Aging and Retirement

Pension Risk Transfer

Evaluating Impact and Barriers for De-Risking Strategies

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SOCIETY OF ACTUARIES

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Evaluating Impact and Barriers for De-Risking Strategies

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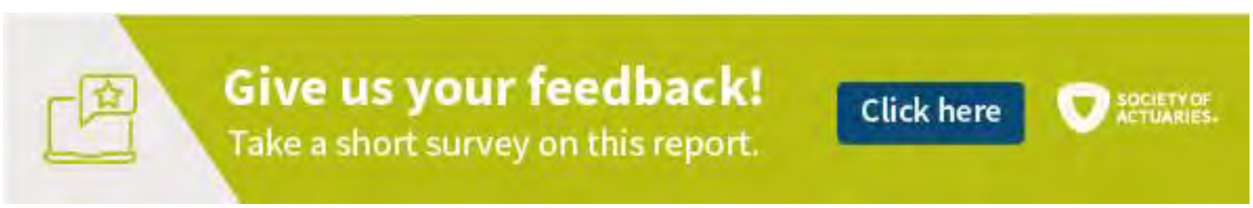

Caveat and Disclaimer

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Section 1: Executive Summary

Pension risk transfer (PRT) has been a hot topic among plan sponsors over the past decade as plan sponsors have struggled with the size, volatility, and cost of pension programs. Following the Pension Protection Act that increased minimum contributions and introduced new benefit restrictions, plan sponsors were buffeted by the severe economic downturn of 2008. While Congress granted funding relief to sponsors, those employers quickly realized that investment losses may eventually come due, which could place a significant financial burden on some companies. Even as plan funded status improved due to contributions and the equity market recovery, plan sponsors were subject to additional challenges as declining interest rates increased liabilities, PBGC premiums increased significantly, and life expectancies continued to climb. Finally, a few very large plan sponsors took action to transfer their pension risk onto insurers or the plan participants, themselves, in the form of optional lump sums. This initial trailblazing by large, well-established sponsors charted a course that many financially strong plans have subsequently followed.

Since this trend emerged, and from the date of our previous research paper, the pension risk transfer market has evolved as plan sponsors confronted the continuation of existing headwinds such as still-lower interest rates and new challenges which further highlighted pension risk. Many plan sponsors had offered lump sums to their terminated vested participants and have moved on to partial annuitization or even full plan terminations. Congress has increased PBGC premium rates dramatically over this time period, providing further impetus for plan sponsors to transfer their risk, and in particular allowing plan sponsors who focus on small benefits the opportunity to even produce savings while reducing risk. Research participants even noted that cost optimization has become one of the primary drivers for pension risk transfer, which is a significant change since 2014.

The insurance industry has also evolved dramatically over this time period as demand for group annuities has increased more than ten-fold. More insurers have entered the market, permitting firms additional degrees of specialization leading to a more segmented market for group annuities. Insurers have added features to their products that were previously only available on the largest of deals, while deal complexity has also increased.

This paper provides background for how plan sponsors have historically managed risk within their pension plan in Sections 3 and 4 and covers the options plan sponsors have to transfer that risk in Section 5. Recent market drivers are discussed in Section 6, which have impacted many of the recent trends in Section 7. Sections 8-11 provide a framework for plan sponsors considering a risk transfer, along with a number of items that should be considered throughout the process. Finally, Sections 12 and 13 discuss potential risk transfer alternatives and innovations, as well as providing a forecast of where the market may go in the future. This is an objective analysis of options; sponsors and other stakeholders should consult with their professionals and advisors about their individual circumstances.

Section 2: Pension Risk Transfer Study & Objectives

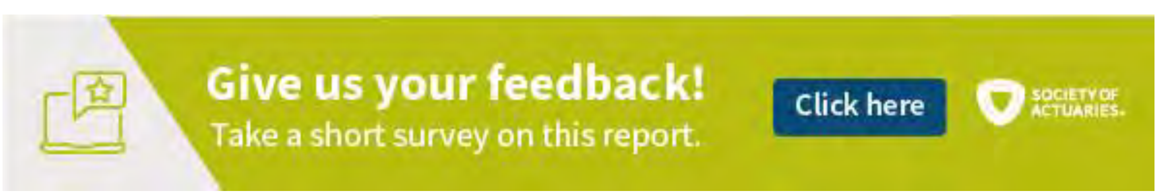
During the last 10 years, many plan sponsors took major steps toward transferring risk by offering lump sum payouts or by purchasing annuities for participants, thereby eliminating a large portion of their benefit obligations. In light of these events, the Society of Actuaries engaged Deloitte in 2014 to complete a research study on the pension risk transfer market titled *Pension Risk Transfer: Evaluating Impact and Barriers for De-Risking Strategies*. This paper provides an update to the 2014 paper related to changes in the continually evolving pension risk transfer landscape. The primary objectives of this study include:

- Developing a historical view on pension regulations and risk transfer origins
- Discussing recent pension risk transfer trends and their underlying drivers
- Identifying pension de-risking actions 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 which could further refine the PRT market
- 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 viewpoints 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 identify key de-risking actions, 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. The SOA has sponsored other research related to the individual participant's point of view on pension risk transfer, a Decision Brief on lump sums as well as empirical evidence around de-risking determinants and outcomes. A developed framework for plan sponsors is included to help a sponsor self-navigate through the rationale for pension risk management.



Section 3: Background

Many U.S. corporations have experienced 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. Pension plan risk management can be a significant 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 defined 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 unrelated entity 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 plan management 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 as illustrated by Figure 7. These unique and historic actions created a significant amount of press, which sparked a growing curiosity about pension risk management amongst other plan sponsors throughout the U.S. Many plan sponsors gained knowledge and insight into the strategies deployed and identified the overall business need for pension de-risking.

PBGC premiums have increased significantly since 2013 as shown in Table 2, which provided DB plan sponsors additional incentive to reduce their DB pension liability. Historically pension risk transfer was often thought of as a way to reduce risk in exchange for a slightly higher known cost. However, with increased expenses to retain risk due to rapidly growing PBGC premiums, pension risk transfer was now viewed as a way for plan sponsors to reduce expenses as the additional present value of PBGC premiums and plan expenses was often greater than the incremental cost to transfer the risk, particularly for retirees with small benefit amounts.

This cost savings opportunity changed the way pension risk transfer was viewed by plan sponsors, and as such led to further acceleration of risk transfer activity.

Section 4: Emergence of Pension Risk Transfer

While many U.S. companies have moved away from the defined benefit model for some or all of their employees, many other companies have not fully exited the defined benefit 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. This section provides a historical overview of how plan sponsors have managed their pension plans, leading up to the emergence of the pension risk transfer trend.

The paternalistic defined benefit plan became increasingly popular in the Post-World War II era amidst wage freezes which prohibited general increases in workers' cash compensation. 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 plan sponsors have taken on a significant amount of market and interest rate risk. In recent years, many companies' focus on pension plans has shifted from a human resources emphasis on talent management to a finance-driven operation.

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. 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 meaningfully, 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, 2008 and in early 2020 as equity markets performed poorly. However, in spite of market volatility, many plan sponsors have chosen to retain market risk rather than taking significant action toward managing those risks. The inertia of plan sponsors may be due to behavioral tendencies, belief in "beating the market" over the long-term, a view that interest rates will rise or US GAAP accounting rules which can encourage risk taking by providing a lower expense for plans with riskier assets. A number of 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.

With the emergence of the defined contribution plan (e.g., 401(k)'s and 403(b)'s), 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 risks (retirement adequacy generally, investment and longevity more specifically), otherwise embedded in defined benefit plans, from the employer to the employee.

Plan sponsors have managed the risk within their plans through three primary strategies. Plan design is generally used to manage the growth of future benefits, as past benefits are protected under ERISA and cannot be reduced. Plan sponsors use funding and investment policy to align their investments to their desired level of risk. With each of these methods risk still remains with the plan sponsor, rather than being fully transferred to a third party as it is through a liability reduction.

Table 1
ALTERNATIVES FOR REDUCING EMPLOYER RISK

Plan Design	Funding / Investment Policy	Liability Reduction
• Reduce or eliminate future benefit accruals • Shift from defined benefit focus to defined contribution focus • Offer hybrid plan design such as variable benefit risk sharing • Change plan provisions to encourage retention and reduce volatility o Review early retirement factors o Offer phased retirement design	• Borrow money to fully fund pension plan and de-risk investments to achieve cost certainty • Reduce exposure to equities and increase allocation to fixed income • Increase duration of fixed income portfolio to match liability duration • Consider derivatives to increase interest rate duration or increase credit spread duration • Consider purchasing longevity swap contracts or annuity buy-in contracts	• Risk transfer — liability settlement through purchase of annuities from insurance company • Terminated Vested Lump Sums Window— settle terminated vested liability by amending plan to allow lump sums • Ongoing Lump Sums to Actives— Offer lump sums to actives upon termination • Retiree Lump Sum Window— settle retiree liability through a lump sum window

4.1 PLAN DESIGN

Traditional pension plans were often designed to provide 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 administer and maintain while carrying significant long-term risk (as defined by uncertainty), 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 initial de-risking measures in the form of plan design.

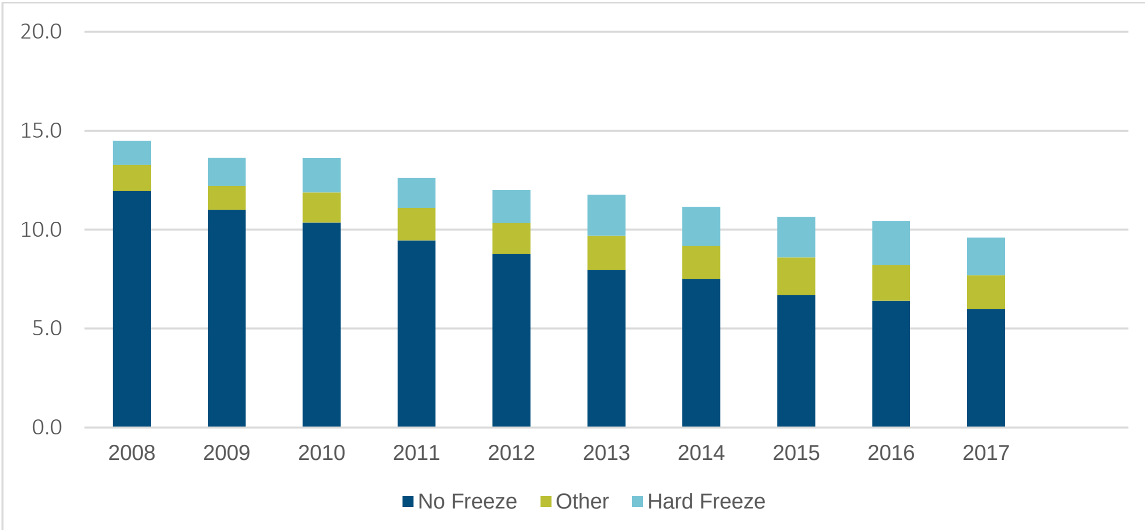
Hybrid plans are popular alternatives for employers who still desire to use the defined benefit structure to provide employees with a benefit but want a benefit value which is easier to communicate. Cash balance, and pension equity plans are a few of the account-based alternatives which employers gravitated toward in the 1990s. 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, pay increases, retirement age and length of service. Many employers moving away from the traditional pay and service-based formula experienced a reduction in anticipated benefit obligation using account-based formulas, although this is more a feature of choice in the richness of benefits than an inherent quality of these plans.

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. 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 1, 2 and 3 illustrate the increasing prevalence of plan freezes amongst defined benefit plans. In Figure 1, the trend shows that in addition to the decrease in total number of active employees participating in pension plans (since 2008, a 46% decrease of active participants in plans that aren't frozen), the number of active participants included in frozen pension plans is increasing.

Figure 1

NUMBER OF ACTIVE PARTICIPANTS BY STATUS OF BENEFIT ACCRUALS (MILLIONS)

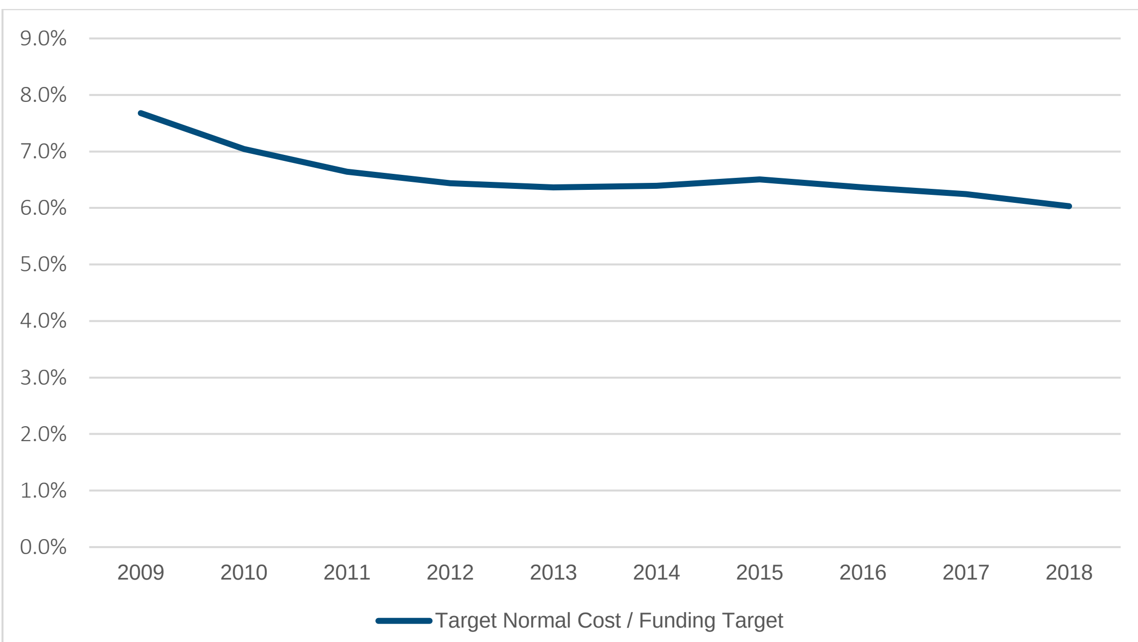


Source: PBGC 2018 Pension Insurance Data[1]

Figure 2 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. Since 2009, normal cost as a percentage of funding target has decreased by approximately 1.65% from 7.68% to 6.03%.

Figure 2

RATIO OF TARGET NORMAL COST TO ACTIVE FUNDING TARGET



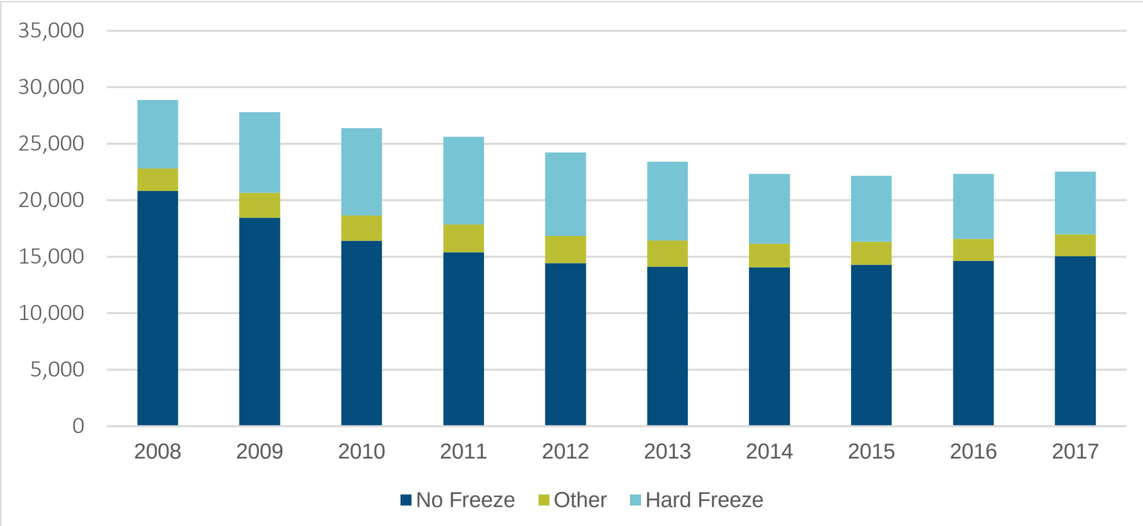
Source: DOL Form 5500 Information 2009-2018

[1] https://www.pbgc.gov/prac/data-books

Figure 3 shows the total number of plans by status of benefit accruals, where it appears that the number of frozen plans has relatively stabilized in recent years. However, it is worth noting that the while number of plans appears fairly level, there has been a decrease in plans with 25 or more participants which has been offset by a modest increase in plans with less than 25 participants.

Figure 3

NUMBER OF PLANS BY STATUS OF BENEFIT ACCRUALS



Source: PBGC 2018 Pension Insurance Data[2]

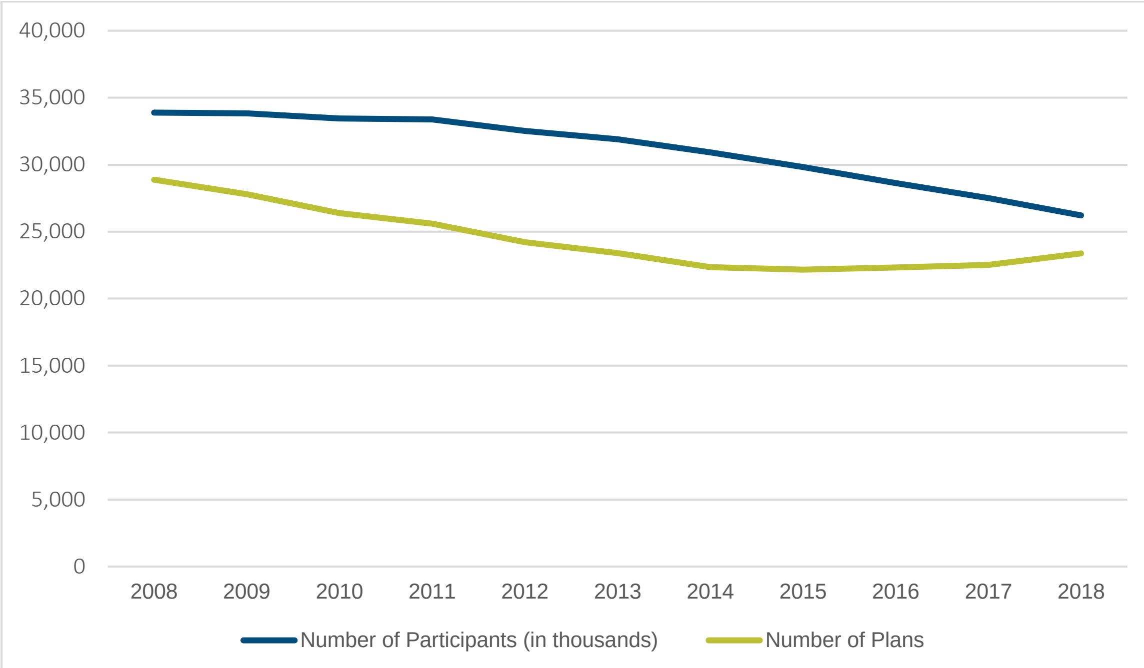
Based on the premium filing data collected for years 2015-2018, the PBGC's Risk Transfer Report[3] finds that a greater proportion of large plans (those with 1,000 or more participants) performed partial risk transfer activities than small plans (annuitization or lump sum offers). In addition, a plan's benefit accrual status was also a factor in whether the plan sponsor undertakes PRT. While plans with some type of plan freeze represented less than a third of all plans in the 2015-2018 period, they comprised three quarters of the plans that performed a risk transfer activity. Finally, comparing the PRT rates by frozen status and plan size showed that large plans performed more risk transfer activities than small plans regardless of frozen status, and that within each plan size category, frozen plans have performed PRT at a higher rate than non-frozen plans.

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, ongoing 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 usually are considered "protected benefits." The potential risks associated with lump sum options when terminating a plan are discussed later.

[2] https://www.pbgc.gov/prac/data-books

[3] Pension Benefit Guaranty Corporation Publication, 2020

Figure 4
NUMBER OF PARTICIPANTS VS. NUMBER OF PLANS



Source: PBGC 2018 Pension Insurance Data[4]

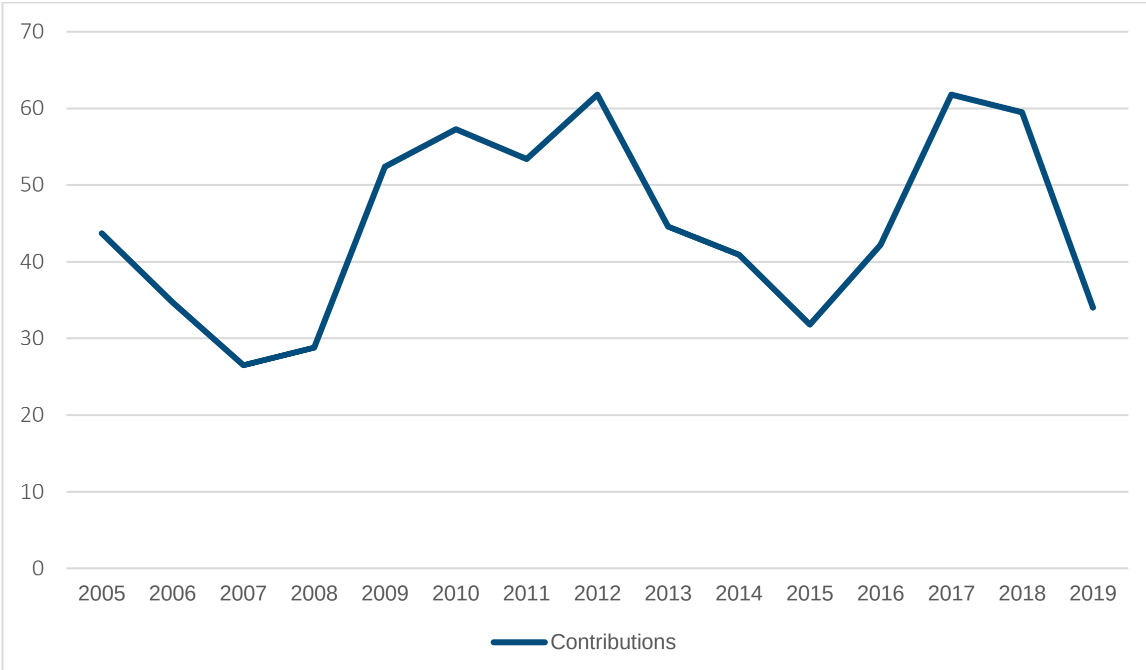
4.2 FUNDING AND INVESTMENT POLICY

Improving funding is another interim step in a de-risking strategy (in particular for frozen plans). The recent change in the corporate tax rate has driven sponsors to accelerate contributions. Once a plan is completely or nearly fully funded, plan sponsors may look to immunize the asset portfolio and remove investment and interest rate risk. The idea of "borrowing to fund" is a form of improving plan funding where the employer replaces the pension underfunding (essentially a form of variable debt) with other debt that is often locked in at a fixed rate and fixed duration, 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 5 illustrates the pattern of funding since 2005, prior to the Pension Protection Act (PPA). Contributions increased significantly from 2008 to 2012 due to the implementation of PPA, which was fully phased-in by 2012, and the economic downturn which significantly increased funding deficits. Contributions decreased significantly in 2019, as a result of the Tax Reform Act of 2017, which reduced the corporate marginal tax rate from 35% in 2017 to 21% in 2018 and provided incentive for plan sponsors to accelerate contributions. Plan sponsors contributed more in 2017 (tax year) in order to claim a higher tax deduction. This allowed plan sponsors to recognize up to a 35% tax deduction, rather than the 21% deduction they would have received in 2018. The trend continued in 2018 as well, as there was an opportunity to designate contributions made in 2018 to the 2017 tax year (as long as these contributions were made before September 15, 2018 for the calendar year plans).

[4] https://www.pbgc.gov/prac/data-books

Figure 5
PENSION CONTRIBUTIONS ($ IN BILLIONS)



Source: Milliman 2020 Corporate Pension Funding Study

In today's low-interest-rate environment, credit-worthy sponsors of underfunded plans can borrow at attractive rates, then use the funds to reduce or even eliminate pension deficit. The "borrowing to fund strategy" benefits plan sponsors mainly by reducing the PBGC Variable Rate Premiums. These premiums rose 500% from 0.9% of unfunded liability in 2013 to 4.5% of unfunded liability in 2020 and have become a significant burden to sponsors of underfunded plans. In addition, plan sponsors that are currently taking advantage of funding relief are essentially deferring pension contributions and associated tax deductions. An economic benefit might be generated by borrowing funds and accelerating contributions. It should be noted, however, that the "borrowing to fund" approach in the context of reducing PBGC premiums is not a true pension risk transfer, it is a tactic to reduce expenses of a pension plan, essentially a tax reduction. Nonetheless, borrowing to fund is often done with the aim to de-risk through a liability driven investing strategy or through a partial or full plan termination. As plan sponsors find themselves better funded than they were in the past, they often choose to proceed with caution and depending on the circumstances may even choose a full termination.

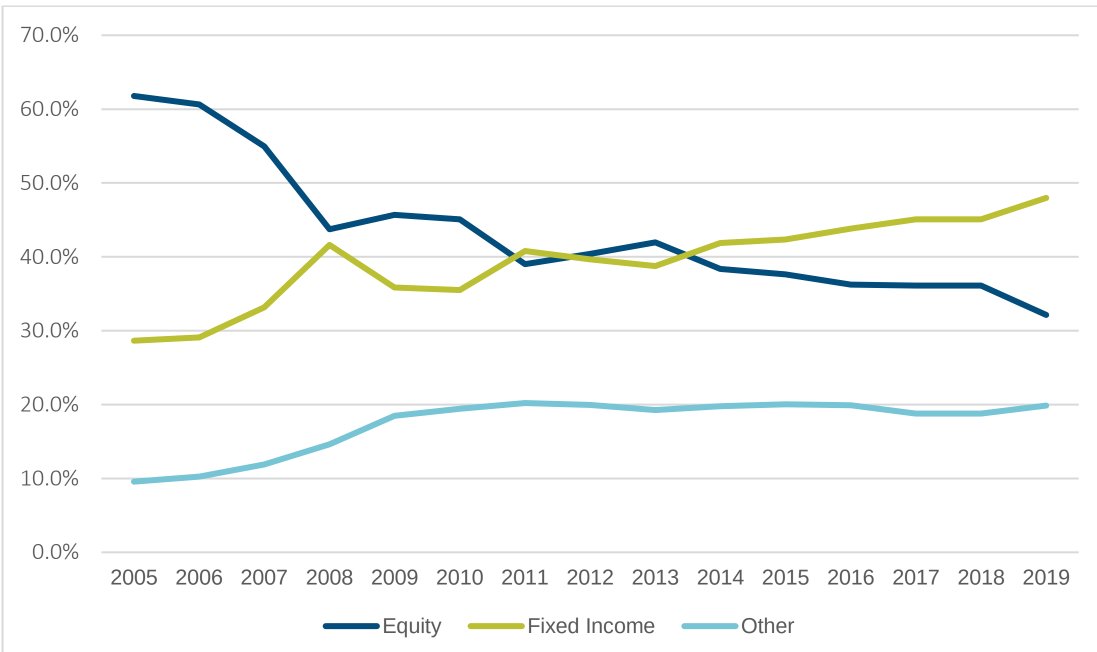
In this instance, enough money would be borrowed to fully fund and terminate the plan, swapping all future cost uncertainty for a fixed loan repayment. Some of the factors to consider when contemplating a borrowing to fund strategy are the borrowing interest rate, length of financing period, form of financing (loan from a financial institution or debt issuance), PBGC premiums and administrative savings and potential effect on the company's credit rating/access to capital. The company may also want to consider whether the money borrowed would be better spent in the broader business, such as in a high-growth business line.

As plan sponsors freeze pension plans, it is common practice to use liability-driven investing (LDI) to hedge volatility associated with liability interest rate risk, especially as funded status improves. However, use of LDI is not strictly limited to frozen plans. Over time, funding levels would be expected to rise based on required and discretionary contributions to the plan. As shown in Figures 6 and 7, historical trends show that companies are moving away from riskier return-seeking assets and investing more in fixed income securities.

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, Treasury/corporate bonds specifically, and liabilities increase, then assets will increase, resulting in a parallel movement of assets and liabilities.

Figure 6

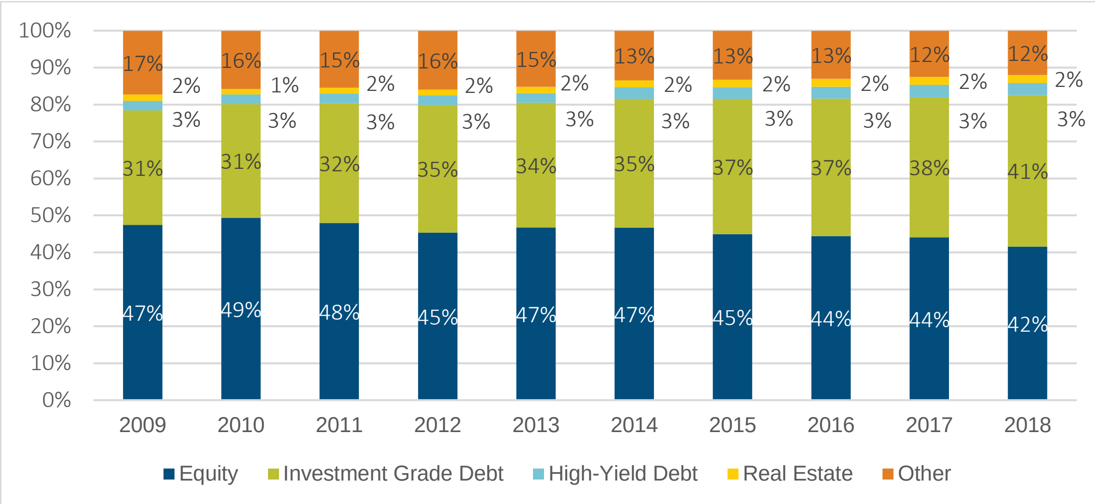
PENSION TRUST ASSET ALLOCATION



Source: Milliman 2020 Corporate Pension Funding Study

In Figure 6, equity and fixed income lines are almost mirror images of each other, and what was once a typical 60/30/10 allocation fifteen years ago (equity/fixed income/other) has now become 35/45/20. Figure 5 above shows the pattern of funding based on aggregate pension contributions, over the same time period that investments have trended away from equities and towards fixed income. These trends further illustrate that U.S. corporate entities are already headed down the de-risking path. Note that these graphs may somewhat understate risk reduction trends, as liabilities, and supporting assets, that have been settled through lump sum payments or purchase of annuities are no longer reflected.

Figure 7
SCHEDULE R REPORTED ASSET ALLOCATION



Source: DOL Form 5500 Schedule Information

Section 5: Liability Settlement

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 when compared to an annuity purchase.

A group annuity purchase (commonly referred to as a "buyout" or "buy-in") 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 required to be purchased for the remainder of the population.

5.1 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.

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. The rates are used by the plan to calculate lump sums for a "stability period" as defined by the plan, which can be up to 12 months in length. In an environment of volatile interest rates, the use of a longer 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 FTSE Pension Liability Index (formerly Citigroup), a commonly used reference point for measuring pension obligations, dropped approximately 110 basis points from August 2011 to December 2012.[5] 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. Significant drops in the discount rate during the calendar year occurred in 2012, 2014, 2016, 2019 and 2020. 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 parts of 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.

Lump sum offerings to participants currently in payment can also provide financial benefits to plan sponsors, while offering spending flexibility to participants. Retiree buyouts were pioneered by Ford and

[5] "FTSE Pension Liability Index." FTSE Russell, 2020.

GM in 2012 after receiving private letter rulings from the IRS enabling them to execute this strategy. While many other plan sponsors followed suit, the practice was effectively prohibited by the IRS in 2015. The IRS reversed their position in 2019, making retiree lump sum windows once again a viable de-risking option. It was expected by some research participants that there will be a renewed interest in this strategy going forward, however not all agreed. In a whitepaper[6] dated April 2020, Aon notes that two factors that may contribute to this renewed interest will be the participant demand for greater spending flexibility evident in strong lump sum election rates. Aon also suggests that perhaps net adverse selection may not be as significant as anticipated, which may make these offerings more financially viable for plan sponsors. As supported by the PBGC's Risk Transfer Report, the retiree lump sums never really took off.

In general, a lump sum window may not be offered to active employees, unless the plan is being terminated. Effective for plan years starting December 31, 2019, the SECURE Act allows for in-service distributions starting at age 59 1/2, without regard to the plan's normal retirement age. Previously, the minimum age at which participants could get in-service distributions was 62. Lowering the age broadens the number of active employees who can be included in lump-sum window offerings.

The PBGC's Risk Transfer Report finds that, based on the premium filing data collected for years 2015-2018, there is a preference among plan sponsors for offering lump sums as a form of risk transfer to participants prior to retirement over purchasing annuities as it is generally cheaper. Of plans with risk transfer activities, 93% employed a lump sum offer, compared to 19% that purchased annuities. This preference was evident in both small and large plans (those with fewer than 1,000 participants and 1,000 or more participants, respectively). However, the plan-weighted average participant removal from lump sum offerings during the period was 13.1% of participants, compared to 25.9% for annuity purchases, mostly due to the fact that lump sum offers are subject to the voluntary election of a participant whereas the annuity purchases are not and the tendency of plans to pursue annuity purchase strategies focused on participants with the smallest benefits, which allows plan sponsors to remove a large number of participants relative to the liability settled.

5.2 GROUP ANNUITY PURCHASES

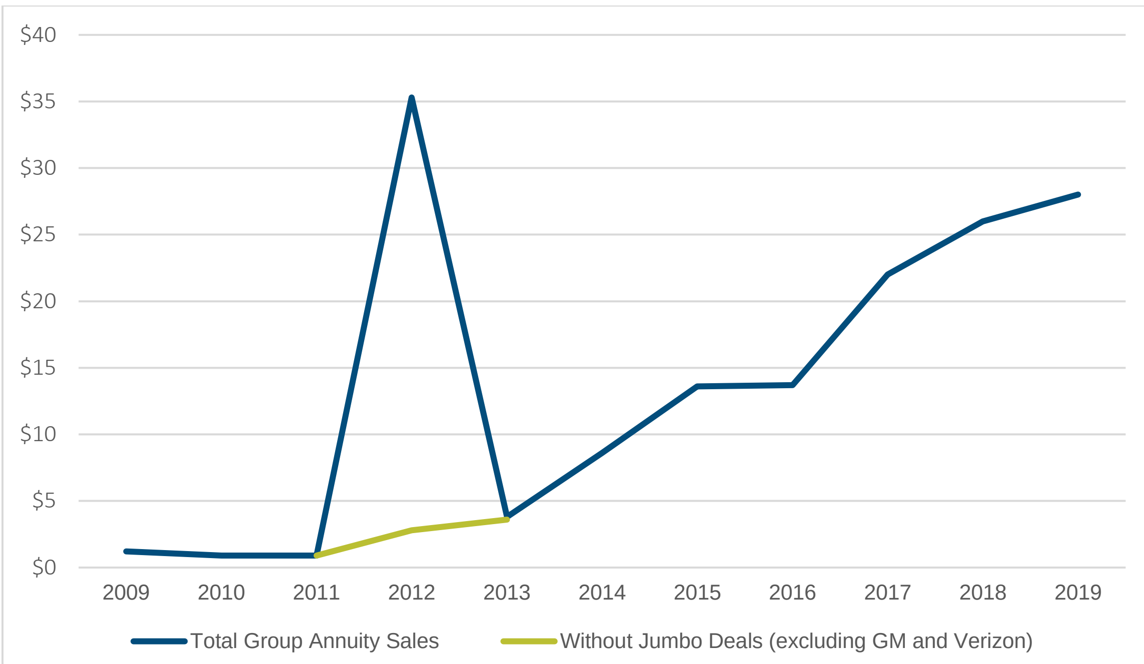
Group annuity purchases or buyouts/buy-ins allow the full responsibility of pension benefits to be transferred from the plan sponsor to an insurer. The plan sponsor enters into an agreement with an insurer to transfer part or all of the existing pension liability for a single premium. The insurer's group annuity contract is usually sold at a higher cost than the pension obligation under US GAAP, most commonly referred to as the Projected Benefit Obligation (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 buyouts are common for retiree populations only, as was the case for GM and Verizon, however a recent trend has been to include some population of terminated vested participants. Full plan terminations generally end with a final group annuity purchase (always a buyout) 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.

[6] Aon Publication, 2020

Figure 8 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 (GM and Verizon). The sales have been increasing ever since, reaching new highs in 2019. While there were no multi-billion dollar deals in 2019, a record-breaking 501 buyout contracts have been reported. While there was a slight drop in 2020 as plan sponsors paused activity due to shutdowns, activity rebounded strongly in the 2nd half of the year. It is expected that sales will continue at a high rate as plan sponsor appetite for de-risking has increased due to the volatility in early 2020, however the cash crunch felt by plan sponsors and uncertainty around the economy in the future makes the long-term projections less certain. Experts believe that the market will continue to see an increase in demand for group annuity contracts in 2021 and beyond. A general consensus exists among research participants interviewed that the expectations are for continued strong group annuity contract sales in both the short-term and long-term, and there is still well over a trillion dollars of single employer defined benefit plan assets in the U.S. from which transactions can arise.

Figure 8

GROUP ANNUITY SALES ($ IN BILLIONS)



Source: LIMRA Secure Retirement Institute

Even though the PBGC's Risk Transfer Report found that most of the risk transfer activity that took place during 2015-2018 was attributable to lump sum offerings, they noted a shift in 2018 towards annuity purchases. This could be attributed to the fact that the lump sum offerings have been exhausted. The proportion of plans with risk transfer activities that employed an annuity purchase in 2018 was up to 34%.

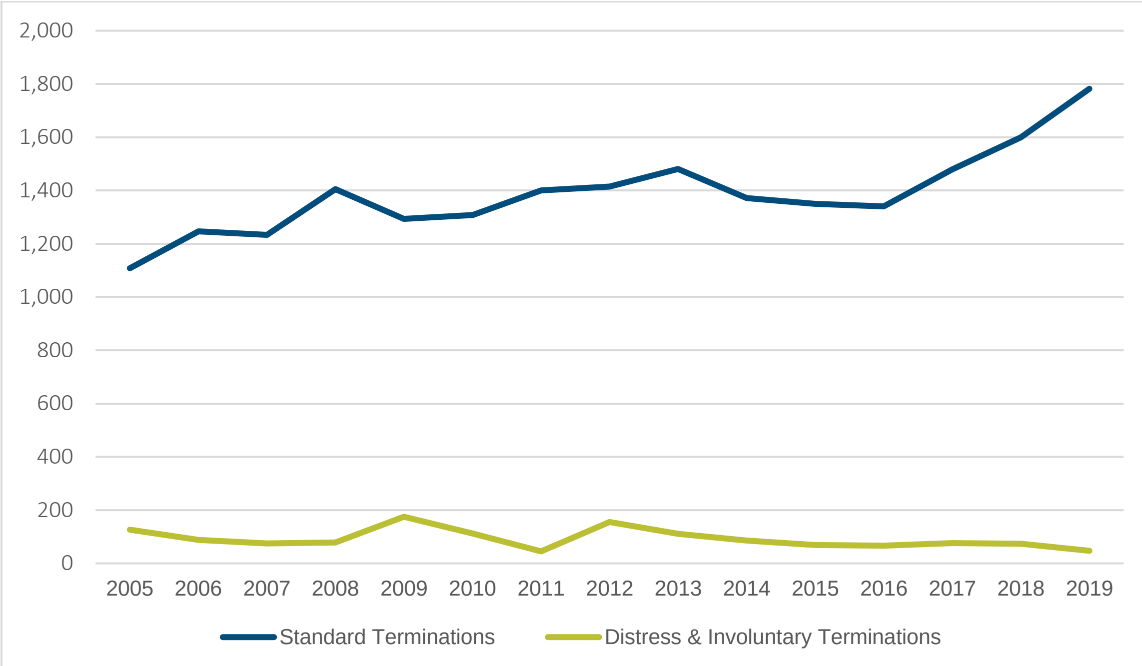
5.3 PLAN TERMINATION

Regardless of whether or not an organization chooses to de-risk its plans now, the endgame for pension de-risking often 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 then 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 date and that termination will not adversely affect its qualification. Receipt of this letter may impact the 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. While there is overlap in processes between a full termination and a standalone pension risk transfer activity, a full termination does have additional complexity. Organizations must carefully consider the implications of annuity lift-outs (a buyout for only a portion of the plan which happens outside of a termination), which may appear to circumvent plan termination regulatory processes. As such, most plan sponsors will 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 9 below, from the PBGC, is indicative of a growing trend amongst employers electing to terminate their pension plans. There has been a steep increase in standard plan terminations since 2016, with an average year-over-year increase of 10% in years 2017-2019. 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 and involuntary (or PBGC-initiated) terminations are for under-funded plans where the employer is in financial distress. In the case of distress termination, the employer must prove to a bankruptcy court or to the PBGC that the employer cannot remain in business unless the plan is terminated. When PBGC is forced to take action to protect a pension plan or the pension insurance system because the plan cannot pay benefits currently due, the agency initiates an involuntary termination. Distress and involuntary terminations are outside the scope of this document as they are generally not considered part of a pension risk transfer strategy. This paper only focuses on voluntary terminations rather than the distress and involuntary ones.

Figure 9
NUMBER OF PLAN TERMINATIONS



Source: PBGC Data Table Listing (2011) [for 2005-2011]; PBGC Annual Reports [for 2012-2019]

PBGC's Risk Transfer Report notes that during 2014-2018, the number of plan terminations was more than double the number of plans performing a partial risk transfer activity (lump sum offerings or annuity purchases) but affected less than 30% of the total number of participants. This suggests that standard plan terminations are prevalent among smaller plans. The PBGC insured over 23,000 single-employer plans in 2019.

Section 6: Recent Market Drivers

Recent market drivers affecting pension risk transfer activity are the increases in PBGC premiums, changes in corporate tax rates in 2017 and due to the CARES Act Net Operating Loss carryback provisions, Department of Labor's focus on missing participants, and COVID-19 and ensuing market volatility.

6.1 PBGC PREMIUM INCREASES

The increases in PBGC premiums continue to drive pension de-risking activities. While strategies to reduce PBGC premiums are more about expense management and optimizing cost savings rather than true strategic pension risk transfer, most plan sponsors start out on their de-risking journey by tackling the PBGC premiums first through a lump sum offer or a small benefit annuity purchase. Since 2013, the flat rate premiums have doubled, while the variable rate premiums have increased five-fold. This has significantly increased the cost of maintaining a pension plan. For years after 2020, there are no scheduled increases in PBGC premiums other than indexing for inflation. This stabilization, coupled with the fact that a lot of the PBGC cost savings transactions have already taken place in the last five years or so, might mean that small annuity transactions will eventually slow in the coming years, and plan sponsors may need to move on larger annuity purchases.

PBGC single employer premiums are made up of a "flat-rate" premium which is based on the number of participants covered under the plan and a "variable-rate" premium based on how well funded the plan is, but subject to a total cap based on the number of participants in the plan multiplied by the cap rate. This premium structure drives certain behavior amongst plan sponsors depending on how well funded a plan is. Plans that are above the variable-rate cap may benefit most from a small benefit annuity purchase as discussed in Section 7.1, while plans that are below the cap may benefit the most from a cash contribution.

The premiums are set by Congress, not the Pension Benefit Guaranty Corporation. Congress may adjust the premium levels for reasons other than PBGC needs, as premiums collected count as tax revenue. If Congress should choose to change the premium levels, it might make de-risking activities more or less favorable.

Table 2
PBGC PREMIUM RATES

Year	Per Participant Rate for Flat-Rate Premium	Variable-Rate Premium Per $1,000 Unfunded Vested Benefits (UVB)	Variable-Rate Premium Per Participant Cap (VRP)
2007	$31	$9	N/A
2008	$33	$9	N/A
2009	$34	$9	N/A
2010	$35	$9	N/A
2011	$35	$9	N/A
2012	$35	$9	N/A
2013	$42	$9	$400
2014	$49	$14	$412
2015	$57	$24	$418
2016	$64	$30	$500
2017	$69	$34	$517
2018	$74	$38	$523
2019	$80	$43	$541
2020	$83	$45	$561
2021	$86	$46	$582

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

6.2 TAX CHANGES

The Tax Reform Act of 2017 reduced the corporate marginal tax rate from 35% in 2017 to 21% in 2018. As a result, record high pension plan contributions were made in 2017 and 2018. Plan sponsors rushed to contribute more in 2017 in order to claim a higher tax deduction. This trend continued in 2018 as well, as there was an opportunity to designate contributions made in 2018 to the 2017 plan year. These accelerated contributions improved the funded status of pension plans. In order to preserve the funded status, many plan sponsors chose to take on hedging strategies within their asset portfolio.

The CARES Act has recently provided an opportunity for plan sponsors to take advantage of some tax savings opportunities within the pension plan. The CARES Act introduced the opportunity to reassign 2020 Net Operating Losses back to 2015, 2016 or 2017. As a result, losses that would have reduced taxes by 21% in 2020 can be reassigned to a year in which it would provide a 35% reduction. Pension plan sponsors who make large contributions in 2020 and fit the criteria to take advantage of the provision benefit by achieving a 14% higher deduction on that contribution. This provision would provide some incentive for plan sponsors to increase funding, which ultimately could lead to future de-risking actions.

6.3 DEPARTMENT OF LABOR MISSING PARTICIPANT FOCUS

In recent years, the Department of Labor (DOL), in conjunction with the Employee Benefits Security Administration (EBSA), has been auditing retirement plans and reinforcing the actions that plan sponsors must take to locate lost participants and pay the benefits due to them. While formal guidance is primarily directed at terminating plans, DOL auditors still expect sponsors of active, ongoing plans to be routinely searching for missing participants. Faced with potential fines and lawsuits, plan sponsors have strengthened their efforts in finding missing plan participants. This has greatly improved the quality of census data and has enabled many sponsors to commence pension risk transfer activities, as well as giving them a reason to do so.

6.4 COVID-19 AND MARKET VOLATILITY

Before the onset of the COVID-19 pandemic, the interest rates were already near historical lows. Then COVID-19 created market turmoil not seen in quite some time. The low interest rate environment coupled with market volatility has caused plan sponsors to approach pension risk transfer with caution. Research participants interviewed have noted that the PRT market had slowed down significantly in the second quarter of 2020 as plan sponsors often paused activity during the shutdown. On a volume basis 2020 is currently expected to be slightly lower than 2019. However, increased volatility may increase demand for PRT in the longer term. While the equity markets have made a full recovery in the U.S. since March 2020 lows, the volatility could serve as a wake-up call for many plan sponsors and has prompted them to start putting de-risking plans into action. Alternatively, the plan sponsors may not want to spend the money that's needed because of low interest rates causing high annuity prices. However, as we are still in the midst of the pandemic, the longer-term impact on the economy and plan sponsors in general has yet to be seen.

In terms of direct impact on pension risk transfer and pension plans, COVID-19 has had a relatively limited impact so far. While plans may have experienced small mortality gains in 2020, often on older parts of the population, it was not the belief of research participants that there should be significant changes to mortality assumptions over the long term. As COVID-19 vaccines have been approved and rolled out, this is viewed as more of a one-time event, rather than something that will persist for years or decades to come.

Section 7: Recent Pension Risk Transfer Trends

Since the release of the 2014 study there have been a number of trends with respect to pension risk transfer that have emerged. While we cannot predict what new trends will emerge in the future, we can see how these recent trends were driven by market forces. As new market forces come into play, it may be possible to see how plan sponsors and insurers react within the current framework.

7.1 SMALL ANNUITY PURCHASES

One of the most significant trends of the past five years is the acceleration of small annuity purchases. While this activity had started prior to the 2014 study, it accelerated as PBGC premiums continued to increase. Given the relatively low cost of annuitizing of in-payment participants, those with small benefits can have disproportionately large savings.

For example, for an in-payment retiree who receives $1,200 per year, the plan could pay $50 (4.2%) per year for administration, $83 (6.9%) for the PBGC flat-rate and $561 (46.8%) if the plan is at the Variable Rate Premium cap. Most plans can purchase an insurance policy for such a participant for less than 5% above the accounting liability, which produces small savings for almost all plan sponsors, and significant savings for plan sponsors at the VRP cap.

These economics produced a win/win scenario for plan sponsors, insurers and consultants, which drove the significant uptick in market activity. The level of activity around small annuity purchases was so significant that a number of insurers transitioned to limit their bidding to retiree-only deals as they had insufficient capacity to price all deals that came to market.

While these economics still hold today, many plan sponsors have already transacted on their participants with small benefits, so the future demand for such transactions is expected to decline. It is expected that this demand will be replaced by larger more complex transactions, such as plan terminations as plan sponsors come back to the market for their 2nd or even 3rd transaction.

The following statistics come from the PBGC de-risking report that was released in 2020. It shows the rapid increase in annuities purchased for retirees between 2015 and 2018. Additionally, while there were still a significant number of lump sum windows, activity did slow over this time period as many plan sponsors had already completed a lump sum window and were instead looking to transact on their retired population.

Table 3
HISTORICAL RISK TRANSFER ACTIVITY

Risk Transfer Activity	2015	2016	2017	2018	Total
Lump Sums					
Terminated Vested Participants Offered Lump Sums	1,299,783	651,902	819,496	442,001	3,213,182
Terminated Vested Participants Electing Lump Sums	639,609	304,106	368,232	186,220	1,498,167
Retired Participants Offered Lump Sums[7]	76,683	31,522[8]	N/A	N/A	108,205
Retired Participants Electing Lump Sums	30,373	12,124	N/A	N/A	42,497
Annuity Purchases					
Annuities Purchased for Terminated Vested Participants	1,669	2,746	2,030	3,498	9,943
Annuities Purchased for Retirees	74,947	167,651	251,637	399,618	893,853
Total Number of Participants Removed from the Single-Employer Program	**746,598**	**486,627**	**621,889**	**589,336**	**2,444,460**

Source: PBGC Report *Analysis of Single-Employer Pension Plan Partial Risk Transfers*, based on risk transfer data reported in the 2015-2018 PBGC premium filings

7.2 RETIREE LUMP SUMS

When the 2014 study was released, some large plan sponsors had recently offered lump sums to their in-payment retirees and beneficiaries. While this had not been a standard practice in the past, it was something plan sponsors were beginning to consider within their de-risking strategy. However, in 2015 the IRS released notice 2015-49, which notified plan sponsors that the IRS intended to amend the regulations to disallow such transactions. As a result, plan sponsors quickly cancelled any plans for such actions.

Then, in 2019, the IRS released notice 2019-18 which reversed their previous position on lump sums to in-payment participants. The notice stated that the IRS won't challenge retiree lump sum amendments. The IRS however did state that they will continue to study the issue.

Plan sponsors however have not been quick to pursue retiree lump sum programs. The IRS did leave some doubt that the regulations would change in the future, which provides risk averse plan sponsors some cause for concern. But perhaps more importantly, such programs may not be the cheapest way to reduce risk within a plan. As retirees have a better feel for their life expectancy than younger terminated vested participants, such programs could create anti-selection opportunities. Additionally, as annuity purchases can be quite affordable for retirees it would not take much anti-selection before a retiree lump sum window is more expensive than an annuity purchase.

However, there are times when such programs may provide cost savings opportunities. This could occur when there is a large drop in interest rates during the year, and the lump sum calculation can use a lookback period to take advantage of higher interest rates. Additionally, populations that are significantly white collar and/or female could take advantage of paying out lump sums for participants by assuming a unisex collarless mortality table, which pays a benefit lower than the expected value of future annuity payments. Even if the pending legality of these programs is fully clarified, the niche circumstances that make the programs financially advantageous will likely limit their widespread adoption. It's also worth noting that some plan sponsors have concerns around making such an offer to elderly participants, as some participants may rely on others to manage their own finances or may not be capable of such a decision. This also leads to concerns of fraud and exploitation.

7.3 NEW INSURERS

The recent increase in pension risk transfer deals and the forecast of continued market growth, have attracted new insurers to the market. While there were only half a dozen regular participants in the PRT market in the early 2000s, there are nearly 20 today. Plan sponsors should be aware of the full list of insurers participating in the market, as well as the differences between insurers. Insurers can vary greatly in which type of plan provisions they prefer to underwrite, as well as their administrative capabilities and these preferences can evolve over time.

The addition of new insurers also increases competition, which provides better pricing for plan sponsors. Increased competition also drives innovation, such as in product guarantees, administrative capabilities, the use of reinsurance or new methods of pricing mortality for underwriting which can all benefit plan sponsors. Plan sponsors however may want to take some extra time to understand what is being offered by the insurers as the differences may not always be readily apparent. Given the fiduciary obligation to select the "safest" available annuity provider, plan sponsors may want to engage an independent expert or independent fiduciary, particularly for large transactions.

7.4 SEPARATE ACCOUNTS

As the market has evolved, insurers have been increasingly looking for ways to differentiate themselves. One way that insurers have been able to do this effectively is through providing additional security behind their product, which is one of the factors specifically mentioned in the Department of Labor's Interpretive Bulletin 95-1 that plan sponsors should consider when selecting an annuity.

A separate account provides additional protections to policyholders as the assets and reserves are held separately from the insurer's general account. The separate account would only hold reserves from one or more pension risk transfer deals, which would insulate the policy from the broader experience of the life insurer, such as life insurance policies or variable annuities. If the life insurer were to become insolvent, a fully funded separate account would be able to fully back the reserves held in that separate account. Additionally, should the separate account suffer losses, the insurer would transfer assets or set up additional reserves in the general account to supplement the separate account, which further provides protection for policies within the separate account.

Given the additional cost of running a separate account, only the largest of pension risk transfer deals were originally provided separate accounts. Recently however, some insurers have even begun offering comingled separate accounts on deals below $100 million, which provide access to these protections to a larger portion of the market. By combining PRT deals, insurers have been able to spread the expenses of running a separate account over many deals, making them much more affordable. Today separate account products are priced similarly to general account products, while also providing additional protections.

7.5 PLAN TERMINATIONS

While full plan terminations had historically been a major driver of pension risk transfer deals, the recent rise in small annuity purchases post-2012 largely overshadowed full plan terminations. As a result, many insurers were able to focus exclusively or almost exclusively on retiree-only deals which are much simpler and less time consuming. Recently, however, plan terminations have been trending upwards.

Research participants agreed that full plan terminations are on the rise, and they expect this trend to continue. Multiple insurers and consultants noted that a significantly greater portion of their case load is due to plan terminations—for some more than 50% of total cases. There are numerous factors which are contributing to this:

- Plan sponsors have already done partial de-risking through lump sum windows and annuity purchases, leaving a full plan termination as the next logical step
- Insurer capacity for deferred participants has increased, leading to more competitive pricing
- Strong investment returns over the past decade have allowed many plans to improve their funded status enough to make a full plan termination affordable
- Many plan sponsors have implemented "glide paths", which have reduced equity exposure as funded status improved, further protecting funded status in case of a market downturn. This preserved funded status enabled some plan sponsors to terminate who may not have been able to otherwise.

As many plans have been frozen for quite a few years and a plan termination is generally the ultimate endgame, it is only a matter of time before they are in a position to terminate.

Section 8: Cost 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.

8.1 BUYOUT 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.

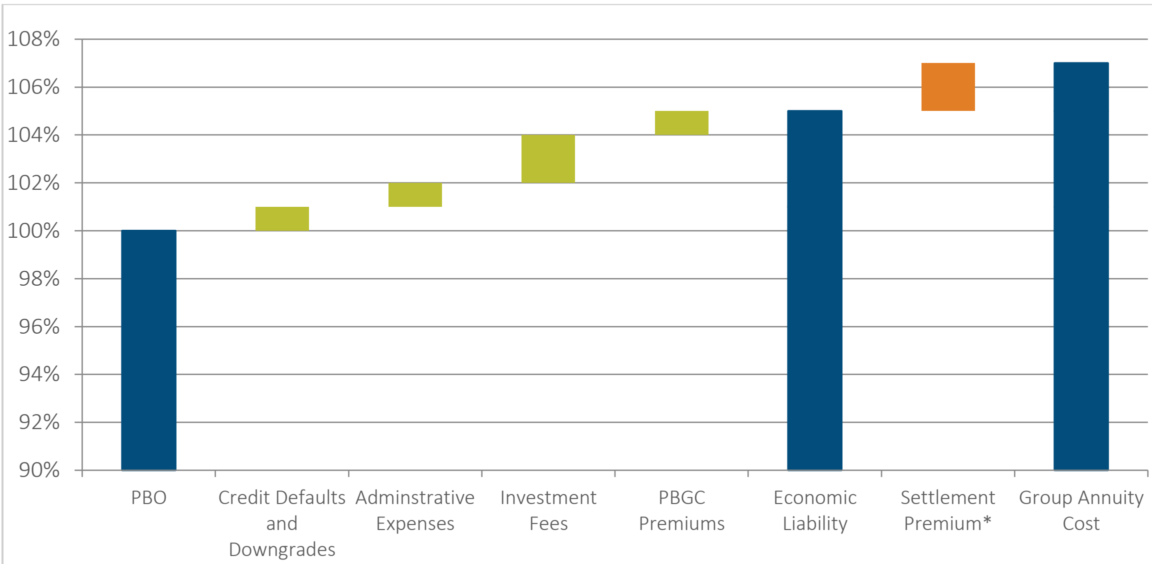
Beyond the basic deficiency in using the net liability, the focus on only the benefit payment outflows ignores additional liabilities associated with the plans, including the present value of plan operating fees and mandatory insurance levies (such as PBGC premiums). These additional exposures relate largely to benefits already earned. The associated costs are impossible to escape except through a risk transfer action or 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."[7] 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 on "high-quality" corporate bonds is due to default or 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.

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

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 (buyout) 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 10 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.

Figure 10
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 settlement premium is represented by the orange box in Figure 10 above. For example, if the participant population consisted of retirees only, the settlement premium and group annuity cost would be lower, and if the participant population consisted of actives only, those costs would be higher.

8.2 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 (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 (or all, in case of a plan termination) 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 $10 million loss, in its GAAP earnings, on its consolidated income statement as part of the pension expense.

Table 4
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 or utilizing a buy-in.

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. Recently, guidance from the Financial Accounting Standards Board under Accounting Standards Update 2017-07 requires companies to account for plan settlement outside of operating income, which might mitigate some of the negative reaction to settlement losses.

Section 9: Is Your Pension Plan "PRT Ready"

Plan sponsors experienced the benefits of a positive economic environment in 2018, mostly due to rising interest rates which decreased pension liabilities and improved the funded status of most plans. The funded status deteriorated during 2019 due to sharply declining interest rates but was able to recover by year-end due to strong investment returns. These favorable results have minimized the need to raise additional cash to transfer obligations and have supported a continued increase in PRT activities. The PBO funded status of the 100 largest corporate defined benefit plans was 89.8% as of fiscal year-end 2019, based on the Milliman 100 Pension Funding Index.[8] However, plan sponsors have seen the significant volatility in 2020 brought on by the COVID-19 pandemic, even if plans may have recovered their early 2020 losses by the end of the year. This volatility may have had a temporary dampening effect on the interest in PRT strategies, as many plan sponsors hesitated to move forward with these transactions due to the uncertainty of the pandemic.

9.1 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 HATFA (see Appendix A for definition) 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 by 20% or more 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 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. This is illustrated in Table 5.

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.

Table 5

ILLUSTRATION OF IMPACT OF TRANSACTION

	Before Transaction	Impact of Transaction	After Transaction
Liabilities	$100	($25)	$75
Assets	$85	($27)	$58
Shortfall	$15	$-2	$17
Funded Ratio	85%		77%

[8] Milliman Publication, 2020.

9.2 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.

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 guaranty associations to name a few.

Table 6
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, among other responsibilities associated with sponsoring a pension plan. Many experts believe that plan sponsors should engage the services 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.

For the largest annuity placement transactions, plan sponsors have consistently sought the services of an independent fiduciary as well as an independent expert to assist in the review of potential insurance carriers. This separation of authority allows the plan sponsor and annuity placement advisor to focus on achieving the best price possible, while the independent fiduciary, independent expert and legal team can focus exclusively on the fiduciary issues.

Section 10: 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 include those that affect the pricing of the transaction as well as those which impact the participants themselves. Other important factors include reputational impact and potential litigation.

10.1 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, the annuity purchase price and the termination liability. 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. Some sponsors are willing to accept uncertainty, if they believe the level of associated risk is manageable for their organizations. From the plan sponsor's perspective, part of the settlement premium includes 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.

10.1.1 PLAN DEMOGRAPHICS & LONGEVITY RISK

Group annuity contracts written for non-annuitants (actives and deferred vested participants) will generally be sold at a higher price relative to GAAP due to the elevated level of longevity and investment risk. Active and terminated vested participants increase the payout period of the pension plan's obligations, adding to the reinvestment risk and uncertainty around expected longevity. Insurers may more easily construct liability-based models for retirees due to the shorter duration 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 struggle to find an insurer when they return to the market to annuitize the remainder of the plan as insurers tend to avoid primarily deferred populations which present them with the most risk.

10.1.2 ANTI-SELECTION AND OPTIONALITY

Absent a plan termination, retiree lump sum offerings are once again an alternative risk transfer strategy explored by many plan sponsors. As previously mentioned, the IRS put a temporary halt on retiree lump sum windows in 2015, which was reversed in 2019. 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, therefore, 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 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 permanently (not as a window), as a means of controlling liability growth. In addition to complex optional forms, plan provisions such as early retirement subsidies or cost-of-living adjustments are features that insurers tend to price conservatively.

10.2 ASSET PORTFOLIO AND PLAN SIZE

Sponsors most commonly purchase group annuity contracts with cash (where the plan sponsor liquidates the asset portfolio and pays cash for the remainder of the premium). However, in larger deals (generally over $100M), in-kind asset transfers have grown significantly since 2015. 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. In addition, the average monthly retiree benefits also impact pricing. The smaller the average monthly benefits, the more favorable the pricing relative to US GAAP liability because of a belief in the positive correlation between benefit amount and longevity.

10.3 PARTICIPANT PROTECTIONS

As noted earlier, ERISA established a number of protective policies for the benefit of plan participants. 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 an insurer 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. [9] 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. [10] In many cases, the creditworthiness of the insurer from whom the annuities are purchased may be greater than the creditworthiness of the plan sponsor. Insurers are regulated and generally operate with capital and surplus well above required levels. In contrast, pension plans often operate with a deficit that could be difficult for plan sponsors to fund in the near term. Some insurance contracts can be further supported by a separate account structure, adding additional layers of protection.

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.[10] Participant protection under state guarantees includes a three-prong approach: State Insurance Solvency, Receivership Process Focused on Protecting Policyholders and Guaranty Association Protection.[11] 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 many cases, pension benefits are restored in full.[11]

Plan sponsors can also impact the protection provided to participants through the structure of the contract purchased. Benefits can be split between two insurers to effectively double the amount of coverage, or additional protections can be provided through a separate account.

10.4 REPUTATIONAL IMPACT

Pension risk transfer activities can be viewed favorably by market analysts and investors. 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 arises when the plan participants do not feel the support from the plan sponsor in effectively understanding the risk transfer process. For instance, in one situation a lawsuit was filed by retirees against their former employer after the purchase of annuities. The retirees claimed that their former employer failed to provide required disclosures, breached fiduciary duties and discriminated against them.[12] The lawsuit has subsequently been dismissed.

10.5 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.

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[9] Milliman Publication, 2014.
[10] National Organization of Life & Health Insurance Guaranty Associations Website.
[11] Keating Written Testimony, 2013.
[12] Investment News, 2013.

SOA's research finds that pension de-risking increases long-term shareholder value and reduces volatility on the balance sheet as a result of pension assets and liabilities. It also finds that implementing de-risking strategies increases stock price and creates long-term shareholder value[13].

Credit rating agencies typically view unfunded pension liabilities as debt.[14] Many long-standing sponsors of pension plans have unfunded pension obligations which represent a significant part of their company's overall debt. Much of this pension debt, the portion that is funded, does 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 result 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.[15] 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 7

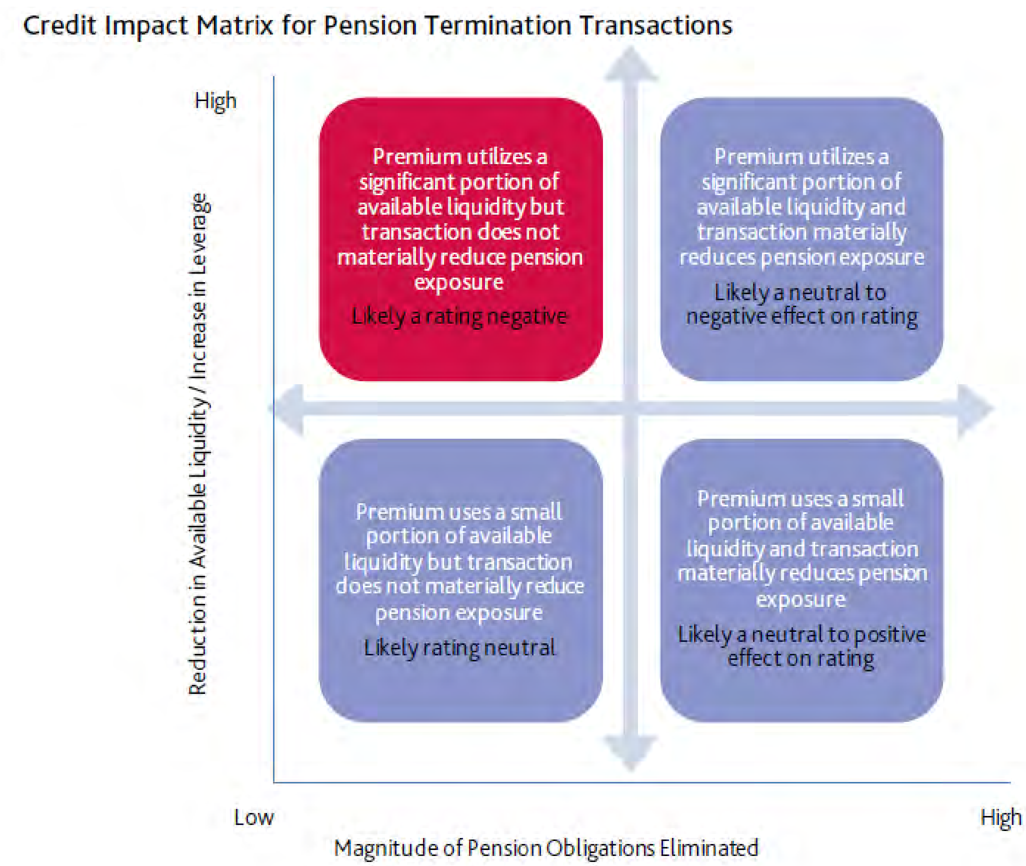
CREDIT IMPLICATIONS OF DE-RISKING STRATEGIES

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

[13] De-risking Strategies of Defined Benefit Plans: Empirical Evidence from the United States, 2020.
[14] Moody's Analytical Approach Presentation, 2013.
[15] Keating Written Testimony, 2013.

Figure 11
CREDIT IMPACT MATRIX



Source: Moody's Investor Service Publication 2012

10.6 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. The available personnel with sufficient experience and expertise to run these deals are limited. This capacity constraint may result in lost efficiency should a significant percentage of plan sponsors decide to transact simultaneously.

There has been a large increase in the number of insurers who compete in the PRT space, which has been able to accommodate the increase in demand for PRT transactions. The market has increased to almost 20 insurers from approximately 8 insurance companies back in 2012. And not only has there been an increasing number of insurers, the insurers have also become more focused on particular segments of the market, whether that's the size of transactions or nature of the transactions. Not all companies are bidding on everything; they are being more selective and focused on particular markets.

In cases of high transaction volume, the market may experience a short-term strain in the availability of the most desired investments. Insurers may be forced to hold more of other investments while waiting for preferred issuances to emerge. As a result, insurers may adjust group annuity contract pricing to reflect the scarcity of debt suitable for backing those contracts. Asset in-kind transfers reduces investment availability concerns.

10.7 LABOR UNION CONSIDERATIONS

Collective bargaining agreements and organized labor may add complexity for many companies when completing pension risk transfer deals, given it involves a potentially adversarial party that needs to agree. 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. As a result, many companies have, thus far, seemed to shy away from involving labor union pension liabilities in their pension risk transfer activities, particularly for actively negotiated plans or benefits.

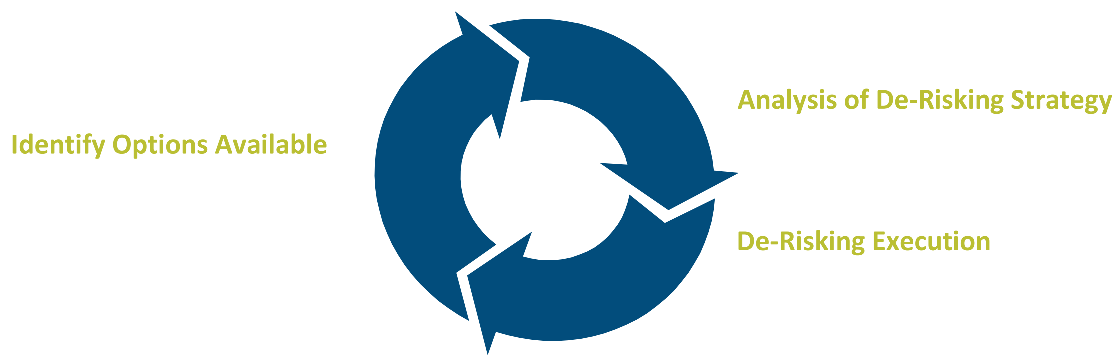
10.8 "TOP-25" RESTRICTIONS

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.

Section 11: 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.

11.1 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.

11.1.1 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 or not 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.

11.1.2 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[16]. Pension de-risking can reduce the volatility of pension expense and mitigate the impact on shareholder value.

11.1.3 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

[16] *Long, C., Bronsnick, E. and Zwiebel, H., "Pensions in Practice, How Corporate Pension Plans Impact Stock Prices," Morgan Stanley, October 2010.*

understand the size of the pension plan relative to the organization.[17] 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 "debt" that increases the leveraged position of the organization. [18] 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.

11.1.4 OPTIONS AVAILABLE

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. Liability Driven Investing strategies allow plan sponsors to mitigate exposure to interest rate risk and longevity risk.

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 participants' elections. 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 buyout).

11.2 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.

[17] *Long, C., Bronsnick, E. and Zwiebel, H., "Pensions in Practice, How Corporate Pension Plans Impact Stock Prices," Morgan Stanley, October 2010.*
[18] Keating Written Testimony, 2013.

11.2.1 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. 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.

Another important risk is interest rate risk. The value of the plan liabilities is 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 an economic 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.

11.2.2 UNDERSTAND GROUP ANNUITY PRICING

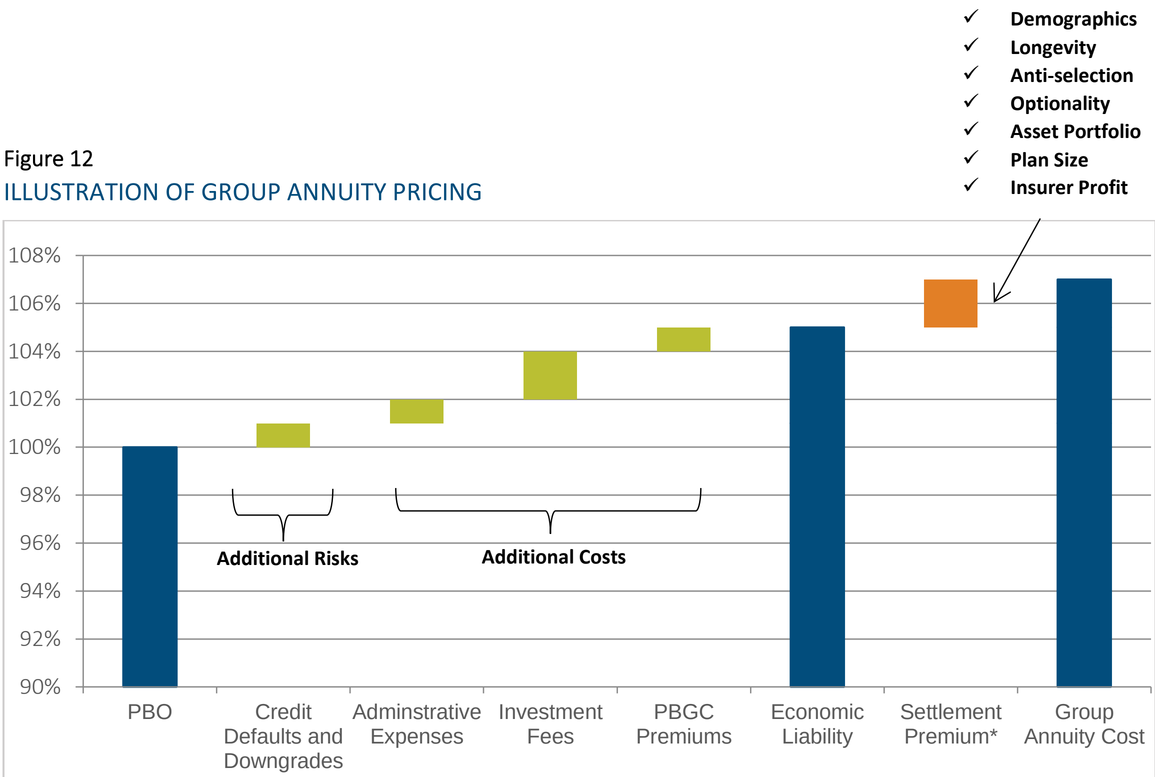
Whether purchasing annuities to carve out a portion of the population or fully terminating the plan, plan sponsors need to understand the factors which impact annuity pricing. As previously discussed, there are multiple drivers of the difference between the settlement premium and the economic value of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

Plan Demographics & Longevity Risk: Large groups of actives and terminated vested participants increase the duration of the portfolio, adding to reinvestment risk associated with increased longevity. Because there are fewer debt instruments with sufficient duration to match the length of the liabilities and more uncertainty as to the 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 12
ILLUSTRATION OF 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 settlement premium is represented by the orange box in Figure 10 above. For example, if the participant population consisted of retirees only, the settlement premium and group annuity cost would be lower, and if the participant population consisted of actives only, those costs would be higher.

11.2.3 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 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 buyouts. 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.

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[19].

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[19] https://www.soa.org/globalassets/assets/Files/Research/Projects/research-2015-corporate-pension-risk-management.pdf

11.3 PENSION RISK TRANSFER EXECUTION

Prior to engaging in pension risk transfer 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 transfer strategy is undertaken, data readiness and preparedness are 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 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 participants 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.

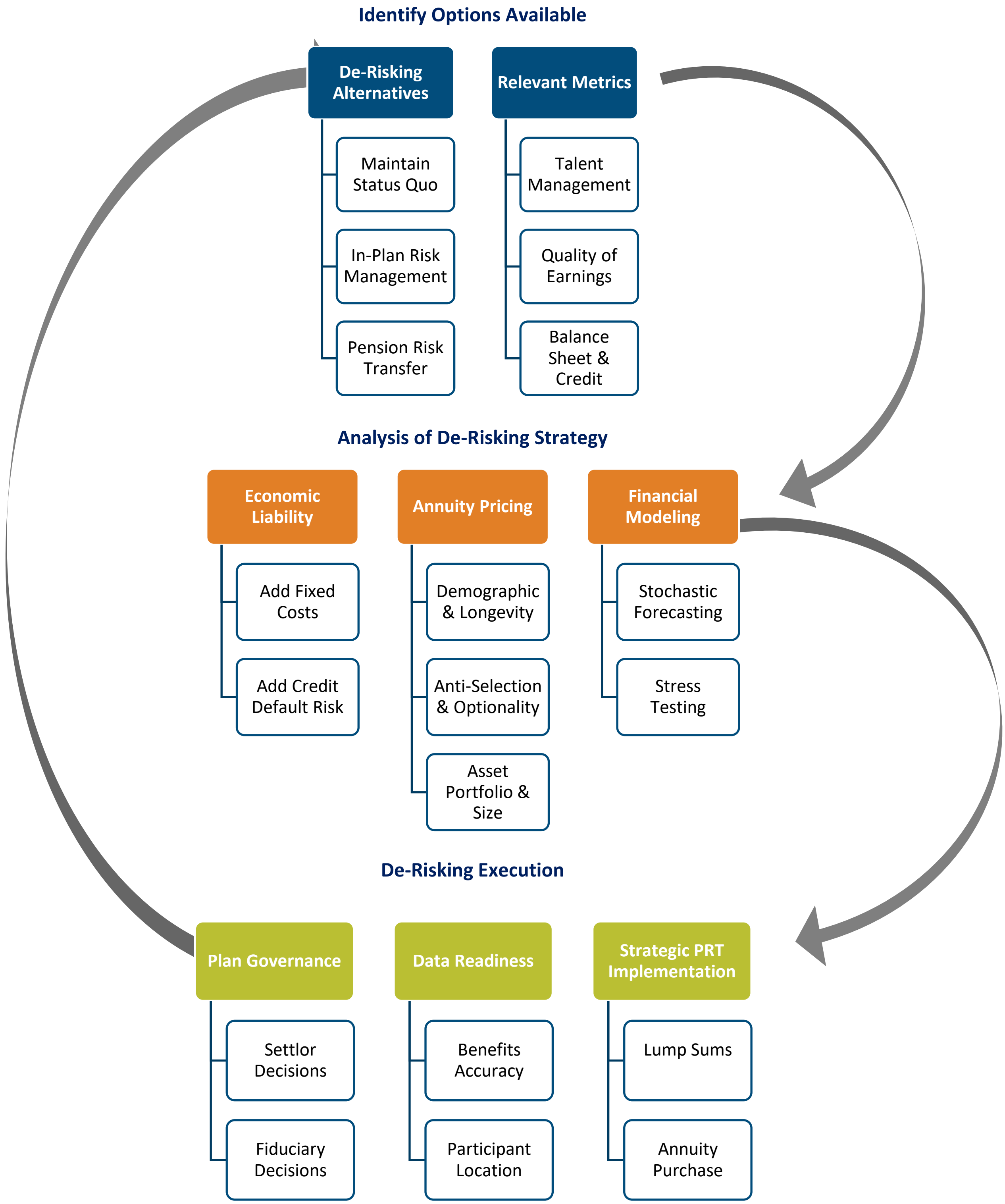
Annuity Placement Strategy: If a group annuity is to be purchased, the plan sponsor needs to identify the implications of targeting a specific population. The plan sponsor will likely work with an intermediary and undergo a bidding process with various insurers. Provider selection will identify the "safest 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 endgame 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.

11.4 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 focus 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. Figure 13 summarizes the plan sponsor framework described above.

Figure 13
PLAN SPONSOR FRAMEWORK



Section 12: Recent 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.

12.1 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 buyout 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 buyouts 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 mid-sized plans as well.[20]

12.2 GUARANTEED SEPARATE ACCOUNTS

Some of the initial jumbo PRT transactions made use of separate accounts in connection with the purchase of group annuities. The separate account structure segregates the pension risk transfer liabilities from the other life insurance liabilities of the insurer, providing additional protection from insolvency. The structure provides additional assurance for fiduciary decisions. While separate accounts have been around for quite some time, they had historically only been more prevalent among the larger deals with significant, perceived fiduciary risk.

Recently, however, insurers have moved to commingled guaranteed separate accounts, which are still insulated from the other non-PRT liabilities of the insurer but are mixed with liabilities from other PRT transactions which would have a similar risk profile. This trend has allowed smaller transactions access to the protections provided by a separate account and provided insurers a way to differentiate their product. Commingled separate accounts have the additional advantage that the liabilities are mixed with other PRT deals, which provides further protection as there is less chance of pricing errors for many deals than for one deal.

12.3 ANNUITY BUY-INS

An annuity buy-in 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.[21] 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

[20] Penbridge Advisors Survey, 2013.
[21] MetLife Publication, 2014.

makes aggregate monthly benefit payments 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 buyout. 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.[22] 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 buyout. Annuity buy-ins are popular in the UK but have not received significant adoption in the U.S. Buy-ins often have a feature that allows them to be converted to buyouts.

12.4 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, because 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.

12.5 REINSURANCE

As the need for capacity in the marketplace is increasing, reinsurance has emerged to help meet market demand. Reinsurance has been used extensively in the life insurance industry for decades, but only recently has it moved into the PRT space. Reinsurance allows insurers access to capital, diversifies risk and enables insurers to price deals more competitively.

Plan sponsors who are being offered a transaction supported by a reinsurance deal should do their homework to understand the impact on the safety of the policy. Plan sponsors will want to understand the structure, how it is collateralized, what the counterparty risk is, and how it impacts potential losses by plan participants.

12.6 RE-RISKING

Although the past decade has produced positive investment returns, plan sponsors retain caution with respect to the investment allocations. While not necessarily an innovation, there have been very few plan sponsors who, having taken steps to de-risk, subsequently reallocated assets back to return-seeking investments as a way to manage risk. 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 to re-risk, most plan sponsors (if they are adjusting asset allocation strategies) are continuing the shift to liability hedging assets.

[22] 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.”

Given the historically low interest rate environment in 2020, some plans sponsors have begun to consider moving out of fixed income and into return-generating assets. These sponsors believe that there is limited return that can be generated on fixed income and a potential asymmetrical interest rate risk. It is yet to be seen however if sponsors will take such risks and begin to act on such views.

12.7 OTHER INNOVATIVE SOLUTIONS

Outside the U.S. there has been a number of innovative solutions developed recently. While the strategies may not work in the U.S. for various regulatory reasons, the underlying principles could be applied to develop new solutions in the U.S.

- Germany – Plan sponsors have set up "pensioner companies" which are sold to investment firms. The pensioner company includes only a fully funded pension plan and is acquired by a firm who believes they can invest the assets and achieve a return higher than what an insurer would receive. The plan benefits are still reinsured by the German equivalent of the PBGC. In the U.S., such a transaction would not work as a pension plan can only be included with a business sale if there is a legitimate business included in the sale.

- Canada – A few very large plans in Canada have marketed themselves and persuaded much smaller plan sponsors to merge into these very large plans, thus creating a jumbo multiple-employer plan. By acquiring a number of smaller plans, the primary plan increases its size, giving it access to more cost-effective investments and administration. It also allows the primary plan to diversify its mortality experience and improve its demographic profile (i.e., by managing the proportion of liabilities attributable to active versus inactive members). The primary plan is generally a jointly sponsored pension plan, whereby responsibility for decision making and plan funding is shared by participating employers and plan members. While not appropriate for all plan sponsors, these plans enable participating employers to offer a defined benefit pension to their employees with a cost that is expected to be stable. The participating employer also eliminates the effort and fiduciary responsibilities associated with sponsoring and administering their own pension plan. Lastly, in some cases an employer who is able to join such a large plan may be able to transfer the accrued liabilities in their legacy pension plan to the primary plan at a cost that is favorable compared to an annuity purchase.

- UK – Similar to Canada, plan sponsors have been joining "superfunds", which is a group of pension plans operating together allowing access to cost-effective administration and investments. Unlike Canada however, in a superfund the original plan sponsor still retains the risk of the pension plan should there be losses due to investment experience or mortality.

  Similarly, plan sponsors in the UK are combining their annuity buyout or buy-in transactions to make the deal more attractive for insurers. There are few insurers in the UK who serve the smallest buyout transactions. By combining their efforts, plan sponsors are able to attract more interest and ultimately settle at a lower price.

Section 13: A Forward-Looking Perspective

The PRT market has come a long way since taking off in the early 2010s. The number of participating insurers has multiplied, increasing competition and improving pricing. A repeat buyer trend has emerged, with plan sponsors coming back to market multiple times to tackle more complex transactions. As we look to the future, experts within the PRT industry shared their insights and thoughts on where the market is headed.

13.1 PLAN TERMINATIONS

As seen in the data presented in this paper, standard plan terminations have seen a large increase in recent years. There is a growing trend amongst employers electing to terminate their pension plans, and it is expected that this trend will continue in the coming years. Research participants interviewed agree that there will likely be a higher volume of voluntary plan terminations in both the short term and long term. As plan sponsors complete some of the initial, simpler, PRT transactions, they will be coming back to the market to complete more complex ones such as plan terminations, and the demand for such transactions will increase.

13.2 INCREASED AVAILABILITY OF SEPARATE ACCOUNTS

Guaranteed separate accounts have been one of the ways insurers were able to differentiate themselves amongst competition in the PRT market. By providing this additional protection from insolvency, they could ensure they would be strongly considered by the plan fiduciaries in the annuity provider selection process but have generally been offered on the large deals only. It is expected however that insurers will be able to further extend offering separate accounts on smaller deals through the use of a commingled separate account, which benefits both plan sponsors and plan participants.

13.3 INSURER CAPACITY FOR DEFERRED LIVES

Historically, insurers were hesitant to take on large groups of active and terminated vested participants, as they increase the duration of the portfolio and add to longevity risk. In addition, there are fewer fixed income securities with sufficient duration to match the length of the liabilities which adds to investment risk. However, recently, insurers have ramped up their efforts to underwrite more deferred liability and we would expect to see them more willing to take on deferred lives in the future. Certain insurers have focused on particular segments of the market, with deferred lives being one such segment. As more plan sponsors are considering plan terminations, insurers may be forced to adapt in the future in order to take on deferred lives.

13.4 ECONOMIC ENVIRONMENT

Recent market volatility caused by COVID-19 has resulted in significant movements in interest rates as well as equity prices. The low-interest-rate environment coupled with market volatility has slowed down PRT transactions in the first half of 2020. However, the long-term demand for PRT is likely there, if not stronger, given some deals were paused or prevented from taking place during 2020. In addition, the turbulent markets of 2020 have been a wake-up call for many plans sponsors who were prompted to start putting their de-risking plans into action.

13.5 REGULATORY CHANGES

There is little question that regulation and legislation affecting the PRT market will continue to evolve. Most plan sponsors will continue to have concern around the lack of certainty in the regulatory environment. Historically, the U.S. government has substantially advantaged the funding of U.S. defined benefit plans through an immediate tax deduction, and tax-deferred asset earnings accumulation and no tax on the participant until distribution. 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. Given this and the economic struggles of some plan sponsors in 2020, there is potential for additional funding relief in the near future. However, 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. Nonetheless, 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.

Section 14: Acknowledgements

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Appendix A: 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.

A.1 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 with single employer plans 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.

A.2 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[23], increasing minimum funding standards for plans, adding quarterly contribution requirements and adding additional components onto PBGC premiums (it increased the rate per participant and 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.[24]

A.3 REVERSION TAX LEGISLATION

When a pension plan terminates, the surplus plan assets can revert to the plan sponsor. During the 1980s 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 80s and early 90s, 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

[23] Silverman, 1994.
[24] Gebhardtsbauer, 2004

the Technical and Miscellaneous Revenue Act of 1988.[25] 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."

A.4 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:[26]

- 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

A.5 THE PENSION PROTECTION ACT OF 2006 (PPA)

The Pension Protection Act of 2006 (PPA) served as possibly the most significant overhaul to U.S. 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.

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.[27] Beginning in 2008, PPA required plans to value benefit obligations using three separate duration-segmented interest rates.[28] 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.

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[25] Modugno, 2007.
[26] Pension Benefit Guaranty Corporation Publication, 1995.
[27] Romano, 2004.
[28] Purcell, 2006.

A.6 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.[29] 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 two years, followed by a 7-year pay-off period, or sponsors could choose to amortize unfunded liabilities over 15 years.

A.7 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 rates, pension obligations per IRS funding standards decreased substantially. Correspondingly, contribution requirements were also reduced for many U.S. 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.[30] 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.

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[29] Buck Consultants Publication, 2010.
[30] Pension Rights Center Publication, 2014.

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 premiums for unfunded vested benefits (variable-rate premiums) are scheduled to more than triple from 2012 to 2016.[31]

[31] Towers Watson Publication, 2014.

Appendix B: Relevance to Multiemployer Plans

A multiemployer 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 multiemployer 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 multiemployer plan, this paper and our framework are not intended for companies participating in these plans.

In a multiemployer 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 Multiemployer Pension Plan Amendments Act of 1980 (MPPAA).[32] The withdrawal liability requires that an employer who withdraws from a multiemployer 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 multiemployer plan. Note that many multiemployer 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 multiemployer 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 multiemployer framework is rare.

[32] Conference of Consulting Actuaries Presentation, 2014.

About The Society of Actuaries

The Society of Actuaries (SOA), formed in 1949, is one of the largest actuarial professional organizations in the world dedicated to serving 32,000 actuarial members and the public in the United States, Canada and worldwide. In line with the SOA Vision Statement, actuaries act as business leaders who develop and use mathematical models to measure and manage risk in support of financial security for individuals, organizations and the public.

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The SOA has a history of working with public policy makers and regulators in developing historical experience studies and projection techniques as well as individual reports on health care, retirement and other topics. The SOA's research is intended to aid the work of policymakers and regulators and follow certain core principles:

Objectivity: The SOA's research informs and provides analysis that can be relied upon by other individuals or organizations involved in public policy discussions. The SOA does not take advocacy positions or lobby specific policy proposals.

Quality: The SOA aspires to the highest ethical and quality standards in all of its research and analysis. Our research process is overseen by experienced actuaries and non-actuaries from a range of industry sectors and organizations. A rigorous peer-review process ensures the quality and integrity of our work.

Relevance: The SOA provides timely research on public policy issues. Our research advances actuarial knowledge while providing critical insights on key policy issues, and thereby provides value to stakeholders and decision makers.

Quantification: The SOA leverages the diverse skill sets of actuaries to provide research and findings that are driven by the best available data and methods. Actuaries use detailed modeling to analyze financial risk and provide distinct insight and quantification. Further, actuarial standards require transparency and the disclosure of the assumptions and analytic approach underlying the work.

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