

AUGUST 2011

Navigating through another “pension storm”

Prudent pension management in an uncertain
market environment

1. Why pensions today?

The events of the past few weeks have brought corporate pension plans to the forefront again. The debt ceiling debate, followed by the downgrade of the U.S. sovereign credit rating by S&P, has surprisingly resulted in a rally in interest rates. The resulting record-low interest rates, combined with poorly performing equity markets, have likely driven the funded status of most pension plans to be materially worse today than at the beginning of the year. This situation represents the “perfect pension storm,” when the present value of liabilities increases (because the discount rate drops) and asset values synchronously drop (predominantly invested in equities and other “risky” assets).

At the same time, many of the larger firms have record-high cash balances and also enjoy access to the debt capital markets at attractive prices.

- The link between today’s capital markets and the pension environment creates a clear but potentially fleeting opportunity to fund pension plans for firms that have the ability to do so
- Contributing to an under-funded pension plan typically has a positive and measurable impact on firms’ financial metrics, because it is Net Present Value (NPV) positive and EPS accretive without adversely impacting credit metrics, even if the contribution is financed with new debt
- The recent market events are yet another reminder for firms to adjust their pension asset allocation to reduce market risk exposure. This adjustment could help them avoid, or at least soften, the blow of pension-induced volatility to the balance sheet, cash flows and earnings
- There have been three perfect pension storms in the past decade. It behooves decision-makers not to be caught in the next one

Figure 1

Three pension perfect storms in one decade

Period	S&P 500 annualized return	Liability discount rate at beginning of period	Liability discount rate at end of period
2002	(23.4%)	7.1%	6.4%
2008	(38.5%)	5.8%	5.5%
2011 YTD ¹	(6.3%)	5.1%	4.5%

Source: Bloomberg, J.P. Morgan, Moody’s Corporate AAA, AA, A bond indices

¹ YTD as of 8/12/2011

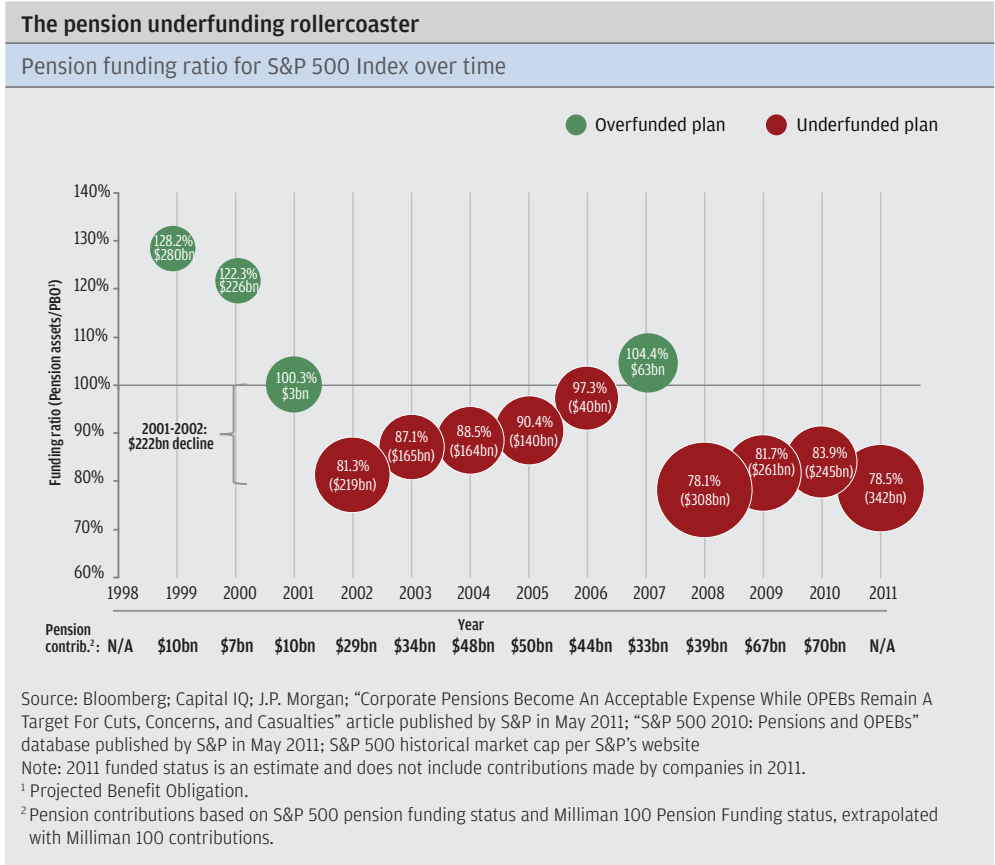
Senior decision-makers should understand pension issues even if they do not sponsor a Defined Benefit (DB) pension plan:

- Even if your firm is not affected directly, your clients, suppliers or competitors may be affected by DB pension problems
- An underfunded DB pension plan, like debt, affects the value of equity holders (and your firm’s equity investments)
- Pension plans’ increasing allocation toward fixed income assets may impact the relative pricing of various asset classes (debt vs. equity)
- Public entities, such as state governments, are experiencing challenges similar to those facing companies with DB pensions, but the magnitude of the problem is larger. State and municipal pension issues may affect your business directly or indirectly through higher taxes, reduced public spending, and increased interest rates, among other mechanisms

2. Perfect pension storms happen

The first perfect pension storm of the century occurred in 2001-2002 with the collapse of the tech/telecom bubble. A second storm transpired within the same decade during the recent global financial crisis in 2008, when the one-two punch of a meltdown in asset values and low interest rates was further exacerbated with the onset of the Pension Protection Act's (PPA) more stringent contribution requirements. As a result of the second pension storm, a \$63bn pension surplus for S&P 500 firms in 2007 turned into a \$308bn deficit by the end of 2008 (Figure 2). In fact, in 2000, less than 20% of S&P 500 firms experienced underfunded pension plans; by 2010, about 64% had underfunded plans (Figure 3). The third pension storm is taking place today with record-low pension liability discount rates. Firms that strategically matched pension assets with liabilities (i.e. weighted toward long-term fixed income) have, however, been better able to protect their pension funded positions during these times of crisis.

Figure 2



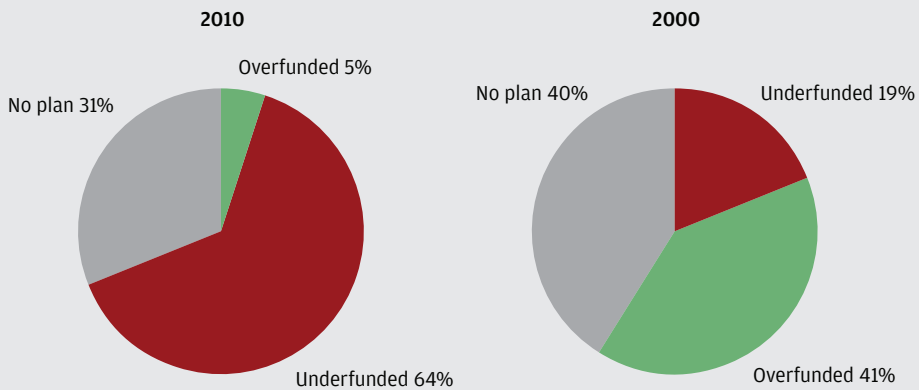
The significant underfunded pension status of S&P 500 firms at year-end 2010 creates a long timeline for full funding (in the absence of material contributions): between four and nine years of 8% annual pension asset returns, or two to five years of much more aggressive 12% annual returns, an achievement that has been rarely realized over the past 50 years. The events of the past few weeks have increased these required returns.

Achieving 8% annual returns will be challenging for pension plans at a time when interest rates are hitting record-low levels and economists are revising their economic growth forecasts downward.

Figure 3

Pension funding has deteriorated dramatically over the past decade

Pension funding status of S&P 500 firms: 2010 versus 2000



Source: FactSet

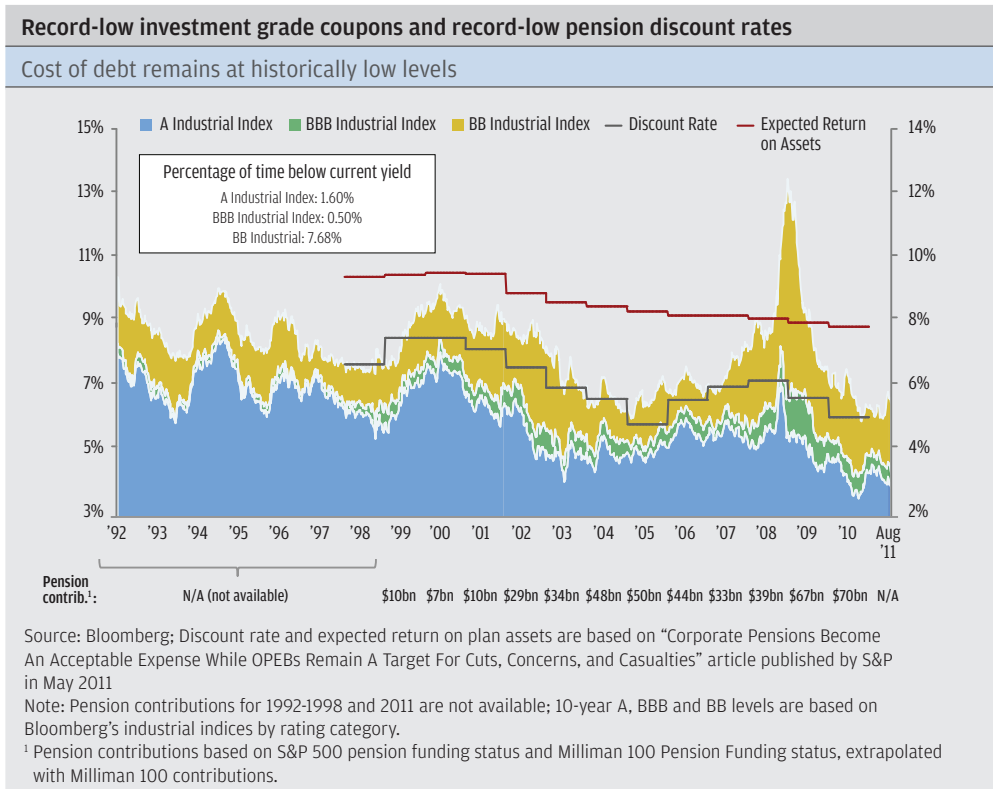
Ten salient pension facts:

- 69% of S&P 500 firms have DB pension plans, and 92% of these firms had pension deficits as of year-end 2010
- S&P 500 DB pension assets amounted to \$1.3trn at year-end 2010
- S&P 500 DB pension liabilities were about \$1.5trn, leading to a \$245bn pension deficit by year-end 2010. This could grow to about \$340bn if current market conditions persist at year-end 2011
- For S&P 500 firms with pension deficits, the funding gap typically represents about 2% of market capitalization and 9% of total debt
- S&P 500 companies could begin closing the pension funding gap, if they so choose, with cash balances of nearly \$1.3trn and good access to capital markets, especially for firms with strong credit ratings
- Total S&P 500 pension contributions were about \$70bn in 2010, representing about 6% of the operating cash flow of firms with plans
- 49% of U.S. pension assets are invested in equities today, compared to 64% in 2000
- Actual pension asset returns over the last decade have averaged 6% for firms with large plans, compared to expected returns of 9%
- U.S. state and local government underfunded pension liabilities are estimated at between \$2 and \$3 trillion as of year-end 2009, compared to debt of \$2.4 trillion
- Pensions represent only a portion of underfunded obligations; other post-employment benefits (OPEBs) of the S&P 500 are underfunded by about \$210bn

3. Pensions and the current capital markets environment

Cheap debt financing—a pension funding opportunity: In spite of significant economic uncertainty, debt capital markets have been benign for most of the year. Even over the last few weeks, as volatility has spiked in many markets, high-quality issuers have continued to enjoy access to capital markets at very attractive levels. As Figure 4 illustrates, the all-in cost of debt for investment grade and even non-investment grade companies has been at record lows relative to the past 10 years. This cheap debt environment reflects historically low Treasury rates and limited demand for funding by large U.S. corporate borrowers, since large U.S. firms enjoy record high levels of cash and have increased their cash flow generation by slashing capital expenditures and R&D. Many firms have taken this opportunity to actively manage their pension deficits by making significant voluntary contributions (total contributions of about \$70bn per year recently).

Figure 4



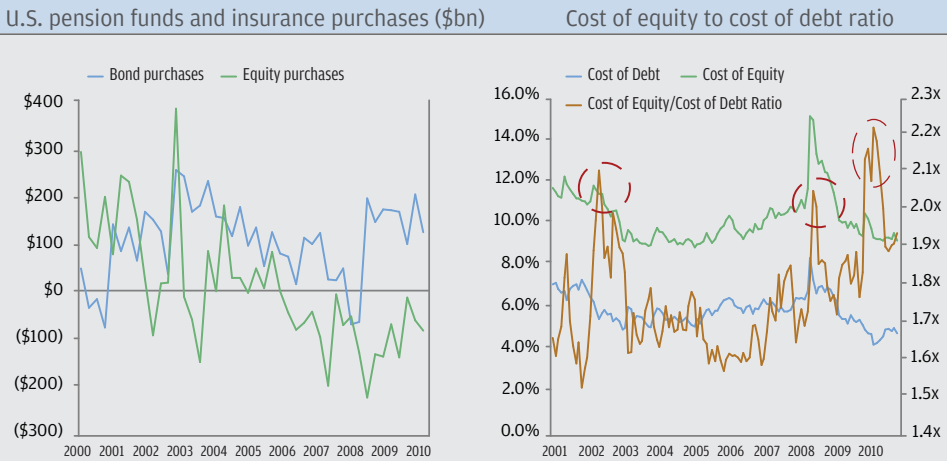
Current borrowing rates are lower today than the two most important pension metrics used for GAAP reporting: the liability discount rate and the Expected Return on Plan Assets (EROA). The liability discount rate (typically representative of high-quality bonds) is the rate at which the pension liability grows with the passage of time. The EROA is the rate at which the accounting asset balance is allowed to grow with the passage of time (with differences from actual asset performance amortized over time). Given the availability of cheap debt financing today, active pension funding is typically compelling from an accounting perspective and will in almost all cases be EPS accretive.

Low cost of debt financing—a hit to corporate pension funded status: Ironically, the current low cost of corporate debt financing also increases the magnitude of estimated pension liabilities, since the stream of future pension payments are discounted at the borrowing cost of high-quality corporate bonds. When these borrowing costs fall, the present value of future liabilities increases, leading to higher pension deficits or lower pension surpluses and potentially higher funding needs.

Increased pension asset allocation to fixed income assets and the impact on the relative cost of debt vs. equity: Data from the Federal Reserve’s Flow of Funds suggest that net bond purchases by U.S. pension funds and insurance companies were \$594bn in 2010 and \$685bn in 2009. This compares with net equity purchases of (\$308bn) and (\$578bn) for the same two years. Not surprisingly, pension funds have increased their allocation to fixed income relative to equity in response to poor equity performance over the last decade, as well as to better match the duration of pension assets to that of pension liabilities. This shift in pension assets from equities to bonds has kept bond issuance yields low, and the cost of equity relative to the cost of debt has recently been near record highs (Figure 5, right panel).

Figure 5

Increased allocation from equities to fixed income has affected the relative cost of debt vs. equity



Source: Federal Reserve, Board of Governors, Flow of Funds (Q4 2010)
 Note: Data are quarterly; Bonds refer to corporate and foreign bonds; Purchases refer to net purchases.

Source: J.P. Morgan, FactSet, Bloomberg
 Note: Cost of debt based on BBB industrial bond index. Cost of equity assumes 10-year Treasury rate, beta of 1, and the average of J.P. Morgan’s 4 market risk premium estimates (Sharpe-ratio implied, bond method, DDM, and historic arithmetic average).

The pension funding paradox: Executives facing underfunded pension liabilities are currently struggling with the following two dilemmas, depending on their view of future interest rates:

- **If the expectation is for high-grade yields to remain low:** there should be no hurry to raise debt to eliminate pension deficits since cheap debt will be available in the future. But the value of pension liabilities will, however, remain high, and pension underfunding may not decline meaningfully without incremental funding

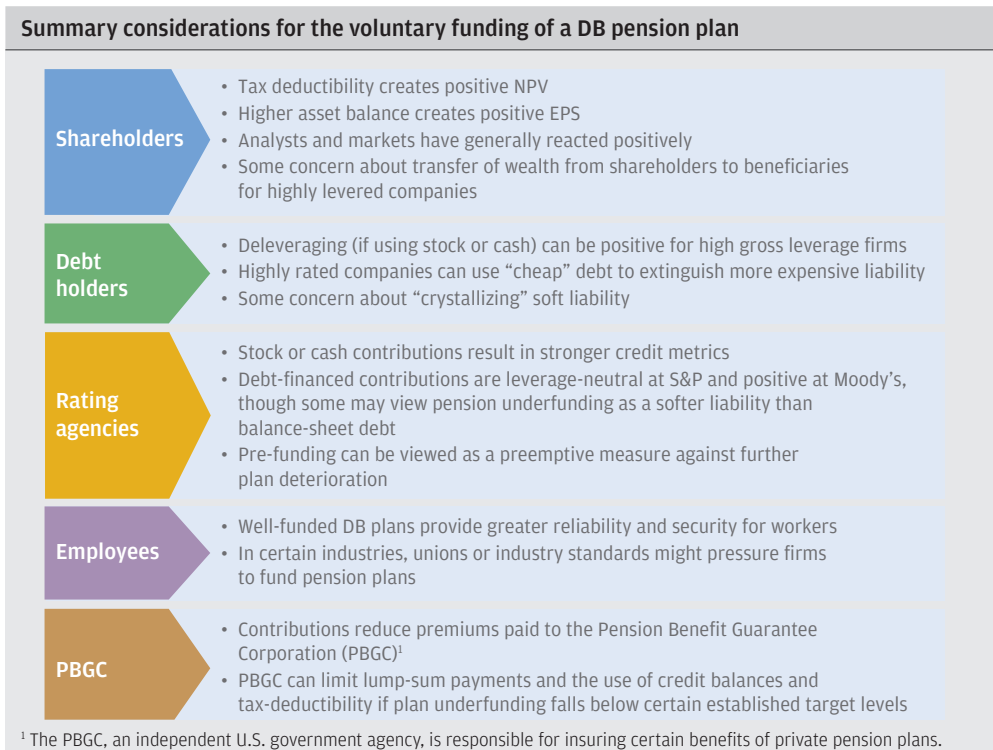
- **If the expectation is for high-grade yields to increase rapidly and materially:** pension liabilities will decline as they will be discounted at a higher rate, but the opportunity for cheap long-term debt financing will also disappear

For companies that have the capital market access and availability today, however, the strategy of raising capital and contributing to the plan will always be a sound one **as long as the cash is invested appropriately within the plan**, i.e. by minimizing the asset-liability mismatch.

4. The pension funding decision: A stakeholder perspective

What drives the decision to make voluntary contributions to pension plans? How should firms compare the decision to fund their pension plans with organic investments, M&A or shareholder distributions? We summarize the key stakeholders' benefits and considerations around pension funding decision in Figure 6. For most companies, the benefits of a voluntary pension funding announcement will significantly outweigh the drawbacks. In a record low cost of debt environment, the benefits of funding can be even more pronounced.

Figure 6



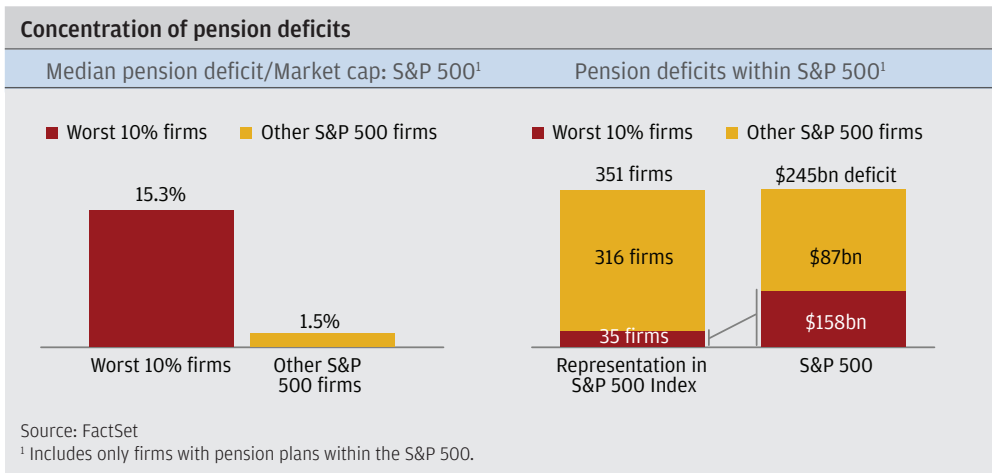
Shareholder value: For boards with the fiduciary duty to maximize shareholder value, the most important consideration is the impact of pension contributions on equity value. For firms that are regular U.S. taxpayers, debt-financed pension contributions in the current environment will tend to be both NPV positive and EPS accretive. The positive NPV impact is a result of the immediate tax deductibility of contributions, as well as from the tax-free growth of assets within the plan. Additionally, companies may receive material savings in Pension Benefit Guarantee Corporation (PBGC) premiums by improving their plans' funded statuses. The EPS accretion arises from the positive spread between most plans' EROA

and the funding cost. As discussed in the previous section, this spread has recently been at record levels relative to the past 10 years. Equity research analysts have highlighted positive NPV as well as EPS accretion as reasons for why pension contributions can create shareholder value.¹

5. The funding roadmap

While most companies can benefit from voluntary pension contributions, we still recommend taking a disciplined approach to evaluating the relevant issues. The companies that will benefit most from active funding decisions are those for which pension deficits are material (relative to firm size, leverage, etc.), and also those for which pension issues are already a point of focus for equity research analysts and investors. As we show in Figure 7, while the pension problem impacts many S&P 500 companies, this issue is critical for some firms.

Figure 7



For firms that have maintained healthy pension funding ratios through the financial crisis and also during the events of the past few weeks, the primary focus should be to ensure that the funded status does not deteriorate under even more severe market swings. Many firms have already started implementing strategies to reduce net market risk in their plans' asset-liability portfolios. Such strategies often take the form of gradually moving toward increased fixed income asset allocations (to match the duration of the plan's long-term liabilities), while immediately adding derivative overlays to ensure that the plan is protected from market corrections in the medium term. We have already witnessed an increase in fixed income asset allocation (to bonds) of about four percentage points over the past five years, and also a significant increase in the use of derivatives to further manage market risk.

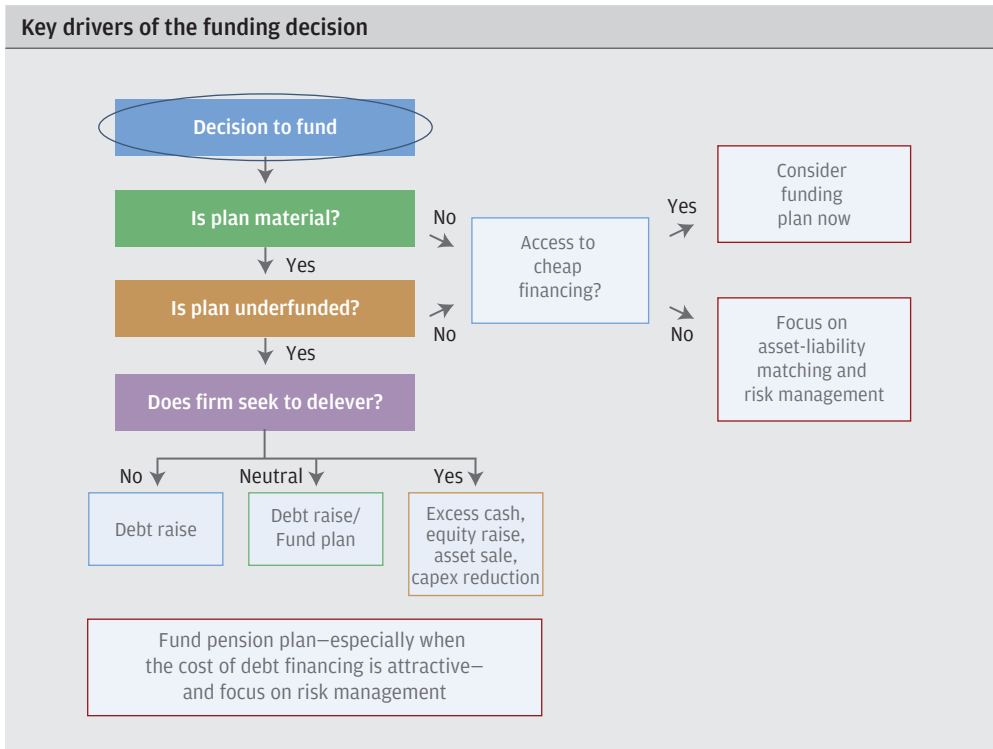
For firms that can materially benefit from voluntary contributions, the best option in today's market may be to take advantage of the cheap debt environment. Closing pension deficits using debt financing provides several benefits, including positive NPV, EPS accretion and locked-in funding costs at today's attractive rates. Firms should, however, consider the entire pension funding toolbox, which includes using balance-sheet cash, parent stock

¹Asset returns earned by contributions offset the potential increase in pension underfunding associated with service cost (benefits earned for every additional year of service) and interest cost (the time value associated with liability getting closer). When combined with a more disciplined asset-liability management approach, this offset can significantly reduce volatility in the plan's underfunded status and avoid future calls on capital. Additionally, U.S. funding rules allow current voluntary contributions to be used, at least in part, as an offset for future required contributions. This provides an additional incentive to tap the markets today to lock in funding at very attractive rates.

or the proceeds from asset sales/equity issuances to make contributions to the plan. These alternate options are likely more attractive for companies with significant excess cash balances, assets that are not a good fit for the firm’s overall portfolio, or limited incremental leverage capacity. Though using parent stock can be an attractive method of deleveraging, companies should keep in mind that the pension plan will be restricted in the amount of parent stock it can own. Hence, in many cases, the plan will dispose of the stock quite rapidly, leading to stock price pressure.

We present our decision tree incorporating the key drivers of the pension funding decision in Figure 8 below.

Figure 8



6. The end of the “one-size-fits-all” asset management scheme

For decades, pension asset allocation strategies were similar across plans with different funded status, sponsor credit profiles and even regulatory jurisdictions (Figure 9). The financial crisis of 2008 and 2009 has, however, highlighted how pension exposure can consume precious cash, pressure credit ratings and constrain capital markets access at inopportune times. The direction and volatility of market moves of recent weeks once again underscore the challenges of managing pension exposures. However, they also present an opportunity to move quickly in order to mitigate any longer term consequences for the plan sponsors' financial health.

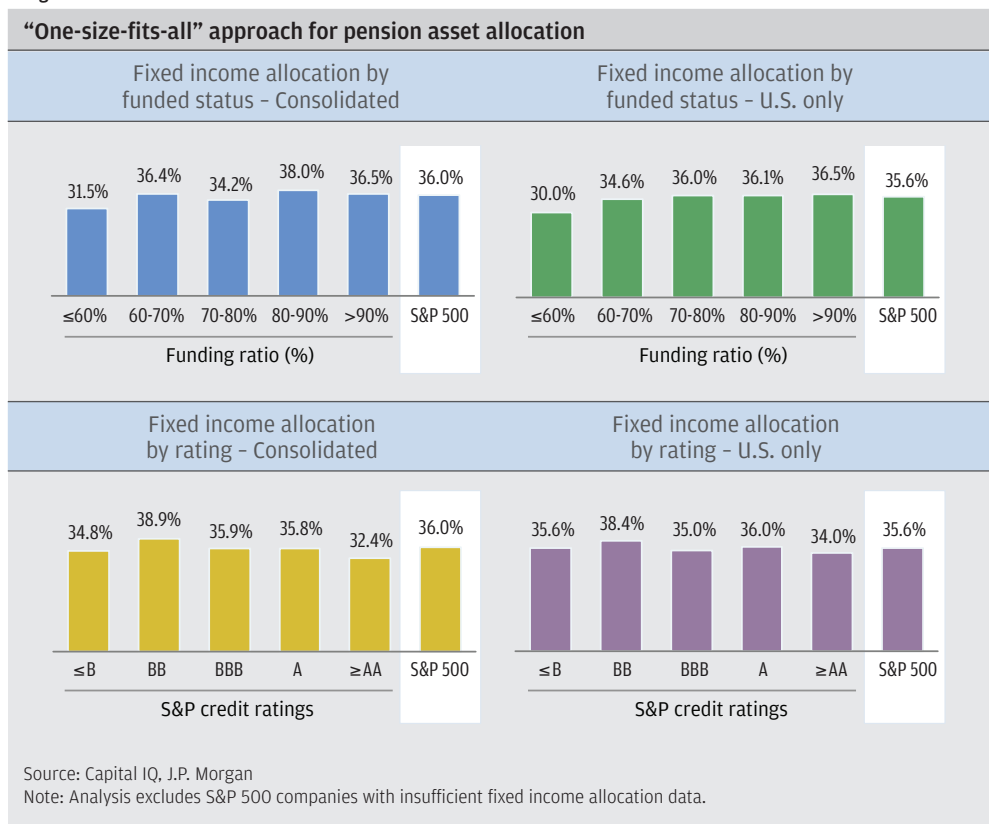
Senior executives are re-evaluating their pension plan designs to avoid a repeat of the three pension storms they experienced over the last decade. Many have also modified the asset mix or used derivatives to reduce the financial risk (interest rate exposure, equity exposure, etc.) of their DB plans.

However, given the pending treatment of corporate defined benefit pension plans as Special Entities under Dodd-Frank legislation, as well as their categorization as financial entities requiring the clearing of over-the-counter derivatives, it is possible that these entities will be severely constrained in using such overlays to manage duration and other exposures going forward.

When examining plan design, decision makers should consider several firm-specific factors:

- The size of the DB pension plan and plan deficit relative to the company’s firm value and leverage
- The potential impact of pension deficits on credit ratings, and the importance of maintaining current ratings for market access and long-term business contracts
- Sensitivity of the company to interest rate fluctuations
- The company’s competitive position relative to peers, peers’ approaches to pension management and the firm’s own profitability and cash flow position
- Labor market dynamics, including the importance of pensions as a component of overall employee compensation

Figure 9



7. Executive takeaways

Consider making “warranted” pension contributions: Many firms have been actively re-thinking their pension strategies in the wake of the recent financial crisis, as well as considering changes to funding policies. The recent rally in interest rates and volatility in equity markets have sparked further interest in optimizing pension strategies. We have seen important changes in many companies’ funding approaches, investment strategies and plan design strategies, as well as financial reporting strategies. Key elements of these changes are highlighted in Figure 10. Firms are increasingly accessing the capital markets to make significant voluntary pension contributions. We anticipate that this trend will continue as long as the capital markets remain supportive.

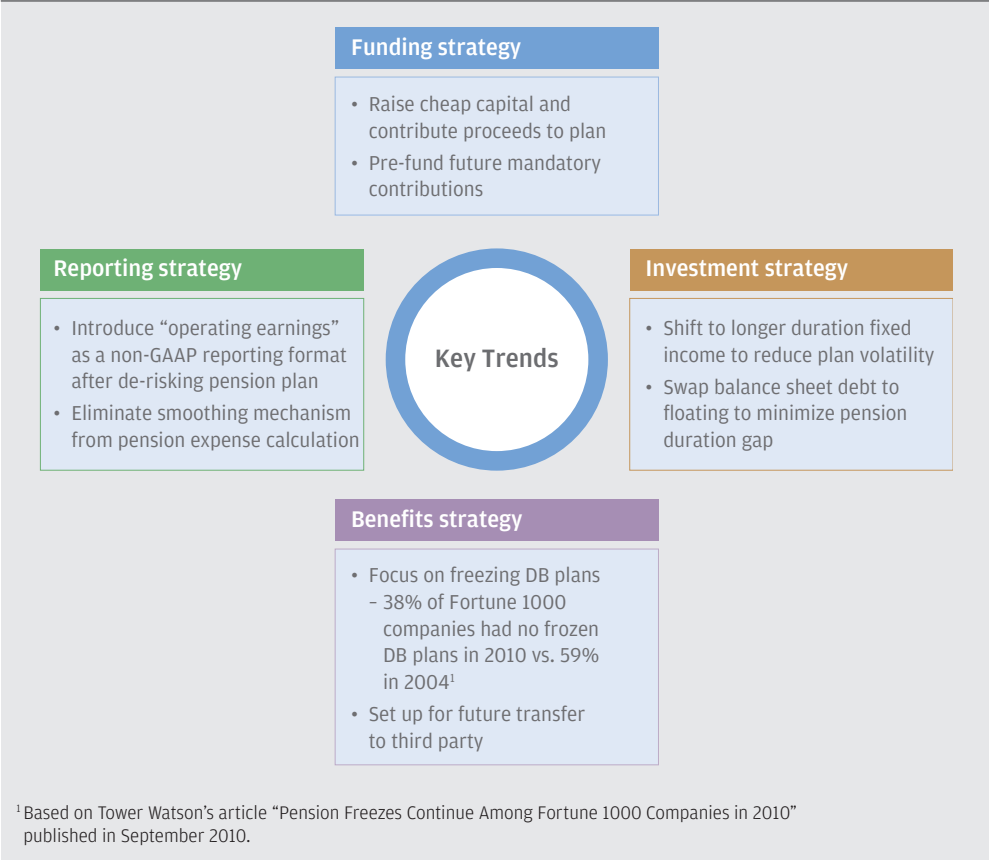
Consider changing pension asset allocations: The pension asset mix has tilted toward fixed income securities and away from equity investments. Companies have also started to use derivative overlays more aggressively to further minimize risk in the pension plans. The driver of these changes has been an expanded acceptance of quantitative methods in measuring the asset-liability mismatch that is inherent in all pension plans. Firms have been more actively thinking about using on-balance sheet strategies as alternatives to counter some of the pension plan risk (for example, swapping balance sheet debt to floating-rate debt).

Continue evaluating plan design: A number of firms have either closed plans for new employees or have frozen benefits for existing employees. By the end of 2010, only 38% of Fortune 1000 companies had unfrozen plans, compared to 59% in 2005. We expect this trend to continue. We also expect to see increased interest in plan terminations, either by buying group annuities from insurance companies or by employing more innovative capital markets solutions. These non-traditional solutions are, however, likely to be more viable once the funded statuses of plans have improved significantly from current levels (either through employer contributions or plan asset performance).

Re-think pension plan financial reporting: Firms are re-thinking strategies for the financial reporting of pension plan details, and two different approaches have gained some momentum. The first approach is to begin issuing earnings guidance for the analyst community on an “operational basis” which excludes most elements of the pension expense (other than service cost). The second approach is a more fundamental change to GAAP reporting, whereby companies are dialing back or completely giving up on some or all of the three smoothing mechanisms available for pension expense reporting. In general, this approach has the benefit of avoiding ongoing EPS headwind from any accumulated losses that have not yet flowed through the income statement. Even so, this strategy exposes firms to potential EPS volatility if their pension plans retain material (equity) market risk. Recent market volatility highlights the risk of these strategies, which we understand to be irrevocable once adopted. As a result, implementing this simpler and more transparent approach is generally only feasible after companies have already materially reduced their exposure to market volatility.

Figure 10

Key trends in today's corporate pension environment



¹Based on Tower Watson's article "Pension Freezes Continue Among Fortune 1000 Companies in 2010" published in September 2010.

J.P. Morgan

J.P.Morgan