

SEPTEMBER 2012

Time for a Pension Paradigm Shift?

Catalysts and strategic considerations

1. Time for a Pension Paradigm Shift?

Since the start of the financial crisis in 2007, poor equity returns and surging liabilities have led to a significant increase in pension underfunding. Subpar equity returns have been all too frequent since the collapse of the tech bubble in 2000, with a few outstanding years isolated in a sea of mediocre performances. Meanwhile, pension liabilities have surged as companies have had to use historically low discount rates to present value future obligations. This combination has compounded the stress on defined benefit pension plans.

The numbers are staggering. **On an aggregate level for the S&P 500, the funding ratio dropped from 103.6% at the end of 2007 to 79.1% at the end of 2011 (see Figure 1).** Total pension benefit obligations (“PBO,” the most commonly used measure of pension liability) are now at 19.7% of the aggregate S&P 500 market cap, up from about 13.2%. We discussed the drivers of these pension challenges and the corporate finance implications in our 2011 report, “Navigating through another ‘pension storm’.”¹

Many companies have come to the conclusion that despite massive annual contributions, they remain exposed to significant (and unwanted) economic volatility because of the large size of their pension plans and the mismatch between pension assets and liabilities. As a result, **several major firms have announced a paradigm shift in their pension management policies. These shifts include most or all of the following:**

- A voluntary contribution to fully fund the plan
- A capital raise to fund this contribution
- A change in the pension asset mix toward 100% fixed income
- A lump sum payment offer to some groups of plan participants
- A purchase of annuities from insurance companies for some plan participants

Equity investors, analysts and rating agencies have responded positively to these announcements, generally applauding the increased transparency, reduced risk and the increased ability to focus on core businesses while not being distracted by pension issues.

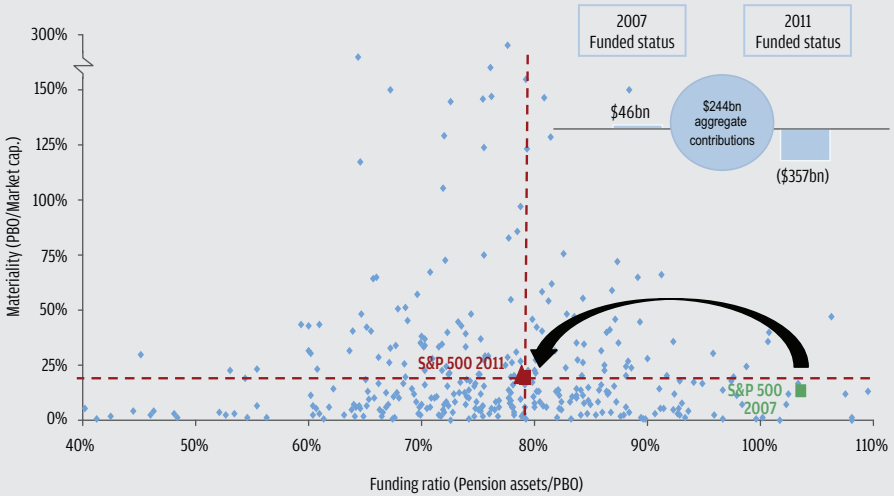
Not all of these shifts are likely to be ideal for every firm. In fact, given the complexity of the issue, each firm requires a customized solution that best fits its unique situation.

In this report, we provide a framework for senior decision makers who are considering the pros and cons of changing their pension paradigm in this environment. Our review discusses the catalysts that are driving these shifts, as well as the various choices firms can make as they consider their own pension challenges.

¹ “Navigating through another ‘pension storm’: Prudent pension management in an uncertain market environment,” published by J.P. Morgan Corporate Finance Advisory in August 2011
Link: http://www.jpmorgan.com/directdoc/JPMorgan_CorporateFinanceAdvisory_Pensions.pdf

Figure 1

S&P 500 pension funded status continues to deteriorate



Source: CapitalIQ; includes non-qualified and non-U.S. pension plans
 Note: Market cap for S&P 500 as of 12/31/2011; based on data for S&P 500 firms that were in the index as of 12/31/2011.

EXECUTIVE TAKEAWAY

Despite almost \$250 billion in contributions from 2008 to 2011, the funding gap of the S&P 500 continues to increase. Today, many decision makers are eager to make a more fundamental change to their pension management and profile.

2. Drivers of recent pension paradigm shifts

In 2011, momentum was beginning to build among plan sponsors to actively de-risk or terminate pension plans. The third pension storm in one decade had hit firms with full force. Discount rates were low, and boards of directors were increasingly focused on the risks brought about by sizable pension plans and the prospect of poor asset returns. What then triggered these pension paradigm shifts in 2012 and not in 2011?

Figure 2

Pension challenges: 2011 and now

	2011	Now
1. Pension fatigue	<ul style="list-style-type: none"> Plan sponsors were experiencing the third perfect pension storm of the last decade EPS benefit from pension plan a thing of the past 	<ul style="list-style-type: none"> The storm continues with the low rates, only partially offset by recovering asset values EPS, cash flow and leverage impact continues to be negative
2. Balance sheet strength	<ul style="list-style-type: none"> Most S&P 500 companies had de-levered to pre-crisis levels Cash on balance sheet was at an all time high 	<ul style="list-style-type: none"> Balance sheet de-levering continues along with terming out of outstanding debt Cash on balance sheet continues to build up despite increased shareholder distributions
3. Access to cheap capital	<ul style="list-style-type: none"> Highly rated companies had access to very cheap debt capital 10Y US treasury fell below 3.0% in June 2011 and stayed between 2.0%-2.5% for remainder of the year 	<ul style="list-style-type: none"> Most companies have access to very cheap debt capital 10Y US treasury rate has remained below 2.0% since April 2012 and reached an all time low of 1.4% in July 2012
4. Equity valuation	<ul style="list-style-type: none"> Equity prices improved materially from crisis levels P/E for S&P 500 around 12x compared to long term average of 15x 	<ul style="list-style-type: none"> Equity markets up materially for the year to date, though with significant volatility Valuations continue to be around 12x for S&P 500
5. Annuity providers	<ul style="list-style-type: none"> Insurance companies positioned to use balance sheet to provide annuity solutions Expectation of up to \$100bn in capacity 	<ul style="list-style-type: none"> Insurance companies' appetite for deals similar to GM's remains strong, though capacity still finite
6. Regulatory landscape	<ul style="list-style-type: none"> Pension Protection Act ("PPA") increased contribution requirements just as funded status was deteriorating Increased scrutiny from analysts, rating agencies and pension regulators 	<ul style="list-style-type: none"> MAP 21 (Highway Bill) reduces contribution burden for the next few years Increasing PBGC premiums, mortality costs and administrative expenses puts a significant burden on plan sponsors Opening up of opportunities to shrink plans through lump sum offers and annuity buyouts

Source: J.P. Morgan, Bloomberg, FactSet

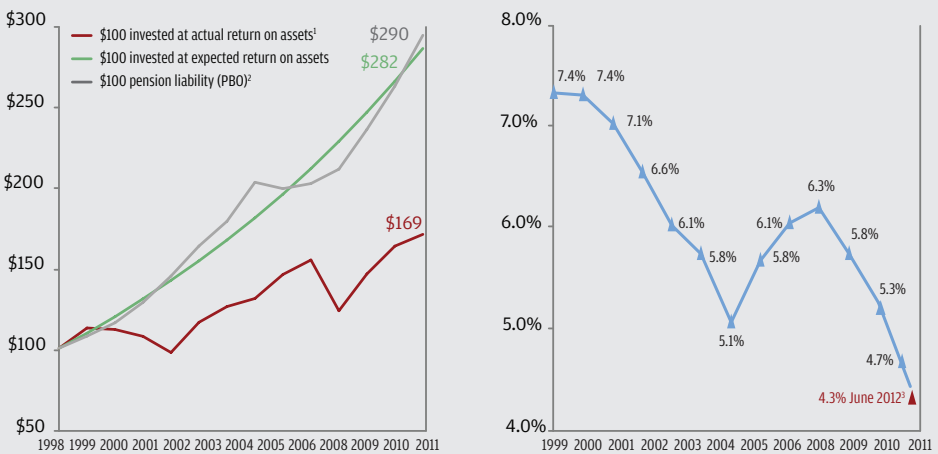
2.1. Pension Fatigue

Plan sponsors have faced pension pressure three times in one decade: In 2001-2002, in 2007, and then again in 2011. The first two times, many executives concluded that this would be a temporary challenge, that pension assets would come roaring back with 1990s type returns, which together with rising rates would organically resolve the pension issue. By the beginning of this year, with continued uncertainty in Europe, low global economic growth and record low rates and valuations, many boards have decided that waiting for the problem to solve itself may be difficult to justify. Discount rates for pension liabilities dropped from 7.4% in 1999 to 4.7% in 2011 (Figure 3). This translates to a 190% increase in liabilities for a typical plan.² If pension assets had grown at the typical plan’s expected rate of return, the assets would have increased by 182%, resulting in minimal shortage. In contrast, pension assets grew only by 69%, leaving a large funding gap in the typical pension plan (even after taking into account annual contributions).

As a result, many firms are **concluding that just waiting and hoping is not an appropriate approach, but rather that a permanent solution to the pension problem would benefit the firms’ shareholders.**

Figure 3

Disappointing asset returns vs. historically low discount rates



Source: J.P. Morgan, “S&P 500 2011: Pensions And Other Postemployment Benefits (OPEB)” article published by S&P in July 2012

¹ Actual return on plan assets based on performance of S&P 500 Index and BarCap US Aggregate Bond Index, assuming a typical 60% equity/40% fixed income asset allocation.

² \$100 GAAP projected benefit obligation (PBO) increased per year to reflect liability growth at the discount rate and impact on liability from change in discount rates; does not incorporate smoothing mechanisms.

³ June 2012 pension discount rate calculated based on the change in Citi Pension Discount Curve for 12-year plans from December 2011 to June 2012.

² Illustrative analysis, excludes impact from benefit payments, service cost and changes in other actuarial assumptions.

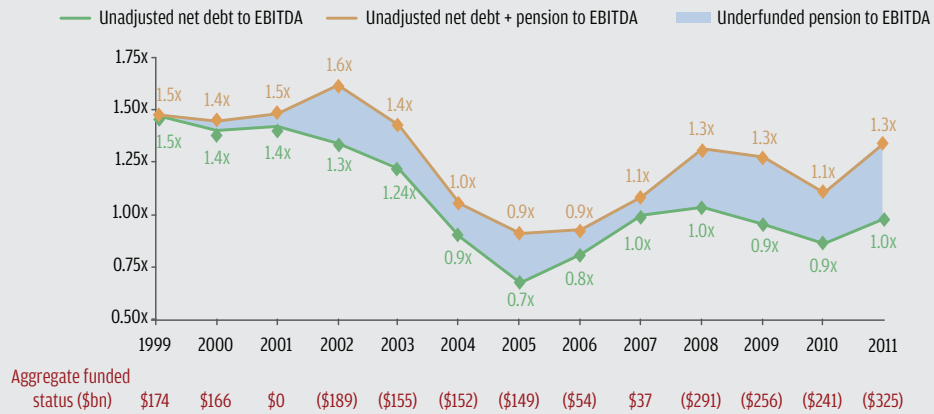
2.2. Balance sheet strength

Large U.S. firms have delevered meaningfully over the last decade. At about 1x Net Debt to EBITDA, the typical large U.S. firm is not very levered, and many firms have significant financial flexibility within their ratings. Rating agencies and other credit market participants generally include underfunded pension liabilities in their leverage calculations. If we include underfunded pension liabilities, then overall leverage levels are still low relative to a decade ago, but the pension component has become a larger portion of total leverage over the last few years.

With significant cash balances, longer maturities and declining on-balance sheet leverage, many large firms have sufficient balance sheet strength to tackle pension issues head-on without having to worry about other balance sheet problems. As we discuss in the next section, capital markets are also cooperating.

Figure 4

Pension underfunding is a growing part of total leverage



Source: FactSet, Bloomberg, J.P. Morgan

Note: Based on median leverage for fixed set of S&P 500 non-financial firms that were in the index as of 12/31/2007.

2.3. Access to cheap capital

Firms that would like to make voluntary pension contributions use their balance sheet cash, or raise new capital in the debt or equity markets. As many of them have strong balance sheets, they are primarily raising these funds in the debt markets. Coincidentally, due to the strong liquidity position of most firms and increasing fixed income allocation among pension plans, there is a healthy demand for new bond issues. As a result, firms have been able to raise debt capital at record low coupons.

However, the low rate environment that is driving coupons on new issue bonds lower is also responsible for ballooning the pension deficit in the first place. Plan sponsors may consider this an inopportune time to lock in the pension liability, measured at historically low discount rates, by adopting a paradigm shift as described previously. While a rates view may be expressed more efficiently elsewhere on the balance sheet (e.g. by issuing longer dated liabilities or swapping floating rate debt to fixed), the low rate environment does argue for a careful examination of the benefits of moving ahead with a pension solution at this time.

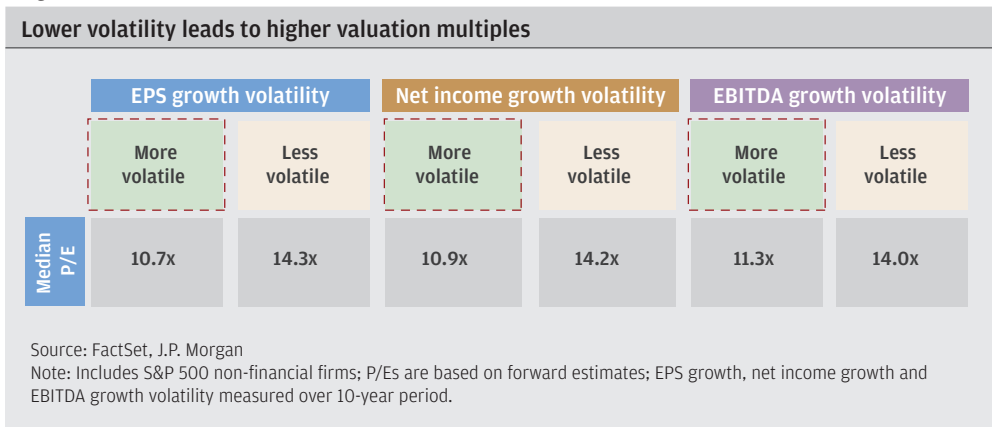
2.4. Equity valuation

The mismatch between pension assets and liabilities leads to significant fluctuations in pension underfunding. As an underfunded pension plan is essentially debt, this leads to significant volatility in the plan sponsor's equity values. This volatility also feeds through the income statement into net income and EPS.

Investors and analysts understand that an oil and gas firm takes on operational and commodity risk when it takes on large exploration projects. This is the core business of an exploration and production company. Investors buy shares in these companies to obtain exposure to commodity prices. They are not, however, buying shares in these companies to obtain exposure to pension mismatch. All else being equal, firms with higher volatility will trade at lower valuation multiples (Figure 5).

Thus, the same forces that are leading companies to focus on their core businesses and create pure plays by spinning off unrelated businesses are also leading boards to consider the pension paradigm shift.

Figure 5



2.5. Annuity providers

Various pension risk transfer solutions have been implemented across different jurisdictions over the last many years. In the U.S. such transactions have been infrequent and small. One of the pension solutions that does work in the U.S. entails transferring long-term pension obligations to insurance firms that issue group annuity contracts to plan participants. The largest life insurance companies in the U.S. have recently allocated meaningful capital and resources to this business and may be in a position to transact on some very large pension transfers. The potential for non-U.S. insurers to enter the U.S. market or for non-insurance based solutions to gain approval and traction could provide additional balance sheet capacity for corporate plan sponsors to consider over the coming years.

2.6. Regulatory landscape

The regulatory landscape associated with defined benefit pension plans continues to evolve in the U.S. The funding requirements first introduced by the Pension Protection Act of 2006 ("PPA") have been modified a few different times, most recently through the relief provisions in the student loan and transportation legislation titled Moving Ahead for

Progress in the 21st Century (MAP-21). But investor sensitivity towards the funding gap that is now reported on the balance sheet has increased, and deferring contributions to a later date is not always well received.

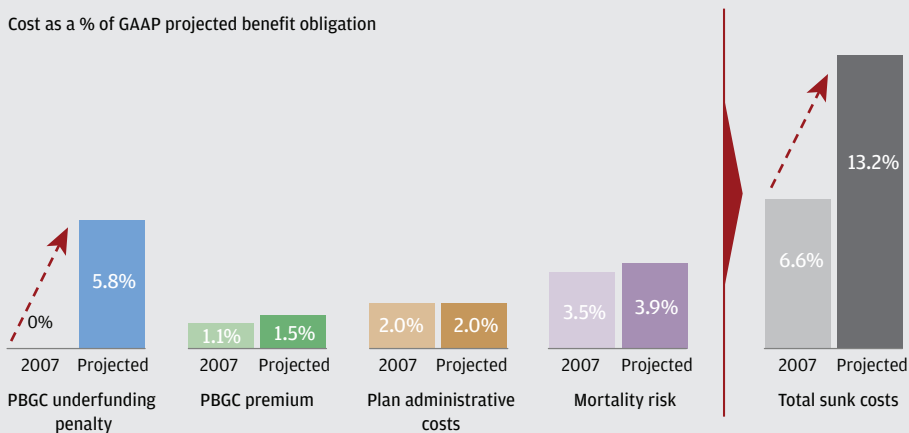
While providing for short-term funding relief through use of long-term average discount rates, MAP-21 also meaningfully increases PBGC (Pension Benefit Guaranty Corporation) premiums and penalties. Mortality (or longevity) is another element of cost associated with sponsoring a defined benefit plan that continues to increase.³ Adding the other administrative costs associated with pension plans, the present value of future “sunk costs” may amount to 13.2% of current PBO and compares with about 6.6% as of 2007.

The costs associated with full and permanent de-risking of pension plans (through lump sum offers, buy-ins, buy-outs etc.) can be significant. But a proper comparison of the costs/benefits of these transactions against the status quo has to fully factor in the “sunk costs” of sponsoring a defined benefit plan.

Figure 6

Sunk costs of managing a pension plan almost doubled over the last 5 years

Cost as a % of GAAP projected benefit obligation



Source: J.P. Morgan

Note: Illustrative analysis based on aggregate pension data for the S&P 500; assumes funded status as of December 31, 2011 for the projected period; includes expected increase in PBGC underfunding penalty and premium.

EXECUTIVE TAKEAWAY

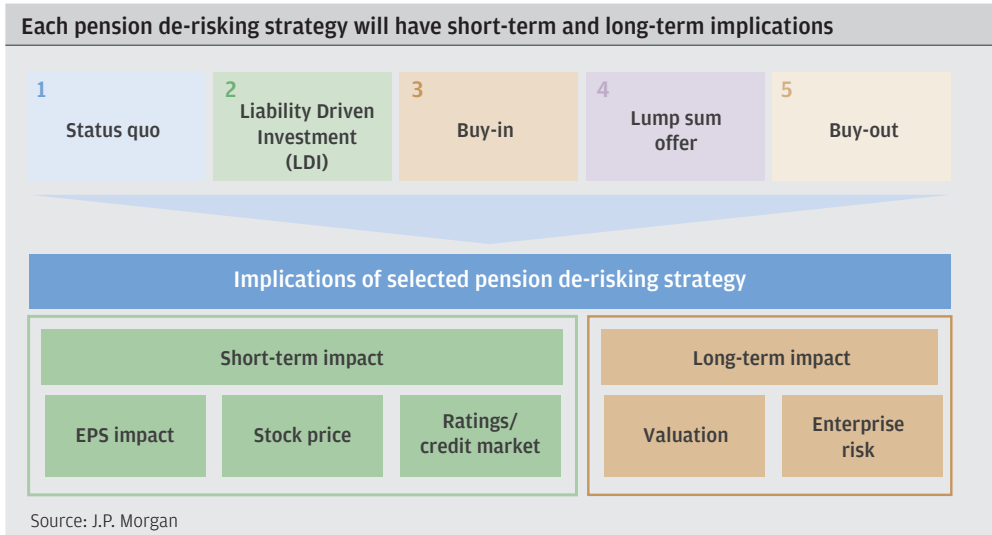
In today’s environment, decision makers have come to the conclusion that equity investors penalize firms for taking on pension risk. In contrast, cheap access to debt and ongoing regulatory changes suggest that the time is right for a structural shift.

³ The risk of higher obligation due to unexpected increases in life expectancy trends.

3. Considerations around strategic and tactical choices

Plan sponsors have a full menu of solutions available to design a strategy that best meets their corporate objectives, and also multiple factors to consider, including cost efficiency, timing and market capacity. Timing and complexity of a pension de-risking strategy will differ by solution type. Each option will likely have some impact on EPS, financial flexibility, credit rating, enterprise risk and long term valuation.

Figure 7



3.1. Status quo

Market conditions over the past few years have significantly increased the size of pension plans and funding gaps. With interest rates at historically low levels and equity valuations not yet recovered, many plan sponsors are waiting for market recovery to bring pension plans back to a healthier status.

For firms with strong balance sheets, relatively small pension plans and a significant asset base, the “wait and see” strategy could be the best alternative. A rally in the equity markets and/or a sell-off in rates could help reduce the funding gap and decrease future mandatory contributions. On the other hand, if the economy continues to remain sluggish and recovery remains farther in sight, these firms can use their balance sheets to undertake de-risking actions within their pension plans.

However, companies with sizeable plans that have meaningful mismatch between their assets and liabilities are exposed to significant volatility in their pension plans. The pension risk can lead to material valuation overhang, given that even small market movements can materially impact financial metrics and lead to large calls on capital in the future.

3.2. Liability Driven Investment (LDI)

Traditionally, pension plans have sought high-return generating assets and primarily invested in the equity markets. However, the past few years have seen an increased focus on de-risking through more disciplined asset-liability management strategies. While most pension plans still carry significant exposure to the equity markets, the equity position has been reduced and replaced with long duration fixed income assets that better match the

liability profile. Given similarity in sensitivity to interest rates, long duration fixed income assets and pension liabilities will move together as interest rates fluctuate, reducing the pension funded status volatility and hence decreasing enterprise risk. This asset management strategy, commonly known as Liability Driven Investment (LDI), has gained significant traction in recent years.

While today's market environment may not be conducive to portfolio rebalancing, a rigorous LDI strategy will likely take time to implement, allowing plan sponsors to achieve "dollar cost averaging" through a layering approach. Furthermore, firms can also synthetically replicate the interest rate exposure in their pension plans by implementing interest rate derivatives either within their plans or on their balance sheets.

3.3. Buy-in

Although a well implemented LDI strategy significantly reduces risk to plan sponsors, it also has its limitations as the pension plan continues to be exposed to longevity risk. One solution for hedging longevity risk is executing a buy-in within the pension plan. In a buy-in, the plan purchases annuities from insurance companies that are held as assets of the pension plan. The annuities are on specified lives, and the cash flows received match the benefits paid out from the plan for the identified population.

Since there is no reduction in liability associated with the transaction, the plan sponsor remains liable for all administrative expenses and PBGC premiums. At the plan sponsor level, the strategy reduces financial risk, but the plan will remain sizeable and hence some of the valuation overhang might persist.

Firms that are considering shrinking the pension plan through annuity solutions could pursue a buy-in as an intermediary step. The buy-in does not trigger settlement accounting at the time of the execution, and it can be converted into a buy-out at any time.⁴

3.4. Lump sum offers

Historically, plan sponsors offering a lump sum distribution to plan participants had to use the 30-year U.S. Treasury rates to calculate the present value of benefits owed. The Pension Protection Act ("PPA") modified that requirement, replacing the Treasury rates with high-grade corporate bonds published by the IRS. The PPA corporate bond rate was phased-in starting in 2008, with full phase-in completed by 2012. Since high-grade corporate bond yields are closer to the discount rates used for GAAP purposes, plan sponsors are now able to offer lump sums at levels closer to the GAAP liability. In some scenarios, plan sponsors might be able to create value by settling the liability below the GAAP liability level, depending on the interest rate environment and plan specific characteristics.⁵

Lump sum offers allow plan sponsors to shrink the size of the pension liability and completely transfer risk to participants. Although there could be an immediate hit on EPS due to settlement accounting, the strategy will likely be positively received by investors and rating agencies, since it reduces overall risk.

The acceptance rate on lump sum offers can vary based on the demographics of the impacted participants. Former employees who have other sources of income and lower

⁴ Under U.S. accounting standards, plan settlements (usually large lump sum offers, pension buy-outs) can require firms to immediately recognize in the income statement a proportional amount of the plan's accumulated actuarial gain or loss, if settlement costs exceed the sum of the service cost plus the interest cost component of pension expense. The proportion is equal to the decrease in PBO divided by the PBO before settlement.

⁵ Discount rates used for lump sum calculations depend on interest rates determined by the stability and look back period of the plan.

present value of anticipated benefits could be more inclined to select an immediate cash payment option. On the other hand, retirees who depend on monthly paychecks as their only source of income could be more apprehensive. Furthermore, participants could also take a view on their own health and how that compares to the mortality tables used for lump sum calculations.

3.5. Buy-out

While the buy-out market has been fairly active in U.K. over the last several years, the General Motors transaction announced in June 2012 represented the first large buy-out in the U.S. market. With a buy-out, the plan sponsor can completely transfer a portion of the liabilities and assets to an insurance company. The risk transfer comes at a premium, which varies depending on the demographics of the impacted population and the characteristics of the plan. A buy-out solution can be implemented instead of or in conjunction with a lump sum offer.

Since there is a premium associated with the transaction, the plan sponsor might have to make additional contributions to ensure that the remaining plan is adequately funded post-transaction. Although there could be some negative perception in the market associated with the premium paid, as well as the one time EPS charge from settling the liability, investors and rating agencies recognize the reduction in volatility achieved. Longer term, settling a material portion of the liability could lead to improved valuation and enhance the firm's flexibility for additional capital allocation investments outside the pension plan.

EXECUTIVE TAKEAWAY

Firms considering pension de-risking strategies benefit from a full set of alternatives. Identifying which alternative is optimal for each firm requires comprehensive corporate finance analysis.

4. Why is the momentum building?

Three large scale pension paradigm shifts have been announced over the last five months:

- In April 2012, Ford announced that it would offer lump sum payments to U.S. salaried retirees and former employees. This was the first risk transfer announcement of this scale.
- In June 2012, GM offered lump sum payments and annuities from Prudential to its U.S. salaried retiree population, establishing the first large-scale annuitization in the U.S.
- In July 2012, NCR announced that it would offer a lump sum option to its U.S. deferred vested participants. NCR also announced a debt financed contribution to its U.S. pension plan.

Additionally, there have been numerous announcements regarding voluntary contributions to pension plans. If structured appropriately, these can lead to an acceleration of tax deduction for the sponsor while improving the risk profile of the plan.

Do three announcements signal a paradigm shift?

We believe they do because, as we pointed out earlier, a confluence of factors is creating the catalysts for today's paradigm shifts. More importantly, shareholders and equity analysts have applauded these corporate finance decisions. **Equity analysts** concluded that this was a “step in the right direction” for each announcement, citing the improved valuation from reduced volatility. This positive outlook is encouraging given the negative perception about the EPS impact and the premium paid for annuitization. **On the credit side**, rating agencies recognize companies' prudence in managing pension risk. Overall, these announcements have exponentially increased interest in de-risking activity. Insurance companies continue to have appetite for similar deals, though it is unclear how large their overall capacity will be.

During the last decade, pension plans have evolved from being stable providers of EPS benefits to being a risk that is difficult to control and often correlated with the operating performance of the plan sponsor. This is leading to a serious re-evaluation of the best policy for managing defined benefit pension plans. The right strategy for any plan sponsor depends on many plan and sponsor specifics that need to be evaluated in a holistic corporate finance framework.

EXECUTIVE TAKEAWAY

Pension de-risking announcements have been well received by shareholders and creditors alike. As a result, more boards are evaluating whether a customized approach to pension de-risking could enhance shareholder value.

J.P. Morgan

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