

**PART I – BEST PRACTICES FOR  
BUILDING A TERMINATION STRATEGY**

# WINDING DOWN YOUR HARD-FROZEN DEFINED BENEFIT PLAN

**BACKGROUND**

Plan sponsors have been challenged with market volatility and risk to the funded status of their plan. As a result, many DB plan sponsors have frozen their plans. In 2008, 27% of DB plans were closed to new entrants. Of the plans that were closed, over three quarters of these, or 21% of all DB plans had also fully frozen benefit accruals for all participants—a “hard freeze.”<sup>1</sup> As of 2013, 40% of DB plans are closed to new entrants and roughly one third of DB plans are fully hard-frozen.<sup>1</sup>

Most of the plan sponsors who froze their DB plans did so because they wanted to reduce the level and the volatility of contributions to their plan. They also wanted to limit their balance sheet exposure. But the ultimate goal for almost all is likely plan termination.

Unfortunately, the combination of adverse and volatile equity markets along with a continued low interest rate environment has caused many DB plans to remain significantly underfunded by any measure.

On the accounting side, unfavorable market conditions have a negative impact on the balance sheet, which can reduce stockholder equity. It also leads to higher required contributions. To ease the burden for plan sponsors, congress passed two iterations of pension plan relief legislation that generally lowers the cash contribution requirements in the short term. For hard-frozen plans, the resulting impact is taking them further away from their end goal of termination. This is why it is more important than ever to develop a definite strategy and timeline in order for termination to remain a realistic goal.

**A HARD-FROZEN DB PLAN** is one that is closed to new entrants and has frozen benefit accruals for all participants.

**EXECUTIVE SUMMARY**

Having witnessed the impact adverse and volatile equity and interest rate markets have had on their plans, many sponsors of hard-frozen defined benefit (DB) plans continue to search for ways to manage their plan’s funded status and for insight on how to ultimately terminate these plans.

But to wind down such plans in a cost-efficient and timely manner requires a well-thought-out strategy. Having a good strategy in place is also crucial to managing the associated financial risks—the ultimate cost of termination and balance sheet liability.

The objective of this white paper is to define “best practices” for developing and implementing a strategy for terminating a hard-frozen plan as soon as reasonably possible, and at the lowest possible cost. The second part of this series, *Best Practices for Executing a Termination Strategy*, will delve into best practices for executing the termination of a hard-frozen DB plan once the strategy is in place.

**Our analysis centers on working effectively with a financial professional and efficiently integrating the plan’s actuary and other retirement plan service provider(s) in the termination process. Special emphasis in part one of this series is placed on:**

- Understanding the rules for termination
- Developing a termination strategy by evaluating:
  - The cost
  - Funding strategies
  - The impact of asset allocation
  - Additional risk management opportunities
- Carrying out your termination strategy

<sup>1</sup> PBGC Premium Filings, February 2013.

## OVERVIEW

Before you develop a strategy for the ultimate disposition of your hard frozen plan, it is important to understand the two primary options:

- 1. Terminating the plan and paying all benefits in full.** This option allows you to plan for a future termination date and budget for the contributions needed to pay out the benefits. However, this probably has the *higher expected cost but the lower long-term market risk*, due to its shorter timeframe.
- 2. Maintaining the frozen plan.** In this scenario, you would operate the plan until it is fully funded under the funding rules for an ongoing, frozen plan (see “Focus on the Rules for Termination” on page 3). Once your DB plan became fully funded, you could then adopt an investment strategy that would help match the movement of assets and liabilities while allowing some potential for equity growth to cover potential losses. While this has a *lower expected cost, it comes with a higher risk* due to the longer timeframe.

It is advisable to decide which of these options is best once you have evaluated all the costs associated with each one. However, for most plan sponsors, the first option is generally going to be the most desirable because it helps eliminate financial risk and plan expense after the termination. As a result, the focus of this white paper will center on plan sponsors who choose to terminate the plan. Regardless of the option chosen, sponsors should continually be looking for ways to manage the risk in their DB plans.

**REGARDLESS OF THE OPTION CHOSEN,** sponsors should continually be looking for ways to manage the risk in their DB plans.

## DEVELOPING THE TERMINATION STRATEGY

At the Principal Financial Group®, we have found there are generally four steps to developing an effective strategy to terminate a hard-frozen DB plan. These are:

- 1. Evaluate the cost of termination.** Knowing the potential cost of a termination can help you determine how long it may take before you have the funding in place to cover that cost. It can also help you determine how quickly you may be able to terminate, so you can develop a timeline for termination.
- 2. Evaluate several funding strategies.** This allows you to pick a strategy that best fits your needs and identifies which one might accommodate a termination within your timeframe.
- 3. Evaluate the outcome of various asset allocation strategies.** To assess possible costs and the volatility of these costs, several strategies should be evaluated, including the current asset allocation. Later, we will be discussing two common asset allocation strategies. These are:
  - a. Traditional static asset allocation,** such as a 60% allocation to equity investment options and a 40% allocation to fixed income investment options. As the name suggests, this is the more traditional asset strategy used by DB plans.
  - b. Dynamic asset allocation,** which links the plan’s asset allocation to its funded status. Dynamic asset allocation can be especially effective for hard-frozen DB plans and we are seeing this become more and more common as the asset strategy used by DB plans.
- 4. Evaluate additional risk management strategies.** There may be additional opportunities to manage the risk within your plan prior to plan termination. This may be accomplished through a transfer risk management strategy which removes a portion of the risk and transfers it to other parties: either to plan participants electing lump sum payments or to an insurance company through an annuity purchase.

**THESE FOUR STEPS** help address the importance of considering both sides of the funded status: liabilities and assets. Doing so promotes the development of a strategy that allows the plan sponsor to move the hard-frozen plan toward termination in a cost-efficient, timely manner.

## FOCUS ON THE RULES FOR TERMINATION

A standard termination requires that all benefits earned by plan participants be provided in full. These benefits are also referred to as the DB plan's liabilities—the amount owed to participants upon retirement or termination. (Other types of terminations—for example, a distress termination—are outside the scope of this paper.)

**There are two ways to provide benefits at a plan's termination:**

- 1. You can pay participants a single lump sum amount (if the plan allows), or***
- 2. You can purchase an annuity for them from an insurance company.***

Participants who are already receiving benefits must receive the annuity. For participants not receiving benefits, you must offer the annuity but can choose to offer a lump sum payment as an additional option. The participant can select either the annuity or the lump sum payment (if the plan allows). However, there are two factors to consider before determining which option to choose:

- Annuities are likely to cost more than the same liability measured under the funding rules for an ongoing frozen plan since the insurance company will be assuming the mortality and investment rate risk for these benefits.
- The cost used to pay lump sums to participants at termination varies over time. Generally, this amount is based on corporate bond rates. This can lead to a cost that is either higher or lower than the ongoing plan funding liabilities, though it is generally lower than the cost associated with buying annuities.

The final cost to terminate is ultimately set at the date of distribution, because the cost is established based on the interest rate at the time of the final distribution. For most plans, any extra assets returned to the plan sponsor after all the benefits are paid are taxed; both an excise tax and federal income tax apply. While there are some actions you can take to minimize the amount subject to taxation, it is generally desirable to terminate without extra assets.

## STEP 1 EVALUATE THE COST

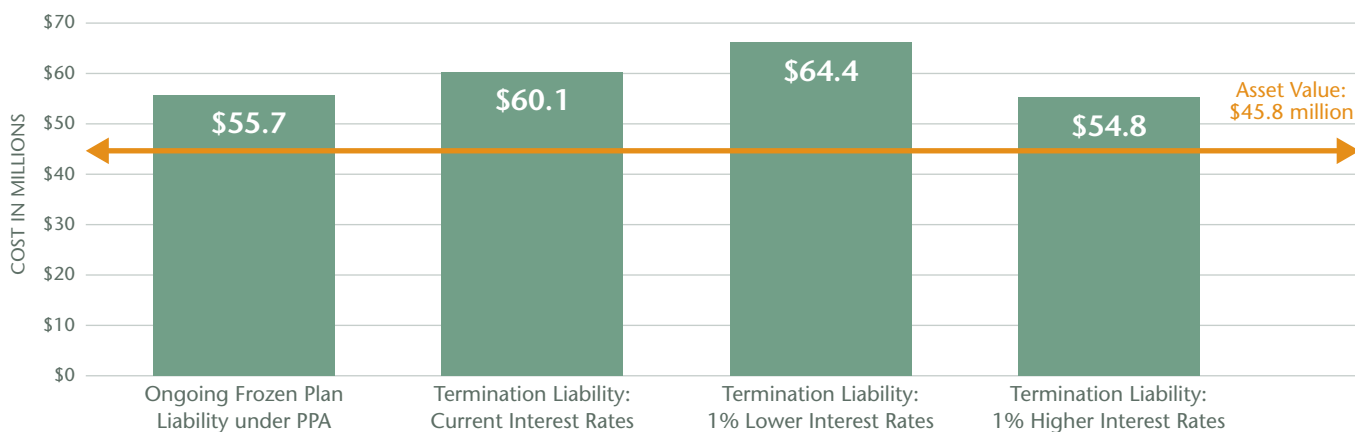
As mentioned previously, to begin planning your strategy, you need to understand the overall cost of the plan—both on an ongoing funding basis and on a termination basis. You can gain this understanding through an actuarial study that calculates plan cost based on certain assumptions or variables.

One variable impacting the cost of termination is the level of the interest rates being used to value the liabilities. Since no one can predict the future course of interest rates, any termination planning study should include calculations of costs using different interest rate assumptions.

The graph below illustrates the interest rate sensitivity of termination liabilities as of January 1, 2015. It also shows the liabilities under the plan’s ongoing funding rules.

As you can see, higher interest rates result in lower overall cost of liabilities (see right-hand column below). But the reverse is also true—lower interest rates result in higher overall cost of liabilities. The amount of change in liabilities is different for each plan based on the ages and benefits of the participant group. Generally liabilities vary about 10% to 15% for each 1% change in interest rates.

**ILLUSTRATION 1: INTEREST RATE IMPACT ON TERMINATION LIABILITIES**



*Liabilities include retired and non-retired participants. For illustrative purposes only.*

**In this example,** the estimated cost to terminate the plan is higher if all participants get annuities (rather than non-retirees choosing lump sums). In addition, even assuming lump sums are paid where allowable, the estimated cost to terminate is more than the cost to fully fund the plan under the funding rules for an ongoing hard-frozen plan.

- On an ongoing funding basis (first column), the funding shortfall is \$9.9 million—the difference between the total liabilities of \$55.7 million and assets of \$45.8 million.
- Based on the current interest rates (second column), the estimated shortfall is \$14.3 million (assuming lump sums are paid to non-retired participants)—the difference between the total liabilities of \$60.1 million and assets of \$45.8 million.

Knowing the possible spread between assets and the potential cost to terminate the plan can help you decide whether you can afford to fund the shortfall over one year, five years or some other period. Depending on your risk tolerance and your organization’s access to capital, you may choose to fund the shortfall through contributions, investment earnings or a combination of the two.

## STEP 2 DEVELOP A FUNDING STRATEGY

Once you've identified the funding shortfall and the potential timeframe that you would like to target for termination, the next step is to look at the available funding strategies for achieving this. Your actuary can assist you with this by calculating contribution levels using various funding strategies under standard actuarial assumptions for asset returns and liability interest rates. While many funding strategies can be considered, three of the most common are:

**1. Contributing the minimum requirement for an ongoing plan each year until the year you plan to terminate.** Then, in the year assets are distributed to the participants (typically 18 to 24 months after the plan termination date), you would contribute a final amount to complete the plan termination.

The timing of this final contribution can vary, but many plan sponsors choose to fund over a three to five year period.

This is likely to be the most expensive choice, but it offers a short timeframe which can lead to lower overall risk, since the risk rises as the timeframe lengthens.

**2. Contributing a level amount each year until the year you plan to terminate.** You would estimate the cost to terminate the plan and distribute assets at a certain future date (for example, five years from now) and spread the cost evenly over that time period. The cost of this option may be slightly lower than option 1, since contributions are made into the plan earlier. They are thus able to earn investment returns within the plan over this time horizon.

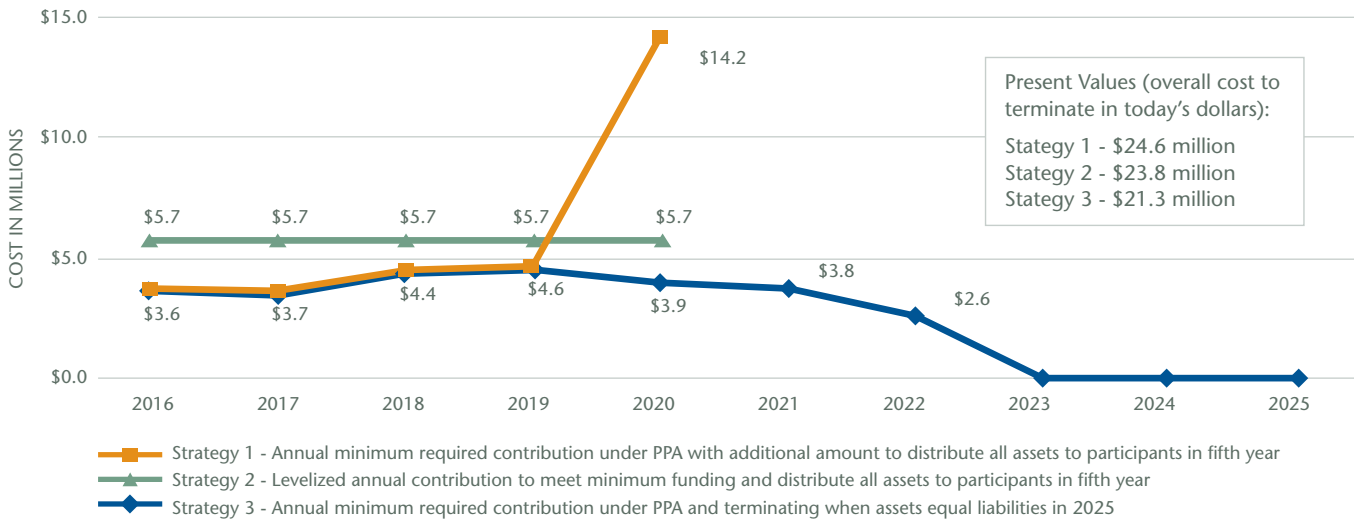
**3. Fully fund the plan under ongoing Pension Protection Act (PPA) funding rules and then potentially let investment income make up the funding shortfall.** You can choose to contribute the minimum required annual contribution for an ongoing plan over this time horizon. Once your plan is fully funded, you can then delay the termination date instead of making a larger payment in the year of termination. This may allow assets to accumulate through investment performance—allowing you to bring the plan to the termination funding level at a lower out-of-pocket cost. The drawback is that this option exposes you to higher risk due to changes in interest rates and markets, which could prevent investment income from covering the funding shortfall and ultimately result in an overall higher cost.

Economic conditions could also change, increasing or reducing the cost of termination; therefore, it is important to monitor the funded status throughout the time horizon chosen and make adjustments to funding as needed.

## STEP 2 DEVELOP A FUNDING STRATEGY *CONTINUED*

The following chart shows a comparison of the expected funding patterns with these three strategies:

**ILLUSTRATION 2: VARIATION OF COST TO TERMINATE UNDER DIFFERENT FUNDING STRATEGIES**



*For illustrative purposes only.*

Strategy 3—which was described on the previous page as involving the funding of a hard-frozen plan at the minimum level and delaying termination until assets equal the termination liabilities—is expected to be less costly than either Strategy 1 or 2. However, because Strategy 3 takes much longer, there is an increased risk of experiencing the negative impact of a down market. A down market would potentially cause a plan sponsor to see a decline in funded status, either adding to the ultimate cost or further delaying termination.

In addition to the pattern of annual contributions, this chart demonstrates the **present value** of the total contributions—an important metric for hard frozen pension plans with a goal of termination. The present value quantifies the cumulative cost, which reflects the timing of contributions and represents the total contributions for each strategy in today's dollars. It also incorporates the funded status at termination and all costs prior to this—all in one metric.

### Evaluating the risk associated with funding strategies

Another consideration when selecting a funding strategy is your willingness to maintain the plan. Until the termination date is set, the plan must be operated as an ongoing plan. The plan's funded status and related expense will, therefore, continue to be reflected in your balance sheet and income statement. This makes the continued use of risk management measures desirable to minimize volatility.

Additionally, you will also continue to incur costs associated with providing participant communications, actuarial services, participant recordkeeping and all government premiums and filings.

The analysis on page 8 illustrates just one scenario of assumed future conditions, which is referred to as a **deterministic forecast**. While a set of deterministic studies may be helpful in visualizing the sensitivity of costs under a limited range of scenarios, a best practice for understanding the risks is to look at more scenarios. This is referred to as a **stochastic forecast**,

where thousands of potential future scenarios are generated to explore how different capital market and economic outcomes may impact cash contributions, termination-funded status and accounting expense.

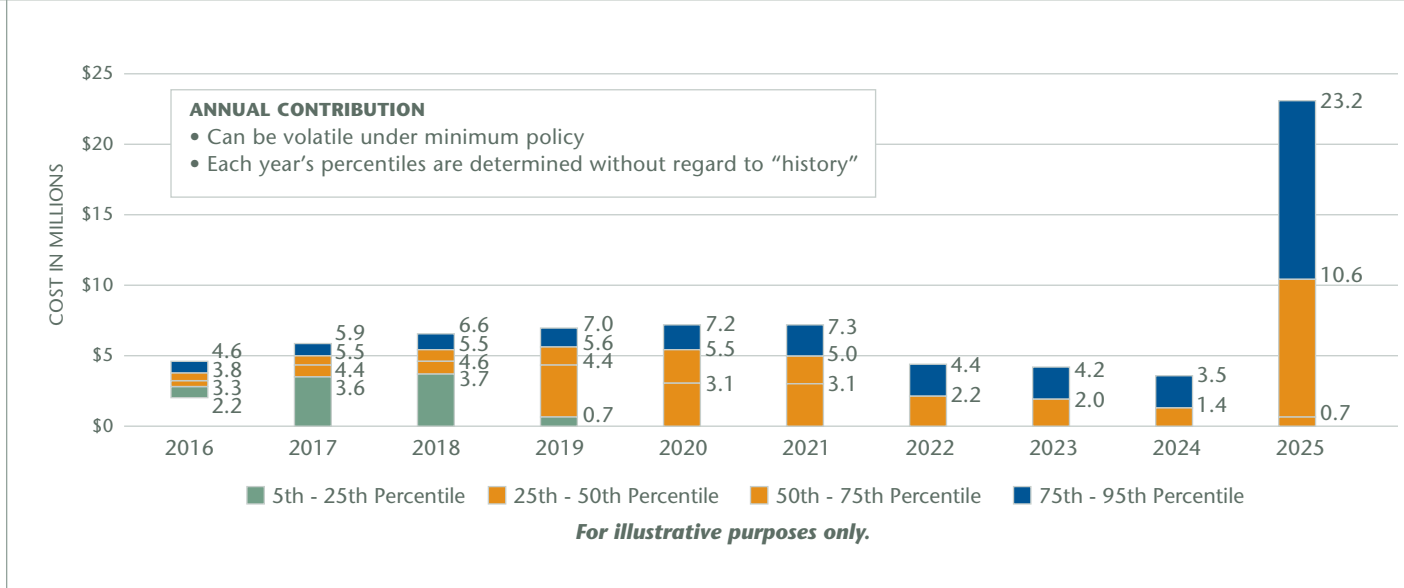
For example, the following graph illustrates the potential range of annual required contributions for a plan sponsor using the first funding strategy we discussed—contributing the minimum annual amount with a final “balloon” contribution to complete funding for the termination liability. Under this scenario, the plan sponsor wants to terminate the plan in no more than 10 years, or in 2024.

**STOCHASTICALLY GENERATED RESULTS**

allow a plan sponsor to quantify risks and analyze the probabilities of future outcomes.

▼ Outcomes under unfavorable market conditions are shown in blue, and outcomes under favorable market conditions are shown in green. Each bar is broken into four sections indicating the likelihood of the contribution amount falling within a certain range.

**ILLUSTRATION 3: FORECASTING MINIMUM REQUIRED CONTRIBUTIONS**



**Under this scenario,** the contribution amount does not vary greatly until the final “balloon” payment. In 2024, there is a 50% chance that the final contribution will be less than or equal to \$0.7 million. However, it could approach or exceed \$23.2 million in a small percentage of outcomes (5% or fewer).

The greatest value of a stochastic forecast is that it shows not only the overall pattern of results, but also the potential range (favorable and adverse) of results and the likelihood of those results occurring.

## STEP 3 DEVELOP AN ASSET ALLOCATION STRATEGY

Once you have reviewed and selected a funding strategy, you should have a clearer picture of the amount and timing of contributions needed to accumulate enough assets to terminate your DB plan.

Selecting an asset allocation strategy with the help of an investment advisor and actuary is the next step in developing your termination strategy. Your asset allocation will impact the amount of contributions you will need to fund the DB plan to termination as well as the volatility of contributions from year to year. It can also help you protect any improvements in funded status as you move toward your termination goal.

### Asset liability modeling

A best practice when determining an asset allocation strategy is to have an asset liability modeling (ALM) study prepared. In an ALM study, your DB plan's assets and liabilities are modeled simultaneously using stochastic forecasting. These forecasts help you evaluate the effect of various asset allocations on measures important to you and to your termination strategy.

#### FORECASTS MAY INCLUDE:

1. *The amount of annual contributions*
2. *Your termination-funding status*
3. *The present value of expected contributions*

The most common asset allocation utilized for pension plans involves maintaining a **static asset allocation**. Asset allocations with a static mix have a fixed allocation among various asset classes, and the portfolio is rebalanced to the fixed target allocation on a periodic basis.

For example, the stochastic forecast shown in Illustration 3 on page 10 uses an asset allocation of 75% equity and 25% fixed income. An ALM study would generate similar stochastic forecasts using multiple allocations between equity and fixed income—for example, the 75%/25% allocation as well as an allocation of 50% equity and 50% fixed income. The results of the forecasts would then be compared to view the impact on the amount and volatility of contributions.

When completing an ALM study, several different allocations between equity and fixed income should be examined to assess the risks and outcomes associated with various investment strategies. The appropriate allocation for each plan sponsor will be different based on the sponsor's unique situation and risk tolerance.

While static asset allocation can be effective for ongoing DB plans, as a best practice for hard-frozen plans, we encourage the plan sponsor to evaluate an alternative asset strategy called **dynamic asset allocation**. Dynamic asset allocation is an investment strategy where the plan's asset allocation is adjusted on a regular basis according to a previously-established rule. For hard-frozen pension plans, it can often be most beneficial to use the plan's funded status as the basis for adjusting the asset allocation.

A dynamic asset allocation strategy will likely result in higher equity exposure when the funded status is low (for example, under 70%) and a reduction in equity exposure as the funded status improves. Reducing the equity exposure as the funded status improves has the following benefits:

- It can help lock in gains as the plan's funded status improves through increasing allocations to fixed income investments, which can help better track the liabilities, thus protecting against loss of funded status as the plan gets close to full funding.
- It can potentially minimize the cash contributions needed by closing the funding gap with better returns and taking advantage of volatility in equity returns or interest rates.
- It can help prevent the plan sponsor from terminating with excess plan assets (which are subject to taxation).

**DYNAMIC ASSET ALLOCATION** is an investment strategy where the plan's asset allocation is adjusted on a regular basis according to a previously-established rule, such as the plan's funded status.



The following chart illustrates the benefits of a dynamic asset allocation strategy. This chart illustrates the present value of the total contributions needed to terminate a plan at a future date under various static asset allocation strategies compared to an optimized dynamic asset allocation strategy:

- The orange line with the small circles represents the current strategy, a static allocation of 60% to equities and 40% to fixed income.
- The other solid and dashed lines represent various static allocation strategies ranging from 0% to 80% equities.
- The red line with the triangles represents a dynamic allocation strategy, where the asset allocation is adjusted periodically in relation to changes in the plan’s funded status.

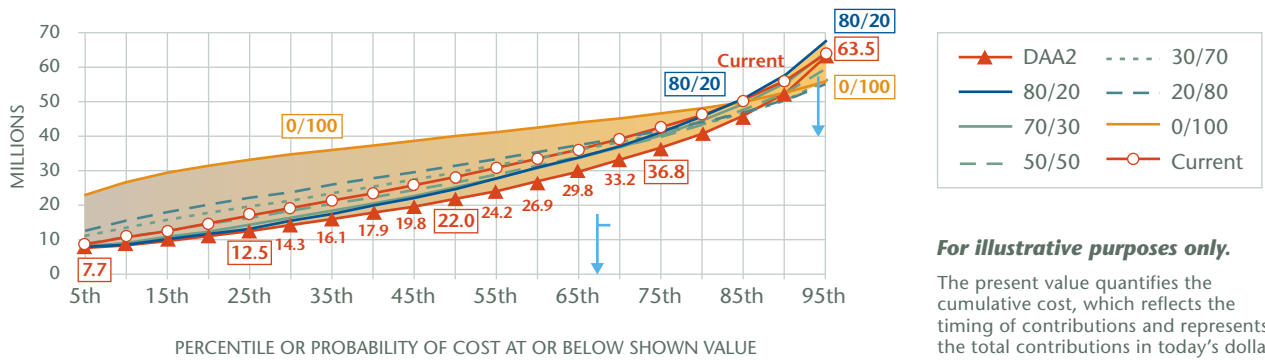
Each line in the chart tracks the probability that contributions will not exceed the amount shown.

**IT IS INTERESTING TO NOTE** that under the **higher equity allocations, better results are rarely achieved even in good markets.**

A **low equity allocation** helps prevent high contributions in down markets, but is likely to cause higher contributions when the market performs well or normally.

The **dynamic asset allocation strategy** produces a lower cost than any tested static strategy in about 85% of scenarios.

**ILLUSTRATION 4: RISK PROFILE OF CUMULATIVE COST TO TERMINATE**



**For illustrative purposes only.**

The present value quantifies the cumulative cost, which reflects the timing of contributions and represents the total contributions in today’s dollars.

In this scenario, a plan sponsor could expect a 50% chance (marked by the dashed lines) of cumulative contributions being less than or equal to:

- \$30.0 million under the 20% equity allocation
- \$25.0 million under the 70% equity allocation, and
- \$22.0 million under the dynamic strategy—significantly less than the two static allocations.

This chart also shows the impact of the markets on the results of these different asset allocation strategies. Results move from more positive market outcomes on the left to the least favorable market outcomes on the right.

Viewing the results from this perspective, we see that the dynamic asset allocation strategy produces a **lower cost than any static strategy in about 85% of scenarios.**

In summary, while static allocations may be appropriate for most ongoing non-frozen plans, sponsors of hard-frozen

plans should consider alternative asset allocation strategies as they wind down their plans. In such cases, a dynamic asset allocation strategy may produce the better outcome.

If you decide that dynamic asset allocation is a good fit for your overall termination strategy, it is important your actuary and investment advisor coordinate their efforts closely throughout your termination timeline, as changes in your plan’s funded status will trigger changes in asset allocation. The equity allocations you use at specific funded levels should be based on your plan characteristics and population, the timeframe you have set to terminate the plan and your risk tolerance level. Again, your actuary and investment advisor can work with you to assess this.

**WHICHEVER METHOD YOU USE,** developing an asset allocation that fits your budget, termination timeline and risk tolerance is key to your overall termination strategy.

## STEP 4 EVALUATE ADDITIONAL RISK MANAGEMENT OPPORTUNITIES

**For some DB plan sponsors,** a transfer risk management strategy is a viable option to remove a portion of the plan's liabilities and corresponding risk entirely from the plan and transferring it to other parties. Plan sponsors should evaluate whether a lump sum payment option or an annuity purchase could help meet their objectives as part of their termination strategy. Like any risk management strategy, either option requires careful consideration and analysis of the impact on your unique plan.

### Lump Sum Payment Options

With either a permanent lump sum payment or lump-sum window option, participants accept a one-time payment instead of lifetime benefits available under the plan. These lump sums can be paid in cash or rolled over to qualified retirement plans or an Individual Retirement Account (IRA).

#### Permanent lump-sum feature:

Sponsors may amend their DB plans to add a lump sum feature. Permanent lump sums can help remove risk gradually as individual lump sums are paid out to employees as they terminate or retire. Risk is retained by the plan until the lump sum payments are actually elected.

#### Lump-sum window:

Lump-sum windows extend a lump sum option to a specific group of plan participants, such as terminated vested participants, for a limited period of time, typically three to 12 months. The temporary nature of windows allows sponsors to transfer risk for the targeted group without incurring future additional costs for employees retiring in future years. It is important that the design of a lump sum window does not discriminate in favor of highly compensated employees.

### Annuity Purchases

Annuity purchases help remove risk from pension plans by moving the responsibility of paying future benefits to an insurance company in exchange for a premium payment from the DB plan. Liabilities and associated assets are shifted out of the plan to the insurer, who manages risk and handles payments to participants.

### Key Considerations

Both lump sum payments and annuity purchase reduce liabilities permanently and can also reduce PBGC premiums due to the plan's headcount decreasing. However, the financial impact of parting with a potentially significant portion of plan assets in exchange for elimination of benefit payments obligations and risk should be fully understood in order to make informed decisions.

#### Pension funding

After a lump sum window or an annuity purchase, the remaining portion of the plan will likely experience an actuarial loss. Actuarial losses reduce funding ratios (Adjusted Funding Target Attainment Percent or "AFTAP") and increased funding shortfalls.

#### Accounting

Annuity purchases and lump sums can trigger immediate recognition of unrecognized losses through net periodic benefit cost (called a "settlement charge"). Many plans are carrying large unrecognized losses due to low interest rates and asset returns less than expected, so settlement charges can become quite significant.

#### Participant risk

Lump sum payments place investment, interest rate and longevity risk directly onto plan participants. Participants' varying levels of financial knowledge can result in varying levels of success in managing a lump sum throughout their retirement years. Because participants can potentially make poor investment decisions and unadvisable withdrawals that prematurely exhaust lump sums, it's vital to provide retirement education for those receiving lump sums.

For an annuity purchase, the financial strength of the insurance company is an important factor to take into consideration. When benefit payments move out of qualified plans to insurance companies, participants lose the insurance coverage from the federal government's Pension Benefit Guaranty Corporation (PBGC). This means that if the insurance company were to go out of business, participants' benefits are no longer guaranteed.

## CARRYING OUT YOUR TERMINATION STRATEGY

If you have followed the steps outlined here, you should be well on your way to developing a strategy for terminating your hard-frozen DB plan. Your actuary and investment advisor can now help you carry out these decisions and start down the path to plan termination.

**However, implementing a termination strategy doesn't end here. Termination may take years to complete, so monitoring your progress is critical.**

A change in the markets may necessitate either a change in your strategy or a change in your timetable, or possibly both. It is important to keep an eye on your plan's progress toward termination and be prepared to make adjustments as needed.

## CONCLUSION

Adverse and volatile market conditions along with low interest rates have amplified the importance of risk management for sponsors of frozen DB plans by exposing them to risks and volatility they may not have anticipated. Fortunately, the steps we've described—evaluating the cost to terminate, selecting a funding strategy, determining an asset allocation strategy and monitoring for risk management opportunities—can help minimize both risk and volatility.

For both you and your plan fiduciary, developing a strategy is also prudent in order to secure your participants' benefits and settle plan liabilities as soon as reasonably possible. By following the best practices detailed in this paper, you can gain a better understanding of your specific situation

and develop clearer objectives around your timetable, contribution strategy and asset allocation.

Once you develop a termination strategy for your hard-frozen DB plan, it is critical to execute that strategy efficiently to terminate the plan as quickly and cost effectively as possible. Refer to Part II of this series, *Best Practices for Executing a Termination Strategy*, to learn about best practices for executing the termination of a hard-frozen DB plan.

**USING THIS PROCESS** to develop your termination strategy increases the likelihood you will successfully wind down your hard-frozen defined benefit plan in the most cost efficient and timely manner possible.



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