Recreating Sustainable Retirement

Resilience, Solvency, and Tail Risk

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The Funding Debate: Optimizing Pension Risk within a Corporate Risk Budget

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To assess the merits of using company cash to fund pension obligations instead of other corporate strategies, we believe a corporate finance approach is needed. Corporate finance theory generally suggests that companies should pursue projects offering returns above a certain hurdle rate for a given risk level. These approaches are more useful for decision-making in a multi-country environment than assessing each pension plan individually. By considering the pension funding policy alongside other potential corporate actions within the same net present value (NPV), internal rate of return (IRR), or similar analytical framework, a company can further optimize the use of available cash resources and balance alternative strategies against each other.

In developing a model for determining whether to provide additional voluntary funding to pension plans, we begin with a 'holistic' view of a company's financial statements, which we use to consider the pension plans and the employer covenant alongside other balance sheet, income statement, and cash flow statement elements. This step establishes the nature and extent of the linkages between a company and its pension plan(s). Next we develop a risk optimization process and framework for selecting the optimal combination of pension funding, investment, and risk management strategies together with desired corporate activities. In particular, we discuss how to compare the relative merits of additional pension contributions against other potential uses of available company resources and how to assess the impact on the covenant. We then extend the debate beyond the strategic aspects by outlining high-level governance and practical implementation issues. Last, we provide some examples of how certain companies have applied these concepts in practice.

The Scale of the Global DB Pension Problem

At the end of 1999, large multinational company exposures to sizeable pension deficits and the perceived level of corporate risk related to the pension liability were considered to be quite limited and rarely mentioned as potential concerns. At that time, DB pension plan investment strategies typically had large equity

holdings and interest rates were higher than in the current environment, leading to lower liability valuations and, in some cases, decisions to take contribution holidays.

Conditions have changed in the wake of two significant global equity market corrections and a trend toward loose monetary policy across the largest developed countries. As Figure 13.1 shows, the total value of pension assets for 498 of the largest European and American multinationals have increased by 1.2 percent *per annum* over the past five years while their total liabilities increased by 2.5 percent *per annum* over this same period. As seen in Figure 13.2, these 498 multinational companies together made pension contributions of roughly €419 billion in total during this five-year period, at an average rate of €84 billion per year. While such efforts to eliminate pension deficits are notable, they have had little impact and one could even say that the past five years of pension contributions have been completely lost.

This global pension funding position has developed against a backdrop of corporate deleveraging and considerable declines in market capitalization. Figure 13.3 shows that for our sample of 498 multinational companies, total net debt declined from a peak of €12.1 trillion in 2007 to €10.8 trillion in 2011, while total market capitalization declined from €8.6 trillion to €8.2 trillion over this same period. Similarly, Figure 13.4 shows that their combined total net income declined from a peak of €837 billion in 2007 to €812 billion in 2011, while total free cash flow increased from €375 billion in 2007 to €832 billion in 2011 (although this is lower than the €1.2 trillion observed in 2009).[1]

Therefore, corporations have continued to make contributions to their DB pension plans despite the ongoing difficulties posed by the financial environment. Yet the continued existence of large pension deficits suggests they could probably have been more effective in the use of their cash. This analysis suggests two key points. First, pension plan investment and risk management strategies adopted by these companies were not suitably adapted to the changing nature of the market environment. Second, the considerable proportion of free cash flow used for pension contribution purposes may have been better invested elsewhere—potentially to boost core productive activities or enhance shareholder value.

A Holistic View of Pension Risk

To arrive at a framework and methodology for assessing whether a company should fund its DB pension liabilities or use its resources to pursue other corporate activities, one must understand the company's options, as it chooses between paying additional, non-statutory contributions to a given pension plan or investing more into the business.

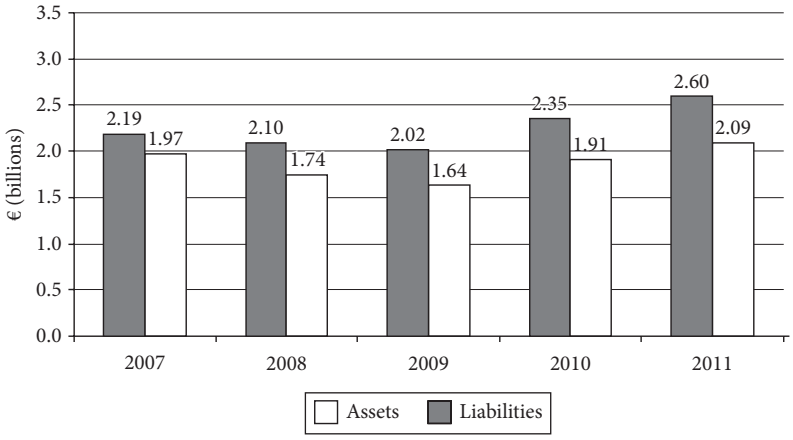

Figure 13.1. Overall funding position on IAS 19 basis for 498 of the largest European and American multinationals.

Source: Authors' compilation from annual financial statements.

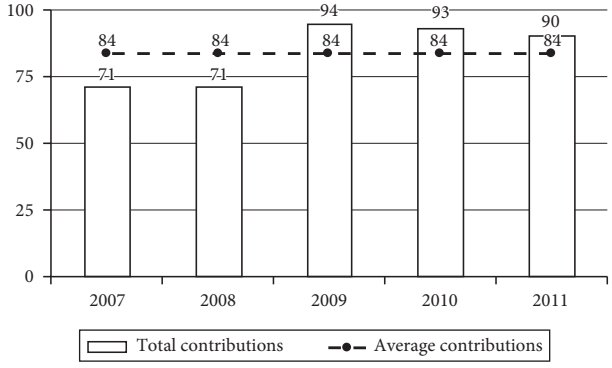

Figure 13.2. Total combined employer contributions for 498 of the largest European and American multinationals.

Source: Authors' compilation of annual financial statements.

What Do DB Pension Plans Actually Mean for a Corporate Sponsor?

A company's financial statements summarize its ability to generate returns for shareholders and provide a detailed understanding of the firm's overall viability. A well-run company should always attempt to find the optimal balance between

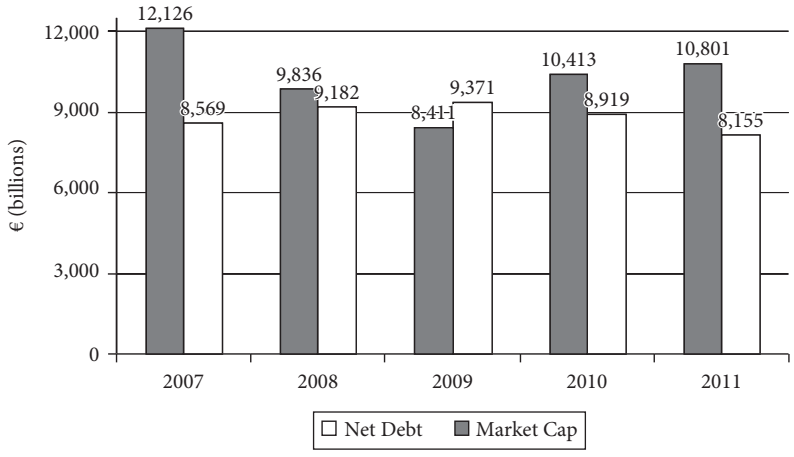

Figure 13.3. Total combined net debt and market cap for 498 of the largest European and American multinationals.

Source: Authors' compilation of annual financial statements.

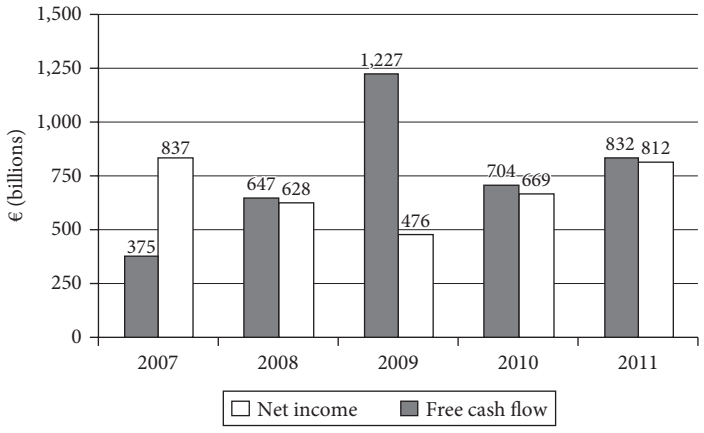

Figure 13.4. Total combined net income and free cash flow for 498 of the largest European and American multinationals.

Source: Authors' compilation of annual financial statements.

its balance sheet, income/expenses, and cash flow objectives, to maximize the value of shareholder equity.

Companies with material pension exposures cannot define their key corporate objectives (e.g. valuation, earnings volatility, capital requirements, capital expenditures, etc.) without considering their pension exposures and associated pension risks. Trying to achieve key corporate objectives without considering the potential

impact of pension risks creates imbalances that will affect the company's ability to achieve its goals and the pension plan's ability to meet long-term obligations. Within this context, one must consider what exactly a DB plan represents for a corporate sponsor.

Corporate sponsors have three levers to manage DB pension risks so that their impact is predictable and manageable: the funding strategy, the investment strategy, and the risk management strategy. In turn these three levers determine how much money is paid into the plan, the trade-off between risk and expected return, and the specific actions that can be taken to reduce either the size or volatility of a DB pension deficit. The ideal balance between these levers depends on the sponsor's financial health. For example, a very strong company may be able to accept higher levels of investment risk or higher contribution levels than a weaker company.

Corporate Risks

Any investment or strategic decision brings potential rewards but also exposes a corporation to a set of risks. As shown in Figure 13.5, these risks can be broken down into three: core business risks, other general risks, and financial risks. Together these risks provide the references against which the success of and return on any corporate strategy can be measured. For our purposes, we shall define corporate risks as any threat to a corporation's objectives measured in financial terms, including all of the individual risks shown in Figure 13.5.

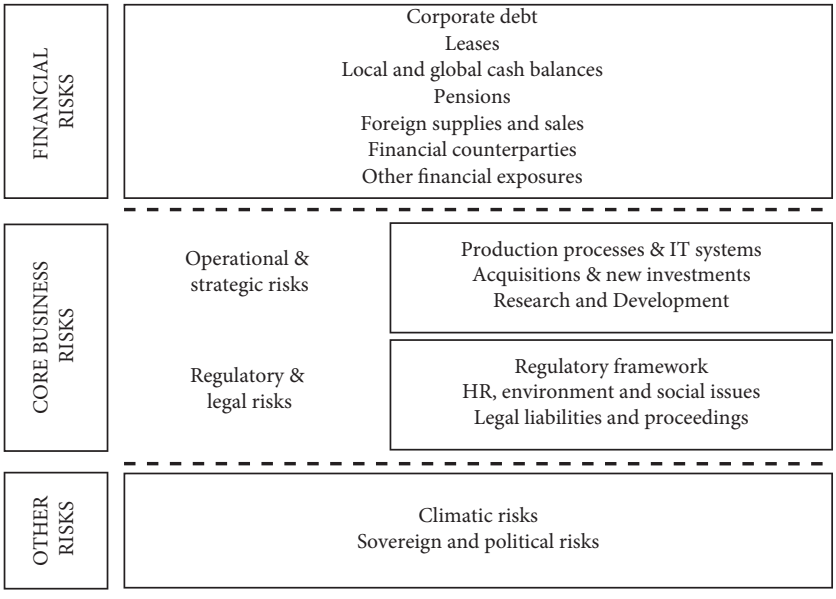

Figure 13.5. Corporate risks.

Source: Authors' compilation.

Figure 13.6. Impact of corporate risks on key corporate metrics.

Source: Authors' compilation.

Figure 13.7. Impact of pension risks on key pension metrics.

Source: Authors' compilation.

A company's operations and internal functions, along with the wider economic and regulatory environment, impact its corporate risks. As shown in Figure 13.6, exposure to these corporate risks can in turn result in an unwanted adverse impact on the company's financial statements and overall market standing.

Pension Risks

Pension liabilities and asset valuations affect pension risk; the latter arise as a result of changes in the market value of assets held to meet pension liabilities, the underlying nature of the pension benefits provided to plan members, the demographic profile of the membership group to which benefits are provided, and the financial and demographic assumptions used to place a value on the liabilities. At a consolidated corporate group level, aggregate pension risks are reflected in the company's financial statements. Under the revised IAS 19 accounting standard, the full value of the pension deficit (or surplus) will be reflected on the consolidated balance sheet, while the consolidated income statement will reflect the total operating cost (i.e. service costs) and finance cost (i.e. the net-interest cost without allowance for subjective expected return on assets assumptions) from a company's DB pension plans. Furthermore, the value of all actuarial gains and losses incurred during the year will be fully recognized through the consolidated statement of other comprehensive income, with the total value of pension contributions reflected in the

consolidated cash flow statement. Just as corporate risks affect corporate metrics, pension risks influence key pension metrics, as illustrated in Figure 13.7.

The Interaction Between Corporate Risks and Pension Risks

Pension risk drivers can be the same as the corporation's risk drivers. For example, a large financial institution will most likely have considerable interest rate exposure through its outstanding debt. In some cases, pension risk drivers can act as diversifiers or even offset some corporate risks when viewed within an enterprise risk management framework. For example, a utility company whose revenues are linked to inflation may be less worried about the level of inflation risk exposure in its pension plans. As a result, it is possible that decisions taken to manage pension risk may result in an increase in overall risk when the pension scheme and company are viewed together.

The asset-liability risks associated with a company's DB pension plans can have a significant impact on the company's financial risks; however, non-financial pension risks can also have an important impact on a company's core business and other risks. Figure 13.8 shows how pension risks can be viewed within a corporate-wide risk budget.

A company's pension deficit directly affects its balance sheet. The pension plan's risk levels and key risk drivers determine pension deficit volatility. Consequently,

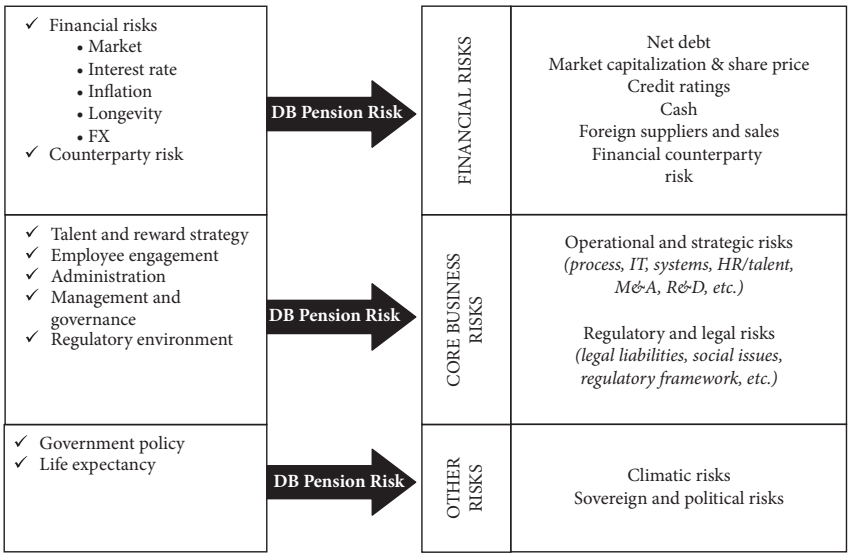

Figure 13.8. Pension risks within an overall corporate risk budget.

Source: Authors' compilation.

pension risk can cause increased volatility of total balance sheet liabilities, thereby affecting all corporate finance metrics that include the company's total liabilities, such as net debt, enterprise value, or the company's credit rating. Similarly, pension expense can dilute the company's consolidated net earnings. Any earnings volatility arising from exposure to pension risks at a local level can, therefore, have a knock-on effect for the company's dividend policy and other corporate finance metrics, including earnings measures such as net debt to EBITDA (earnings before interest, taxes, depreciation, and amortization) ratios. Finally, the pension contributions a company is required to make can ultimately drain overall free cash flow, thereby reducing its ability to develop its business and undertake profitable ventures.

Pension benefits can be met either from the pension plan's existing assets (and the expected future return earned on these assets) or by making additional contributions (i.e. the funding plan). A company considering additional contributions is essentially faced with a choice between contributing money to increase pension plan assets in the hope that these contributions and the associated additional investment returns will help minimize the probability that the company will have to meet pension obligations using additional financial resources,[2] and using the available funds to invest in 'corporate activities' (i.e. invest in research and development, productive capacity, a debt or equity buyback program, or other similar activities). In the latter case, the pension plan is left either unfunded or underfunded for a period of time. The assumption is that the company's financial position will be strengthened as a result of its other corporate activities and the stronger company should be better placed to meet its future pension obligations. The company is trying to 'grow out of the pension problem': a pension deficit of €50 million may be seen as a material problem for a company whose total value is €100 million but might be considered immaterial for a company whose total value is €1 billion.

The Pension Balance Sheet

When considering a DB plan in isolation, the employer covenant reflects the notion that the company bears ultimate responsibility for providing promised pension benefits; therefore, pension liabilities not backed by specific assets ear-marked for this purpose must be met from the company's other resources (i.e. the employer covenant). Unfunded pension obligations are just another financial liability.

Corporate liabilities consist primarily of net pension obligations, debt, leases, and other financial obligations, while corporate assets are mostly composed of cash and other long-term real and financial assets. The question for the company is how best to structure its assets to meet its liabilities and maximize the value of shareholder equity. Decisions about the asset structure might look at contributions and cash flow (described further on in the chapter), but will also include

decisions about investment and risk management strategies, which affect the balance sheet if they result in reduced volatility of the pension deficit.[3] The company must find an acceptable balance between pension deficits and overall company debt capacity.

Deciding to leave the pension plan either unfunded or underfunded for a period of time might also be viewed as a form of inexpensive borrowing for companies, especially for those companies with high borrowing costs. This flexibility may be an attractive factor from a corporate finance perspective. On the other hand, companies may feel uncomfortable borrowing from employees. Importantly, this issue may be mitigated where there is some form of pension insolvency insurance, such as the Pensions-Sicherungs-Verien (PSV) in Germany, the Pension Protection Fund (PPF) in the United Kingdom, and the Pension Benefit Guaranty Corporation (PBGC) in the United States.

The Pension Income Statement and the Statement of Other Comprehensive Income

Under the revised IAS 19 accounting standard, the annual cost of running a DB pension plan is the sum of total service costs (including current and past service costs plus any curtailment and settlement gains and losses recognized on the income statement), the net-interest cost recognized on the income statement, and 're-measurements,' including actuarial gains and losses, recognized in 'other comprehensive income.' By making additional contributions to a DB pension plan, the sponsoring firm could achieve a lower net-interest cost (*ceteris paribus*) and effect a transfer of some pension liabilities and risks,[4] thus reducing the pension plan size and expense levels, or achieve a better degree of asset-liability matching,[5] leading to less volatility in annual 're-measurements' through the statement of other comprehensive income and on the balance sheet.

These potential benefits contrast with possible increases in operating or investment income should the company choose to invest in other corporate activities. In this case, the expected increase in earnings in the long term may overwhelm pension expense volatility in the short term. If an acceptable balance between pension deficit and deficit volatility on one hand and earnings dilution and volatility on the other is not reached, there could be a material impact on the valuation of the company and/or the strength of the covenant.

The Pension Cash Flow Statement

Using an example of a single underfunded DB pension plan, and assuming that the sponsor is not required to fund the deficit in advance, we can look at the choice between making no immediate contributions to the plan, making a large contribution up front, and making regular but relatively smaller contributions over

time. A graphical illustration of each of these choices is provided in Figures 13.9, 13.10, and 13.11.

If the company does not make immediate contributions, the pension plan's benefit payments will be met from the plan assets in prior years. When these assets are expended, the rest of the liability cash flows must be covered by the employer. In this case, the company will be left free to invest in corporate activities in the early years until the point in the future when it will need to cover the ongoing benefit payments from its own operating cash flow. If the company were to consider monetizing the existing pension covenant by making additional contributions to the pension plan, it could do so by front-end loading the required contribution. Under this option, the hope is that that this contribution, along with the additional returns earned on the investment, would be sufficient to meet ongoing benefit payments with no further sponsor involvement. Alternatively, the company could make regular contributions over time, which might balance the need (or priority) to invest in corporate activities with the potential objective of reducing the requirement for additional sponsor investment in the future. The selected approach constrains to some extent the company's non-pension investment program and can affect the long-term strength of the pension covenant. Structuring additional contributions should reflect a balance between the level and timing of contributions needed to meet the legal and regulatory funding requirements of the pension plans, which differ greatly across countries, and pursue other planned

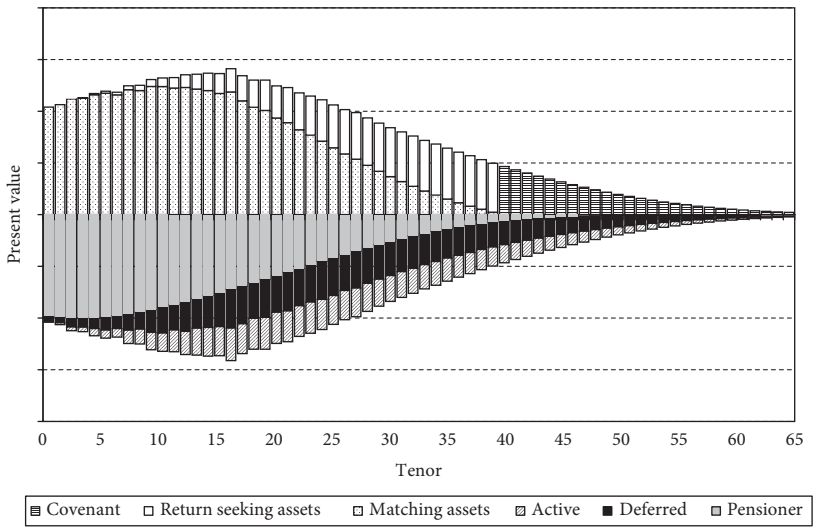

Figure 13.9. No immediate additional contributions.

Source: Authors' compilation.

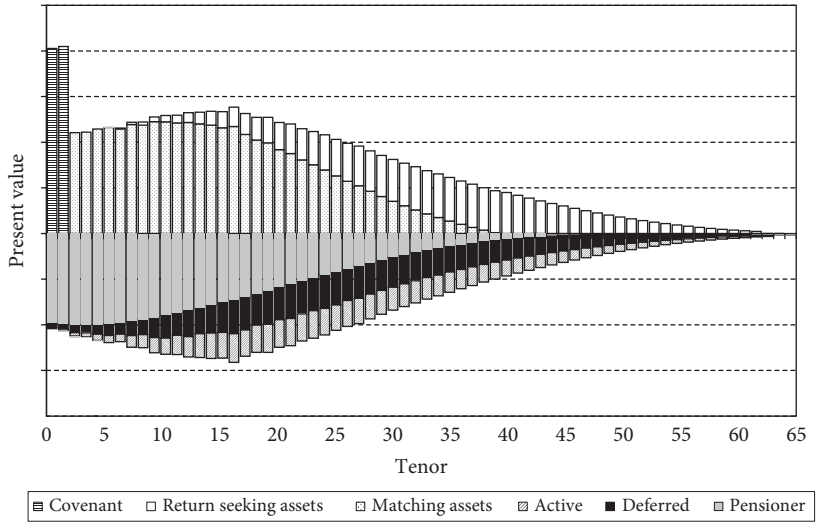

Figure 13.10. Immediate upfront contribution.

Source: Authors' compilation.

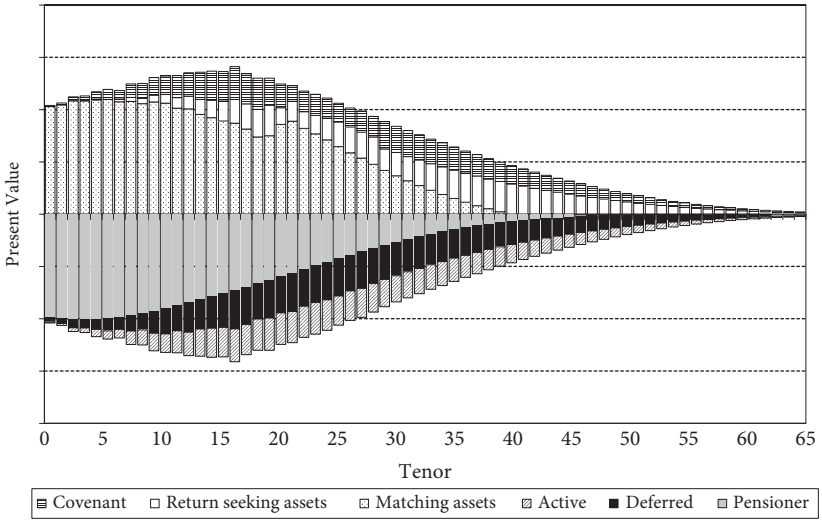

Figure 13.11. Regular additional contributions over time.

Source: Authors' compilation.

business initiatives, including capital expenditure and the scheduled repayment of existing company borrowings.

The shape of the contribution schedule is important. Ideally corporate sponsors should take account of liquidity constraints and attempt to customize the schedule to meet the objectives, needs, and preferences of both the pension plan and the corporate sponsor.

Optimizing Pension Risk within the Overall Corporate Context

Achieving corporate objectives often requires a detailed understanding of and a sound framework for managing, optimizing, and governing various exposures and risks, including pensions. Additionally, a corporate sponsor's financial health is instrumental in ensuring its pension plans' long-term capacity to meet their obligations. Without some objective way to consider and compare the different risks and potential returns from changes in strategies, a company cannot adequately assess how much pension risk it can afford to take, where risks can be taken to ensure they are satisfactorily rewarded, which risks need to be hedged or transferred, and which risks need to be governed.

To this end, we focus on the processes that can help optimize and govern pension risks. This can be achieved in three phases. First, a risk optimization process is required, where changes in funding, investment, and risk management strategies are analyzed in terms of their impacts on corporate metrics and objectives. This is then supplemented by a cost/benefit analysis to determine the relative merits of each alternative pension strategy and how changes to the pension risk/return profile affect the sponsor covenant. Last, another cost/benefit analysis will be carried out to compare the best pension strategy to other corporate options available.

Optimizing the Pension Risk and Return Profile

Ideally the plan sponsor will form a view on the level of pension risk that might be regarded as acceptable, tolerable, or desirable. At a corporate level, aggregate pension risk must be commensurate with the sponsor's capacity to absorb potential costs/losses. For example, for a company sponsoring multiple pension plans, reducing pension risks in one or more plans may allow additional risk to be taken in other core business activities within the overall risk budget. But for the sponsor to appreciate the scale of its pension risk, it must specify an overall pension risk limit that reflects risk levels in its pension plan(s) and the impact that these risks have on wider corporate metrics. The steps set out below can be used to achieve this.

Identify Corporate Objectives and Key Corporate Metrics

Key corporate metrics and ratios determine the extent to which corporate objectives have been met. These metrics must include traditional valuation metrics, such as the stability of earnings, the level of net debt, earnings targets, etc., and sector and company-specific ones (e.g. the Basel 2 capital requirements for banking institutions, cash flow levels for utilities, etc.).

With a Detailed Understanding of the Overall Corporate Objectives, Develop 'Proxy Corporate-Pension Metrics'

Simple 'proxy corporate-pension metrics' can combine corporate metrics and pension metrics such as the following ratios: net pension deficit as percentage of market cap and/or net debt, pension expense as percentage of net earnings, pension-driven net earnings volatility, and contributions as percentage of pension-adjusted free cash flow.

Companies may also consider more complex ratios as proxies, using pension-adjusted figures such as funds from operations (FFO)/pension-adjusted net debt, pension-adjusted net debt/EBITDA, and pension-adjusted net debt/capital. The appropriate metrics vary from sector to sector. Individual company circumstances can lead to different levels of importance attached to each metric. These 'proxy corporate-pension metrics' should illustrate the materiality of a company's pension exposures, while their volatility provides an indication of pension risk levels and their potential impact on the company.

Set an Explicit Limit on the Level of Pension Risk Regarded as Acceptable, Tolerable, or Desirable

For companies valued on the basis of Net Debt to EBITDA or enterprise value to EBITDA ratios, a simple risk limit could be specified as a maximum value for the ratio of either [pension-adjusted net debt + one-year 95 percent Value-at-Risk][6] to pension-adjusted EBITDA or [Pension-adjusted enterprise value less one-year 95 percent Value-at-Risk] to pension-adjusted EBITDA.

For others, the dilution of earnings from DB pensions and the corresponding volatility can give a good indication of pension cost in terms of overall company valuation. For such companies, one might consider ratios such as the volatility of net earnings to the volatility of net earnings excluding the pension expense or, alternatively, net earnings (current pension expense + impact of one-year 95 percent Value-at-Risk on expected pension expense) to net earnings (current pension expense).

The appropriate definition of a risk limit is complex and must reflect the company's specific circumstances and objectives. The risk budget is likely to be multifaceted with several risk limits, including the maximum increase in deficit over a given period of time, the maximum value of additional contribution over a given period of time, or the maximum increase in pension expense over a given period of time.

Develop Alternative Pension Funding, Investment, and Risk Management Strategies Focused on Meeting Desired Return Objectives While Remaining Within the Set Risk Limits

To ensure pension risk is within the acceptable levels set out in the previous step, a range of strategies must be considered, including changes to planned pension funding or the period over which funding will occur, changes to investment strategy (i.e. asset allocation, diversification within asset classes, and hedge ratios), and other risk management options (e.g. initiatives to reshape the size or profile of the liabilities, risk transfer options, and alternative finance solutions).

Bringing pension risk to an acceptable limit may require contributing money and using contributions to affect the investment strategy or risk management changes. These additional contributions may affect other corporate activities, so the combined overall pension and corporate strategy should be fully analyzed. The sponsor must decide whether making additional pension contributions as part of a revised contribution policy or funding strategy is preferable to using the available cash elsewhere in the sponsor's business.

Assess the Appropriateness of a Given Investment and Risk Management Strategy for the Pension Plan Based on the Pre-Defined 'Proxy Corporate-Pension Metrics,' Acceptable Risk Limits, and Other Evaluation Criteria Such as NPV, IRR, etc.

One must maintain consistency when comparing pension funding and corporate investment decisions. One way to maintain consistency is to complement the 'proxy corporate-pension metrics' and acceptable risk limits defined earlier with risk-adjusted hurdle rates, IRR, or NPV, so pension strategies can be compared to other alternatives.

Any single available pension or corporate strategy cannot be considered in isolation; as noted above, it is the overall pension and corporate strategy that must be analyzed. For example, consider a company with a material pension deficit faced with a simplified decision between contributing money into its pension plans to remove the deficit and buy out the liabilities with an insurance company, or continuing with its existing contribution policy, using available cash resources to

develop, say, a new production plant over the next ten years. In this example, the appropriate comparison is between (a) the risk-adjusted NPV or IRR for the company's ongoing business initiatives, including the initial cash contribution to settle the pension liabilities, but without any future balance sheet or earnings volatility or any potential cash calls from DB pension plans; and (b) the risk-adjusted NPV or IRR for the company's ongoing business initiatives and the new production plant, but taking into account the impact on this risk-adjusted NPV or IRR of the remaining pension risks (and hence the potential need for additional future pension contributions).

If this example company pursued the second option, and a new medical breakthrough resulted in a substantial increase in life expectancy, the financial analysis of the company's business initiatives and new production plant could remain unchanged. The increased cost of having to pay pension benefits for significantly longer periods of time may make it difficult for the company to effectively complete its planned development of the new production plant. Allowance for such factors may reduce the NPV of this option.

Two pension investment and risk management strategies can have similar risk/return profiles, yet different overall impacts and combined NPV or IRR results. A feedback loop can help separate strategies that increase the strength and value of the covenant (e.g. generate positive NPV) from those that decrease it.

Select the Most Effective Pension Strategy from those Deemed Appropriate by Ensuring that Risk Is Taken in the Most Efficient Manner and that the Combined Pension and Corporate Strategies and Activities Maximize the Chosen Evaluation Criteria

The main differentiating factor between different strategies remains the overall impact on the covenant. This impact is best captured using evaluation criteria like NPV or IRR.

Risk should be taken in areas that are expected to be rewarded and any potential diversification benefits between different risk sources should be maximized. In deciding which strategy is most efficient, one must consider both the company's views and factors specific to the company and its operating environment. An illustration of how this framework might work in practice is shown in Figure 13.12.

Governance and Implementation Considerations

In the extended framework set out above, a company must ensure that the process for comparing alternative strategies is rigorous and reliable. Consequently, sponsors would do well to consider the implications of these decisions from a governance and implementation perspective.

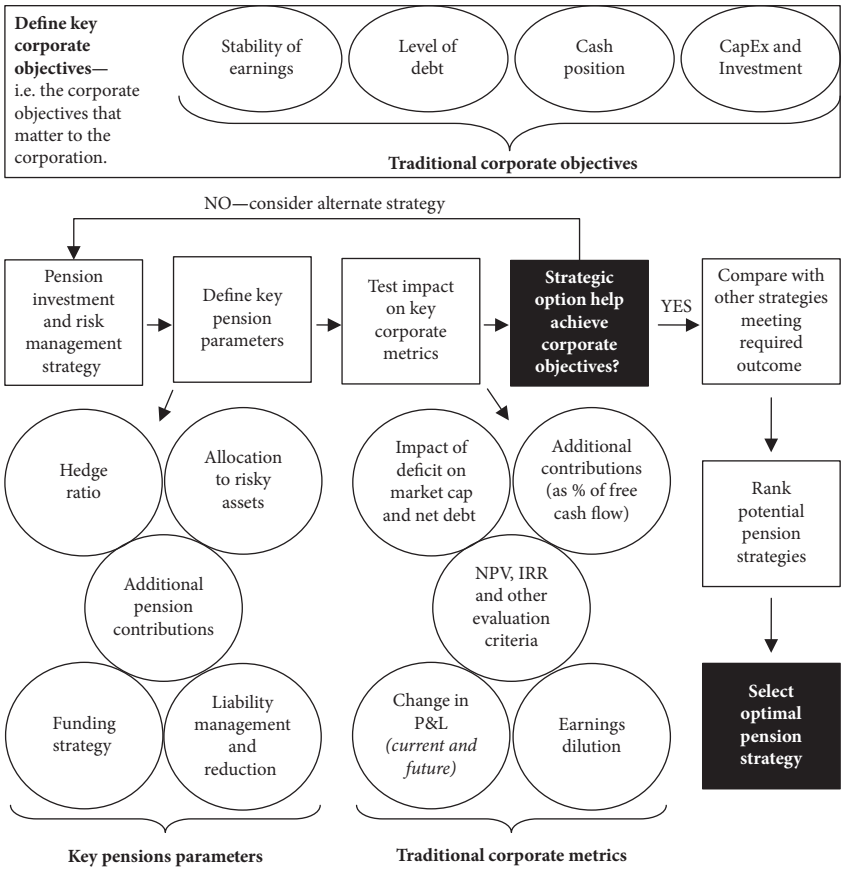

Figure 13.12. Optimizing the DB pension risk and return profile.

Source: Authors' compilation.

Governance Implications of the Funding Debate Framework

The framework and approach advocated has several distinct advantages for managing pension risk. Nevertheless, these methods introduce complexity because a company may need to implement various corporate and pension strategies simultaneously. This increased complexity requires robust governance and monitoring. In particular, a company must be aware of implementation requirements for a given pension or corporate action, the need for coordination between different services, geographies or lines of business, potential disparities between different stakeholders, advisors, and providers (which would

require the sponsor to clearly define responsibilities and assign them to named individuals, define policies and processes, articulate risk tolerances, implement a forward-looking monitoring process, and manage internal and external communications), and the potential need for the company to take corrective action in the face of unfavorable outcomes and its capacity to actually develop and take such actions.

Understanding Cash Sources

Another dimension that must be considered is whether potential pension contributions are sourced from excess cash within the business or raised on the market. This decision could affect the level of relative leveraging in the company's balance sheet and the company's long-term borrowing capacity. In certain industries, companies may have a regulatory arbitrage opportunity. Although the cost of capital is assumed to be the same, changes in the company's debt-to-equity ratio as a result of raising the funds externally should be considered. Tax considerations and the existence of potential tax shields should also be taken into account when determining the most appropriate source of additional cash.

Implementation Constraints

One reason for testing and ranking many alternative strategies is that structural and organizational limitations can affect their implementation. For example, the sponsor may not be capable of making additional contributions as its financial standing is weak, or due to liquidity issues. This affordability constraint may limit the universe and nature of the pension strategies and activities that can be implemented. Alternatively, legal and regulatory requirements might determine the way in which pensions are financed. For example, in the Netherlands or the United Kingdom, companies are required by regulation to make pension contributions if their pension plan solvency falls below some pre-defined short-term or long-term level.

Furthermore, the company may run into opposition from trustees or other third parties. For example, in the Netherlands and United Kingdom, DB plans are typically set up as trust arrangements with a set of fiduciaries that have ultimate responsibility for investment strategy and compliance with local funding requirements. If the merits of the company's pension decisions cannot be communicated clearly to such third parties, it is entirely possible that their opposition could complicate matters significantly and, in the worst case, could render the entire approach impossible.

If the most favored strategy is not implementable, the company may well need to consider whether the second or third ranked strategies (shown in the previous

figure) would be sensible and desirable, and whether this approach could offer an attractive strategy that can actually be carried out in practice.

Practical Application of the Proposed Framework

Our suggested framework provides companies with an innovative way to assess the relative merits of using available cash for pension funding. Moreover, we are aware of a number of cases where companies have successfully applied some of its individual components. This is because companies are increasingly evaluating pension funding decisions with reference to the potential impact these decisions could have on their key performance indicators and business plans, rather than just considering changes in typical 'pension-only' metrics like Value-at-Risk. One such example comes from a large European telecom firm with significant pension liabilities. This company was faced with calls from their largest plan's trustee to adopt a very prudent long-term funding target; by considering the specific components of their core business that could offset pension risks to some extent and how the pension deficit (and risk) was expected to develop over time relative to the expected progression of the employer covenant, the company was able to demonstrate that it would need to increase the current level of risk in the pension plan by 50 percent in order to have a reasonable chance of meeting the trustee's prudent funding target. The company was then able to clearly illustrate the potential detrimental impact that this risk increase could have on its debt and equity holders, and how the increased risk might impact the perceived strength of the covenant in the shorter term and, hence, the security of member benefits. In this way, the company was able to negotiate a pension contribution policy that did not adversely impact its development plans and ensured that pension risk levels relative to the employer covenant were reasonable in future years.

A second example comes from a European bank that has developed an approach to pension risk monitoring as set out above. The bank identified the financial metrics most important to its shareholders and then restated these metrics to explicitly include the size and potential volatility of global DB liabilities. As a result, the bank gained better control over global risk exposures, with the ability to quantify and qualify risk sources and evaluate the impact of pension risk on its capital requirements. This provided the bank with an 'early warning system' to identify when risk limits were close to being breached and provided senior management with a better understanding of the potential impact that pension risk management actions could have on their key financial metrics. The bank has now also developed a governance framework with clearly defined responsibilities for identifying potential risk management and investment opportunities.

Furthermore, companies and external stakeholders (e.g. equity and credit rating analysts) appear to have increasingly greater appreciation for the potential

positive impact that reducing or removing pension risks can have on expected future company performance, even if this involves substantial initial contributions that might have been used elsewhere in the business. For example, in mid-2012, a large U.S. manufacturing company announced an offer of lump sum payments to a significant percentage of salaried retirees in the U.S., with other retirees offered a continued monthly pension, insured by a large U.S. insurance company. The company contributed approximately $4 billion to help fund a group annuity contract purchase and improve the funded status of the pension plan for active employees. The company took a one-off charge to earnings of approximately $3 billion, as well as an ongoing annual reduction in earnings of approximately $200 million. Despite the substantial additional contribution requirements and the reduction in overall company earnings, reactions from investors and credit rating agencies were positive to neutral. The successful completion alleviated many concerns that the market would view accounting charges unfavorably.

Conclusion

For many companies, DB pension liabilities are material and can have a significant impact on their ability to achieve the firm's business objectives. Consequently, companies increasingly need an integrated governance and pension risk management framework that will allow them to evaluate the relative merits of using cash to fund pension obligations versus using it for other corporate objectives. There is no simple solution to the pension problem; we have argued here that the answer lies in adopting a corporate finance approach. While we have yet to see a company fully adopt the framework set out here, there are clear examples that many corporations are moving in this direction. We believe this momentum will continue and that companies adopting a corporate finance approach will be far better placed to manage DB pension risk in the future.

Appendix: Defining the 'Sponsor's Covenant'

As with other company debtors, the company owes money to pension plan(s) that it sponsors. For a pension plan, the value of the sponsor's financial support is crucial if it wants to meet the pension obligations of its members. The 'sponsor's covenant' in relation to a pension plan is defined as 'the combination of (a) the ability and (b) the willingness of the sponsor to pay (or the ability of the trustees to require the sponsor to pay) sufficient advance contributions to ensure that the scheme's benefits can be paid as they fall due' (IFoA 2005).

If a company is looking for a solution that leaves it free to pursue its corporate agenda while ensuring DB pension risk is well managed, it might look to maximize the value of the sponsor's covenant and reach a balanced position where corporate finance and pension risk management decisions are optimized.

Notes

1. Free cash flow is taken to be cash flow from operating activities less total capital expenditure.
2. In this example, 'money' is intended to capture not only direct cash contributions but also the transfer of a wide range of contingent or conditional assets.
3. With the changes in IAS 19 disclosure requirements, deficit volatility will feed into the balance sheet through recognition in Other Comprehensive Income.
4. In this example, risk transfer is intended to cover liability management exercises, such as enhanced transfer values or pension increase exchange, as well as either a partial or complete buy-in or buyout.
5. To the extent that additional contributions are used to reduce risky assets and increase hedging.
6. Value-at-Risk is the potential increase in pension deficit that would be expected to occur over a given time horizon with a defined probability and is typically measured in monetary terms.

Reference

Institute and Faculty of Actuaries (IFoA) (2005). *Sponsor Covenant Working Party Final Report: Allowing for the Sponsor Covenant in Actuarial Advice*. London, U.K.: IFoA.