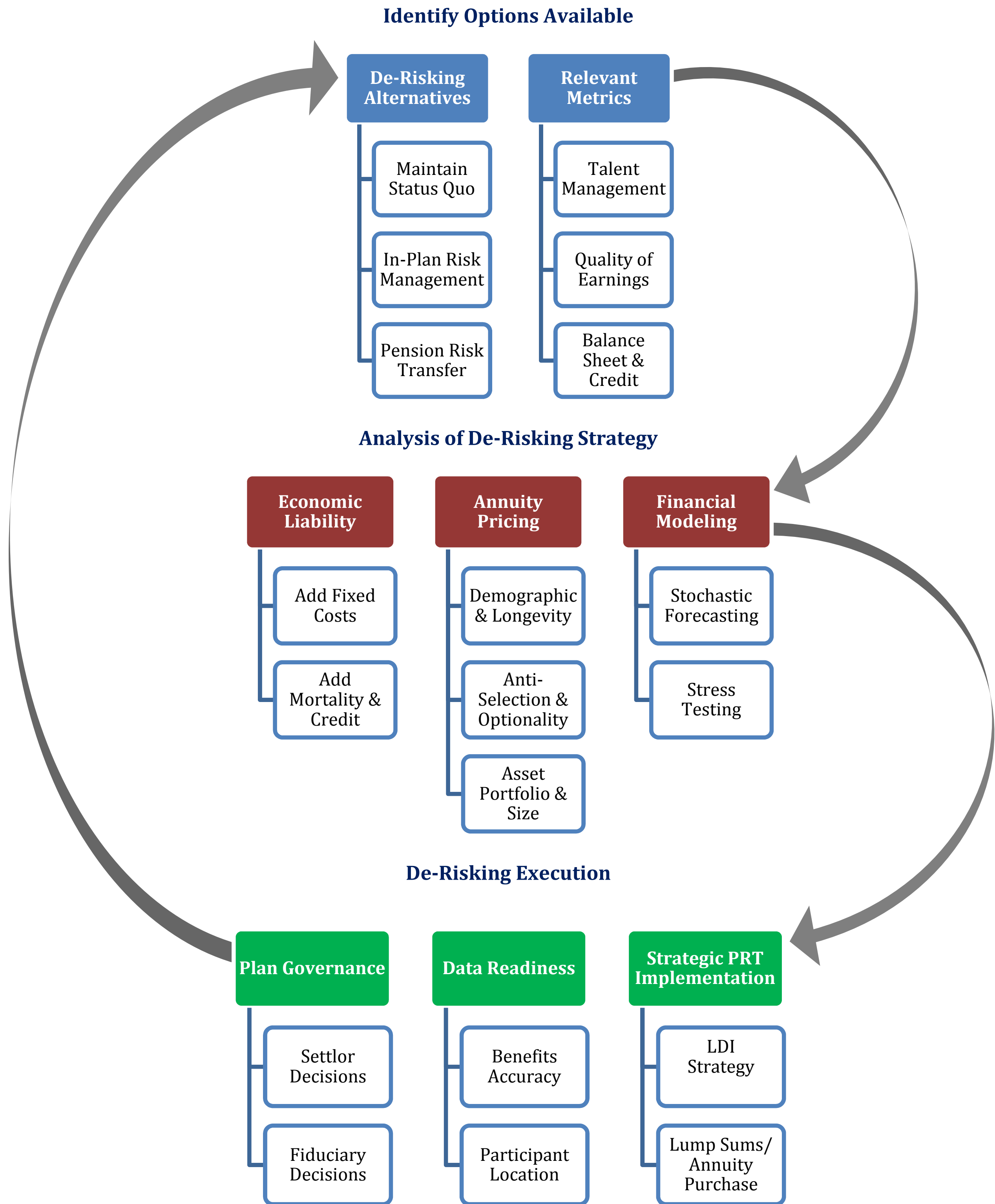
## Figure 12 - Plan Sponsor Framework

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## A Forward Looking Perspective

Understanding the current lay of the market, de-risking impacts and potential barriers leads to the belief that the PRT market could provide further economic efficiencies to current pension plan sponsors. The PRT actions seen in 2012 marked not only a historic year for activity and sales, it also was the launching pad for raising plan sponsor awareness and interest in risk transfer opportunities. Pension risk transfer began well before 2012; however, the evolving marketplace, economic environment and most notably recent legislative changes have paved the way to a renewed sense of urgency to de-risk.

Experts within the PRT industry shared their insights and thoughts on where the market is headed and what changes may make the market more efficient.

### New Entrants in the Market

Pension risk transfer has not only become increasingly popular for plan sponsors, but it has also been attractive for emerging insurers entering the market. Due to increased demand, as many as three new companies are expected to join the market in the near-term. The market may prove that with increased demand comes increased supply.

### Clarity around Settlor & Fiduciary Responsibilities

Plan governance is paramount for executing risk transfer. Inherent focus around the responsibilities of the settlor and fiduciary continues to drive change around plan participant protection. ERISA law sets forth the guiding principles of participant advocacy. New proposals from participant rights groups are calling for increased focus on protection including bolstered disclosure requirements, transparency in annuity provider selection and potential for reinsurance as an additional layer of buy-out protection. The impact of the increasing attention regulators are paying to this market may impact if, when, and how many of these transactions happen in the future.

### Plan Sponsor Education

While plan sponsors may seem to be leaps and bounds away from where they were even five years ago in terms of understanding the costs and risks associated with defined benefit plans, there is still more education needed. Given the increased focus on pension liabilities, there is a need for plan sponsors to now understand the triggers that cause pension plans to challenge the organization as a whole. It is likely that outside advisors will play a key role in helping plan sponsors meet these challenges.

### Reporting on Economic Liability

As discussed, the pension accounting liability on a company's books doesn't represent the full economic liability of the plan. Experts believe that movement toward reporting the full economic liability will provide greater transparency in the marketplace. Plan sponsors, however, may have different views of what they believe to be attributed to a true economic


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value. Standards could be changed to require disclosure and accounting for a liability which is closer to the true economic obligation.

### Longevity Data Sets

Many ask the question, "Why are some de-risking strategies successful overseas, but are not implemented in the US?" As an example, longevity swaps are becoming more common in the UK but are rare, or nonexistent, in the US. One reason is that it is common in the UK for retiree benefits to be indexed, which increases longevity risk. The other more prevalent issue is that it is easier to access longevity data sets in the UK. UK plan sponsors and financial institutions have access to published sources that provide robust information around mortality, which allows market participants to construct more clear and accurate products for plan sponsors. In contrast, the US lacks a similarly robust data set, and what is already available is becoming more restricted and challenging to access. Lack of access to mortality data hinders the ability to create products like longevity swaps. This may represent an opportunity for a non-governmental or non-regulatory body to facilitate the collection and dissemination of applicable mortality data.

### Regulatory Changes

There is little question that regulation and legislation will continue to evolve and affect the way sponsors fund and account for their pensions. As funding and accounting requirements change and serve to increase volatility there will likely be increased demand for PRT. The perception of the need to manage risk is likely to increase with enhanced reporting to plan participants, retirees, analysts, shareholders and other stakeholders, despite lack of impact on economic liability.

Most plan sponsors will continue to have concern around the lack of certainty in the regulatory environment. Historically, the US government has substantially subsidized the funding of US defined benefit plans through an immediate tax deduction. As government has sought revenue-raising opportunities, a reduced requirement to fund has been an attractive way to raise additional government revenue without having to actually increase tax rates. If sponsors avail themselves of the opportunity to defer pension contributions, plans may become more poorly funded in aggregate which could make PRT activity more financially demanding. However, the continued potential for legislative changes may also serve to accelerate additional activity in the pension risk transfer market as employers further tire of the regulatory uncertainty associated with defined benefit sponsorship.

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## Final Thoughts

Employer-provided retirement benefits have changed drastically since the emergence of defined benefit plans. A movement from defined benefits to defined contributions has allowed employers to pass potential risks to the employee. However, many US corporations continue to sponsor some form of defined benefit plan either for current or former employees. Given that very few new plans have been started in the large plan market over the past twenty years, simple inertia may be driving the continuance of plans already in existence. Whether a plan is open and ongoing for active employees or frozen to future accruals, these legacy pensions still pose significant risk to the sponsoring organizations. Many are experiencing escalating costs and financial volatility. As a result, a proactive approach to de-risking defined benefit plans may help enable employers to effectively manage income, cash flow and the balance sheet.

A changing regulatory environment continues to drive changes in the costs and risks associated with pension plans and, as a result, pushes plan sponsors to become more engaged. Many believe that, to some degree, legislation encourages pension risk transfer. Continued funding relief may provide a barrier for PRT for others because employers may not be required to fund their pensions as quickly. However, a number of potential accelerants exist within the current regulatory framework including increased benefit restrictions, increases in PBGC premiums, proposed mark-to-market accounting, future mortality improvements and the potential for stringent regulations that may impact the payments of lump sums or annuity purchases.

Today plan sponsors are using an array of de-risking alternatives to curtail pension risks and costs. Many organizations have initiated some form of de-risking by closing their defined benefit plan to new entrants and freezing future benefit accruals (i.e., plan design). Others have chosen to de-risk using funding or investment strategies to potentially hedge interest rate and market volatility. Market sentiment and actual sales growth have shown that pension risk transfer has become an area of increased focus within the defined benefit ecosystem. Plan sponsors today are more aware and knowledgeable about de-risking. However, there is still significant education needed for plan sponsors to better understand the merits, or limitations, for pension risk transfer and make prudent decisions about these opportunities.

The pension de-risking framework presented earlier in the paper can be utilized by plan sponsors as a tool in managing pension risk. The key steps a plan sponsor can take to determine whether they are ready to pursue a pension risk transfer are:

- Identify options available
- Analysis of de-risking strategy
- De-risking Execution

Throughout our research we have gathered thoughts from the experts who deal with pension de-risking. One thing is for certain – the need for pension risk transfer is very real today. Growing interest and recent utilization have proven that plan sponsors are becoming more engaged in


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effectively managing the costs and risks associated with their defined benefit plans. Plan sponsors are looking to educate themselves about the impact pension risk transfer may have on their overall business objectives. Pension risk transfer must be a well-thought-out exercise. Plan sponsors need to be given support and sound advice to make decisions due to the complex nature of these transactions and the participant implications.

Pension risk transfer is likely to become the de-risking alternative of choice for more and more plan sponsors. This increased focus will also allow plan sponsors that choose to maintain their plan to make better-informed choices. There will continue to be fewer and fewer plans with assets managed solely on a return-seeking basis, and private plan sponsors are likely to become scarcer and scarcer. There will also be an increased focus on managing the costs of maintaining a plan in a responsible matter. The next five to ten years are likely to see the biggest transformation of our defined benefit ecosystem since Labor Day in 1974 when President Gerald Ford signed ERISA.

The defined benefit system has been in decline for three decades. The majority of companies have not chosen to establish new defined benefit programs in many years. Yet, they have (possibly irrationally, depending on the risk level of the plan and its size relative to the employer) chosen to maintain the plans that they already have. Sponsor psyche is shifting, however. If some of largest pension plan sponsors (managing tens of billions of dollars in assets each) do not believe they can "beat the market", other sponsors are likely to capitulate as well. For some companies, retaining legacy liabilities may make prudent financial sense as they have the financial strength and scale to appropriately manage them. But, many—perhaps most—companies may choose to turn over the responsibility to insurers who specialize in managing risk. It is unlikely one would ask an insurance company to build a car or provide cellular service; the day is coming when one will not ask his or her car or telecommunications company to manage the risk associated with a large, complex group annuity product either.

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