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A Framework for Pension Risk Management

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OVER THE PAST DECADE, sponsors of corporate defined benefit pension plans in the United States have been taking meaningful steps to reduce financial risk in these plans. Plummeting plan funded ratios, resulting from the 2008 stock market collapse and the corresponding decline in interest rates, have helped drive this recent spur in risk reduction. Changes to federal funding requirements and accounting standards over the past decade have generally also served to increase plan sponsors' interest in mitigating financial risk associated with their plans.

For such plan sponsors, low funding ratios and asset-liability mismatches have a number of potentially significant negative consequences, including increased pressure on corporate cash (due to higher and more volatile funding requirements) as well as elevated balance sheet and income statement volatility. As a result, pension risk can have a significant impact on key corporate items such as credit rating, cost of capital, and valuation (Bader 2003).

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Plan sponsors recognize the problems pension plans can cause and are taking action to manage the risk in these programs. Thanks to improving balance sheets (e.g., via corporate deleveraging) and improving cash ratios, more and more companies now have the latitude to tackle pension issues head-on. Even for companies that have already embarked on de-risking strategies, continual monitoring and consideration of new tactics is necessary for prudent ongoing plan management.

A FRAMEWORK FOR PENSION RISK MANAGEMENT

The following Pension Risk Management Framework can help companies evaluate, manage, and monitor pension risk in a holistic manner. Because pension risk manifests itself differently in every organization, the framework is intended to provide broad guidance rather than be overly prescriptive.

1. Diagnose and inventory pension risk factors

From a corporation's perspective, pension risk can be defined as the risk of a change (up or down) in the plan's funding deficit or surplus and the resulting change in the plan's funding ratio. Pension risk management does not simply mean removing or reducing risk exposures but rather more holistically focusing on areas where it makes strategic and tactical sense to hedge or exploit risks.

A number of common risk factors impact a plan's funding status; the two most important of these in terms of their influence are movements in interest rates and equity markets. Other risks, such as credit risk and longevity risk, could have a direct and meaningful impact on a plan's current funding status and long-term total cost. Additional plan risks exist beyond those whose direct impact is primarily financial, including those related to operational and fiduciary matters of the plan.

Listing and identifying a plan's risks is an important first step in understanding and managing the overall level of risk associated with the plan. A company must seek to understand its exposure to each risk and the likelihood of adverse outcomes related to each risk. Importantly, the risk impact must be understood at both the plan level and at the company level in terms of how the exposure may offset or amplify risks in other parts of the business. By conducting a pension risk diagnostic, measuring risk exposure, and creating a pension risk profile, a company can increase its understanding of its plan's current health as well as potential risk areas.

2. Decide which risk factors to address

Depending on a company's objectives, risk tolerances, the costs and benefits (both implicit and explicit) of mitigating risks, and other considerations, each pension risk factor can be analyzed in terms of how it should best be managed.

For example, if management's objective is to increase company value, risk management of the pension plan

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has to positively affect one or more of the inputs that drives firm value in the first place; for example, cash flows, growth rates, and the discount rate used to value cash flows to investors. Some risks are best to hedge, reduce, or remove, while others are best left to pass through to the individual risk management function of investors (who can shift their own portfolios to counter decisions made by the company). Furthermore, some risks may be best for a company to simply ignore if not material, while yet other risk exposures can potentially be increased and intentionally exploited.

3. Utilize the pension risk management toolkit

After cataloguing the risk factors and selecting an approach to manage each one, a company can utilize different approaches to effectuate changes. Common approaches utilized to mitigate pension financial risk are often described as 'levers': for instance, one can think of a benefit lever, an investment lever, a funding lever and an insurance solutions lever.

These levers are not mutually exclusive and independent of one another; ideally, they will function together, like a machine, to support the primary objective of managing the risks in the pension plan. For example, a company that has decided that interest rate risk is worth hedging (perhaps because cash flows will increase and the discount rate the market used to value those cash flows will decline and thus increase firm value) can explore which lever or levers might best achieve the desired result.

Benefit Lever

This lever addresses changes that can be made to the terms of the pension plan to alter the risk profile. For example, freezing the pension plan to new entrants and/or new accruals, changing the plan design, or offering participants a lump sum option, are all ways to manage risk exposures.

For U.S. corporate plans, pension benefit reductions can only be implemented with respect to benefits not yet earned (accrued) by participants. Short of the drastic step of filing for a distress termination with the Pension Benefit Guaranty Corporation, benefits already earned by participants' past service cannot be modified to reduce cost or risk to the company. For this reason, while the benefit lever can often lower a pension plan's risk trajectory over the long term, most types of benefit changes will do little in terms of immediate risk reduction. One exception is the addition of a lump sum option for plan participants, which (to the extent exercised) results in immediate settlement of pension risk.[1]

Investment Lever

Risk management strategies using the investment lever generally seek to align the expected performance of the plan's assets with the expected behavior in the plan's liabilities. Core to such strategies is that pension liabilities behave like bonds given they are, at heart, a contractually defined stream of cash flows.

There are numerous ways to match expected asset and liability returns. For example, matching the duration of the plan's assets to the plan's liabilities is commonly employed as a first step in this process. Such an investment strategy is usually implemented via a greater allocation of the portfolio to bonds and perhaps the inclusion of interest rate derivatives. More complicated approaches include key-rate duration matching and cash flow matching.

Consistent with a theme of this article, any shift in investment allocation should be viewed not only from a plan perspective but also from a corporate perspective. Merton (2006) discusses conducting asset-liability modeling for the entire company and claims full immunization of pension liabilities may not be the value-maximizing strategy for an entire enterprise. A change in investment strategy impacts the company's overall risk posture and ultimately impacts capital budgeting decisions and company value.

Contribution Lever

Another way to manage risk in the pension plan is through increased contributions. This lever does not change a plan's sensitivity to the different risk factors but by making a cash infusion beyond minimum requirements and improving plan health, a plan is better protected against adverse scenarios. Note, a pension contribution simply shifts from the corporate balance sheet to the pension balance

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sheet—the overall enterprise is still virtually in the same position before and after the infusion. Nevertheless, a firm may decide the optimal use of cash is in improving the plan's health rather than deploying the funds in some other manner.

A company can also issue debt to fund its pension plan. In the current low interest rate environment, some companies may be inclined to make such a transaction. In essence, this amounts to trading one piece of debt for another; the pension plan is debt to participants.[2]

Insurance Lever

Purchasing annuities, either on a partial basis or as part of a full blown pension termination process, can shrink the size of the pension plan or eliminate risk entirely. Longevity swaps are an alternative to annuity purchases that allow a sponsor to hedge a plan's longevity risk while retaining investment and other risks. Longevity swap transactions have gained popularity among pension sponsors in the United Kingdom, but have not yet significantly impacted the pension landscape in the United States.

4. Select a Strategy

A plan sponsor's choice of a strategy depends on short- and long-term implications in terms of key metrics like earnings per share, stock price, credit rating, enterprise risk and valuation. As conditions change, the best strategy may also change and the plan sponsor should be flexible enough to adapt to this reality. Strategy decisions also depend critically on achieving buy-in from a myriad of stakeholders including company management, shareholders, regulators, participants, etc. Proper governance is also critical.

5. Monitor the Strategy

Just like a person may get a physical health exam every year or few years, the plan's exposure to risk factors should also be frequently monitored and adjustments might be warranted as conditions change. Moreover, any strategy that is implemented should be evaluated over time to determine if the intended effects are materializing and whether modifications need to be made.

Reducing and eliminating pension risk is not a foregone conclusion. Careful analysis needs to be performed to determine if this is the best decision for a company. Plan funded level, plan size relative to the company, company risk tolerance and objectives, company borrowing capacity and credit rating, time horizon, and a host of other factors play a determining role in how to best manage the pension plan.

The Chinese symbol for risk is a combination of danger and opportunity. Strategically managing risk by following a Pension Risk Management framework should help companies balance this danger and opportunity and enable good decision making that increases the odds of achieving stated objectives.

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ENDNOTES

[1] This article examines risk primarily from the company/shareholder perspective. Freezing the pension plan (and perhaps concurrently moving employees to a defined contribution plan) or offering lump sum cash outs to employees may create additional risk for those individuals. The other levers discussed in this article may also alter the risk profile of plan participants and other stakeholders in ways not addressed herein.

[2] The determination of whether to borrow and fund the plan or to fund the plan according to statutory rules generally involves a comparison between the liability discount rate and the borrowing rate. Other factors do complicate matters including, but not limited to, insurance premiums, the actual structuring of the corporate bond offering, corporate tax rates and tax deductibility of pension contributions and debt interest payments (Gannon 2013). Additionally, other types of assets can be contributed to the pension plan like company stock and property.