Public Money

Bonding for Benefits: POBs and 'OPEB-OBs'

New strategies to shatter the old POB paradigm

By Girard Miller | January 15, 2009

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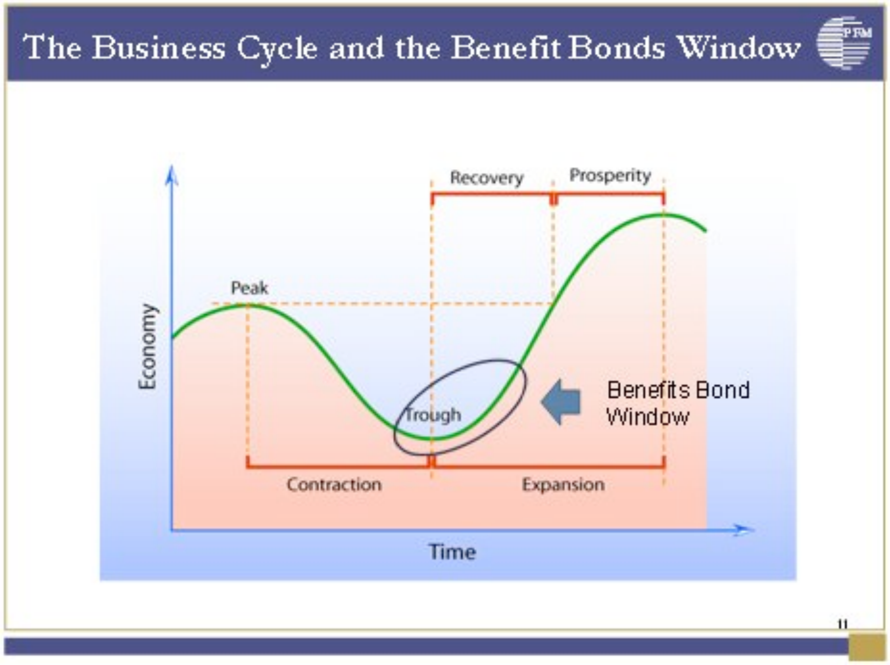
Ever since Oakland, Calif., issued tax-exempt bonds in 1985 to invest the proceeds in its pension fund to earn a higher long-term return, pension obligation bonds (POBs) have been controversial. Even after the U.S. Treasury slammed the lid on similar tax-exempt deals with its 1986 arbitrage regulations, there have been over $50 billion of subsequent taxable POB deals issued. Many have gone sour and attracted negative press for a host of reasons, and the problems have not been limited to POBs. For example, a number of Wisconsin school districts discovered that their misguided efforts at financial engineering in 2006 backfired after issuing similar "OPEB obligation bonds" to fund retiree medical benefits. They reportedly have lost millions after buying risky securities they allegedly didn't understand when the deal was pitched to them. The Government Finance Officers Association has issued recommended practices which urge "considerable caution" in the use of this financing strategy. A recent editorial in a prominent pension publication continues the dialogue and debate on this sometimes-controversial strategy.

The purpose of this paradigm-shattering column is to present rationally the market economics that determine feasibility of these strategies, and some painful but avoidable lessons from history. To minimize abuses and misuses of these instruments in the future, I will separate fact from fiction and fear, reality from hype, analysis from political influences, and marketing scams from legitimate uses of a complex financial technique that clearly requires great expertise and sound judgment to execute properly and prudently.

Aftermath of 2008 on public retirement benefits plans. Like other investors, pension funds had a terrible year in the markets in 2008. Their average funding ratios plummeted from roughly 85 percent to something below 65 percent, and their unfunded liabilities are now estimated at $1 trillion nationally. Their close cousins, the OPEB plans ("other post-employment benefits," usually for retiree health care) are actually in worse shape, with unfunded liabilities in the range of $1.5 trillion and heading higher as municipalities continue to under-contribute to these plans actuarially for lack of free cash. In light of this combined $2.5 trillion level of retirement plan under-funding, with no new revenue sources likely to come to the rescue, some financial professionals are revisiting the concept of "Benefits Bonds" — POBs and their new cousins: OPEB obligation bonds (OPEB-OBs).

In addition to the dismal funding situations facing most state and local governments, there is a purely market-driven reason that benefits bonds are likely to gain attention in 2009. A relatively rare capital markets window is likely to arise once the recession begins to bottom out, assuming that the new administration's fiscal and financial initiatives take root. As the economy bottoms, the now-frozen taxable municipal bond market is likely to re-open for high-quality issuers, while stock prices are likely to remain relatively depressed on a long-term valuation basis, even if they should rally somewhat from recessionary bottoms.

The 2009 benefits bonds window. The cyclical window for benefits bonds is easiest to illustrate through the following diagram. This graphic shows where this specific bond window fits into the broader economic cycle, as well as the capital markets cycles that accompany recessions and economic recoveries.



Graphic: PFM Group

Perhaps the most intriguing question is not whether this window will eventually open, but rather how long it will last. Risk-averse investors are much more likely to favor taxable municipals before they begin to plunge into riskier equities. However, if the stock market rallies strongly from distressed levels in anticipation of a strong economic recovery, the public employer's opportunity to invest in stocks at discount prices (after selling bonds to raise necessary capital) could evaporate rapidly. Therefore, the smarter finance officials and plan administrators are starting to develop their strategies and policy support in the first half of 2009.

I began anticipating this convergence of necessary market conditions in one of my prior columns in 2008, and now believe that a massive benefits bond window could bring $20 to $50 billion of such financings in 2009, depending mostly on whether market conditions remain favorable for a sufficiently long period of time to get these issues out the door at prudent levels and with sufficient confidence that the economy will ultimately recover. The upper end of that range would require a saucer-bottom in the stock market and an anemic, protracted economic recovery that keeps interest rates low. To put those estimates in perspective, the upper end of that range ($50 billion) is roughly equal to the cumulative total of POBs sold in the past 23 years. What is different this time is that OPEB obligations, which are 150 percent of today's unfunded pension plan liabilities, were officially ignored in the past 23 years. Recent accounting rules have pushed those liabilities into broad daylight. Also to provide perspective, a single issuer (Alaska) is already authorized to issue up to $5 billion. Other debt teams are now standing on the sidelines waiting for feasible market conditions. They are now doing their homework: Are you?

Basic "benefits bonds" economics. The financial logic of a POB or OPEB-OB is that a public employer can sell high-quality taxable debt at an interest rate significantly below the expected return of the pension fund or the OPEB trust, so that an "arbitrage" profit is earned over the life of the bond issue. By definition, it is a leveraged transaction that involves the sale of debt to buy securities. In this respect, the strategy is not much different than the successful long-term market arbitrage that the legendary Warren Buffet at Berkshire Hathaway accomplishes each time that firm sells bonds opportunistically at low yields and then finds higher-returning investments. The key public policy difference is that this involves taxpayer money and not private capital.

The savings that result from successful deployment of a benefits bond issue can be substantial. Over a 20-25 year funding period, a properly timed benefits bond can potentially produce present value savings of approximately one-half of the amount of the issue if realized investment returns achieve historical averages, depending of course on structure, market factors and other circumstances. Paying off a liability at half-cost is an attractive prospect, but it comes with significant risks and some drawbacks, as noted below.

"Hard debt" replaces "soft debt." This financing technique essentially replaces normal actuarial amortization of the plan's unfunded liabilities (often called "soft debt") with bonded indebtedness ("hard debt"). From a comprehensive financial perspective, the total obligations of the employer are essentially unchanged at the time of issue, but the soft debt is then converted to hard debt which is less amenable to "pension holidays" and other devices that public employers have used in the past to defer making payments for their benefits plans. So there is a potential loss of financial flexibility inherent in traditional benefits bonds, especially those which are non-callable. Also, the issuance of bonds will count against the employer's borrowing authority in many states, so there has always been a concern about impairing the government's ability to perform essential and traditional public services such as building infrastructure.

To put this issue into perspective, the combined actuarial deficits for pensions and OPEB now total $2.5 trillion nationwide, which works out to $10,000 per capita or $20,000 per full-time adult worker! At some point, the credit rating agencies will need to formalize that reality into their thinking about debt ratios. In their efforts to craft global ratings systems that put corporate and municipal credits on the same scale, they will have to take into account retirement plan obligations which most corporations have now scaled back. Once ratings agencies start to pro-forma these overhanging retirement obligations into their models, a public employer's decision to re-characterize an existing benefits obligation with a debt obligation should be viewed more neutrally, especially for issuers who simultaneously take steps to control and curb their long-term costs and liabilities through plan design changes.

Refinancing Uncle Norman's loan for your elderly mother's house. Some skeptics of benefits bonds claim that they are tantamount to taking a second mortgage on your house to put money into your IRA. That's actually not a correct comparison. For both pensions and OPEB plans, there is already an obligation out there. It's more akin to a family loan from rich Uncle Norman who has advanced the money interest-free over the past decade to pay for your elderly mother's (his sister's) house — because pension and OPEB obligations are actually for services performed previously for prior generations. So what is really happening here is that a benefits bond re-finances Uncle Norman's loan, which he now needs to put on the books at 7.75 percent because his accountant told him to. Plus, there is a reasonable chance to get cheaper money than the terms on Uncle Norman's 7.75 percent loan, once the taxable muni market unfreezes.

Lessons from history. On the positive side, the ability to earn superior returns on diversified long-term portfolios is quite well established. One of my prior columns cited several historical studies which show that over rolling 20-year and 30-year periods, the returns on common stocks (the core component of a pension or OPEB trust) have almost always exceeded bond yields. In fact, when markets have declined by percentages equal to those experienced in 2008, there are no cases since the election of Franklin Roosevelt in which such a strategy would have failed over those multi-decade time intervals.

But that long-term story was too often over-simplified. Every financial advisor and POB bond peddler who pushed this strategy to public officials had a similar story. Most had never met a POB that they didn't love: Benefits bond deals generated fee income to them when the markets were lousy for conventional public finance. The pseudo-sophisticates among them proffered "Monte Carlo" statistical models to show that over the long term, a POB bond strategy almost always works. What the traditional POB peddlers never admitted is that this strategy is actually much more dependent on business cycles for its success in the intermediate term — the period when the responsible public officials are in office or still in their current jobs.

Deceptively, the oversimplified Monte Carlo models almost always magically worked, whether the market was at 13,000 or 14,000 on the Dow (when some issues were sold or authorized) or at 8,500 after the carnage of 2008. This alone should demonstrate the superficiality of such naïve and linear approaches to such a complex issue. My September 2007 column warned of the risks of POBs at the peaks of economic cycles, and market history since then has shown clearly the fallacy of the traditional POB paradigm and a one-dimensional Monte Carlo mind-set. That column also laid out a few much-needed professional standards for prudent use of POBs.

Professionally, I am not opposed to Monte Carlo analysis as one part of due diligence. Such techniques can help simulate and assess possible future outcomes and central tendencies over long periods of time. As with any statistical model, however, it needs to be just one of several analytical techniques and approaches that a competent financial adviser brings to a client under the new paradigm. These include mean-reversion and market-cycle analysis, scenario analysis, and business cycle economics. But ask any chartered financial analyst whether she would rely predominantly on Monte Carlo techniques before making a nine-figure leveraged investment recommendation, and you know what the answer will be.

A fresh, market-cycle perspective on benefits bonds. After analyzing this issue intensively for two years in the context of studying the nation's OPEB funding problems, I have learned a great deal about benefits bond dynamics and the resultant strategies that optimize their use. This column reveals for the first time in a national publication the key findings of my comprehensive analysis and perspectives on the issuance of bonds to fund long-term retirement-related benefits.

Let's start with three simple introductory observations:

1. The previous POB model was driven by public finance professionals, not investment professionals. The resulting POB model was simplistic and naïve. What many advisers who drove these deals cared about most was selling the concept of an arbitrage profit and increasing their fees by maximizing the size of the issues.

2. The real-world success of a benefits bond is primarily driven by equity market returns and therefore the point of entry into the equity markets is much more important than the spread between borrowing costs and *assumed* pension fund investment returns (usually the actuarial discount rate). Of course, the cost of capital sets an important and indispensable threshold for the long-term success of the deal, so it can hardly be ignored. But as far as timing and success over initial business cycles is concerned, it is actually the secondary, not the primary, driver of success. This cyclicality has never been addressed systematically before in the public finance literature.

3. Pension funds have typically invested about 65 percent in stocks and 35 percent in bonds. OPEB plans generally will follow the same asset allocation. We have to think about these stock portfolios and the bond portfolios separately, when they are funded by borrowing money in the municipal bond market.

The shattered POB paradigm. With that as background, I now will ask the paradigm-shattering question of 2009: Why should issuers of POBs or OPEB-OBs sell bonds to buy bonds? Where is the expected excess return from selling taxable municipal bonds to buy a portfolio of investment-grade bonds for a pension fund or an OPEB trust? The answer is that there is none (other than a possible argument about reducing short-term volatility through diversification, which is irrelevant in the long run). For lower-rated issuers, it's a moot point because borrowing costs exceed investment grade bond yields net of fees — and for high-quality credits, the sad fact is that underwriters' profits from the oversized sale, plus oversized bond counsel and financial advisory fees as well as bond portfolio managers' fees, will eat up most if not all of any potential arbitrage that could ever be earned from the portion of a POB or OPEB-OB that would be invested in bonds and assuming the credit risk.

If that is true, then the primary source of arbitrage profit expected from benefits bonds is a result of equity market returns, which could include domestic and foreign stocks as well as equity real estate and private equity. For this analysis we will simplify, and focus primarily on the listed domestic equity markets, which are highly correlated with the returns of the other equity asset sub-classes over the long term.

The good news is that equity returns are much higher than average pension fund returns, because pension fund investment portfolios include bonds which do not earn significantly more than taxable bond issues. The long-term historical returns of equities are 10 percent since 1927. (During this period, bonds historically have returned 5 percent.) Most equity market analysts consider these estimates for equity returns to be achievable in the future. That provides a much richer opportunity for arbitrage against taxable muni bond rates in the 6 percent range. Instead of a 2 percent arbitrage expectation using average pension fund returns, we instead have a four percent opportunity with less principal at risk — a greater margin of safety for taxpayers in the long run.

Also good news is the corollary that benefits bond deals can be sized smaller than in the past, because only the equity portion of the portfolio should be financed this way. Even better, it is feasible to devote excess equity returns to the repayment of bonds to reduce taxpayer costs, rather than allowing employee groups to skim those profits when they arise. These protective measures reduce borrowing costs and minimize the potential impairment of conventional borrowing capacity. Collectively, they reflect a more conservative approach to issuing debt to achieve long-term investment results that reduce unfunded liabilities more efficiently than traditional methods.

Benefits Bonds: the new paradigm. Over the past year, several of my professional colleagues have collaborated with me to develop and refine a completely new paradigm for issuing benefits bonds, which include both POBs and OPEB-OBs. Here are some essential concepts and techniques from the New Benefits Bonds Paradigm that outflank the traditional POB model used in the past 23 years:

> **1. When to issue.** Benefits bonds should only be issued during recessions or during the early stages of economic recovery, when stock prices are depressed. (See again the graphic above.) The entire strategy is dependent on stock market returns exceeding taxable bond borrowing costs, so those who sell benefits bonds after the economy has recovered are especially vulnerable to suffering net investment losses in the next recession — especially when borrowing costs are considered. One need only study the sad experience of previous untimely issues to see this simple fact: Issues sold in 1999-2000 and 2006-2007 were doomed at the outset.

Financial advisers who hang their hat on naïve linear Monte Carlo models are using static analysis that ignores the power of the business cycle and the associated forces of bear markets. An inexperienced 25-year-old MBA (or a one-eyed monkey) can push the button to run a Monte Carlo analysis to demonstrate, every time, that POBs will probably work out in the long run. What the naïve and one-dimensional financial advisers under the traditional POB model fail to disclose is the risk facing every public debt manager who relies on Monte Carlo models to sell benefits bonds after the cyclical window has closed. Those who rely unduly on that sole metric when the economy is clearly in an expansion mode will probably put themselves and their taxpayers in jeopardy. Market and business cycle history shows that the next recession will likely pull their cumulative investment returns below borrowing costs and put the deal underwater. Certainly the experience of the past two decades has made that abundantly clear.

Even during a benefits bond window, there is still inherent risk to the transaction. Nobody can ever be certain that markets have bottomed (See point #5 below.) Conversely, those who wait until the economy has clearly recovered until they issue will likely magnify their risks going into the next business cycle recession. Procrastinators and herd-followers will surely reduce their probability of long-term success by picking an inferior, belated entry point.

2. How much to issue. It is foolhardy to fund more than 80 percent to 85 percent of total plan liabilities through a debt issue. In the past, under the old POB paradigm, issuers were encouraged to bond for "full funding" of the plan's unfunded liabilities. There was a mistaken belief that this stratagem would "fix" the underfunded plan for once and for all. Instead, this approach perversely guaranteed that once the plan actually achieved the stock market returns it desired, the plan's funding ratio exceeded 100 percent and it was then deemed "overfunded." (For a critical analysis of the "pension overfunding" fallacy, see my previous column.)

This inevitably brought the unions and retiree groups back to the table demanding benefits improvements — which then put the plans right back into unfunded positions in the next recession. Experience has shown that bonding more than absolutely necessary invites a vicious cycle. The old paradigm was wrong. Excessive POB sizing will inevitably dig a deeper hole. Lesson: Think smaller, not bigger. The best debt managers will be those who right-size their benefits bonds deals to optimize long-term results.

3. How to invest. It makes little or no sense to sell taxable bonds to buy bonds. At the outset, benefits bond issues should fund only investments in equities, which historically earn more than the coupons on the taxable bonds. To naïvely sell bonds and fund a pension or OPEB portfolio that invests a portion in bonds is simply selling bonds to buy bonds. And selling bonds to buy riskier fixed income securities (as in the Wisconsin schools mentioned earlier) or to buy the bonds of neighboring jurisdictions without appropriate diversification, as some financial and investment advisors in the Midwest have recently suggested, is pure lunacy. Selling bonds to buy bonds is an impairment of borrowing capacity for no rational reason.

The New Benefits Bonds Paradigm invests the bond proceeds in equities for at least five years and then begins to allocate a small portion of the proceeds annually toward fixed-income investments over the life of the bond issue to achieve the desired long-term asset allocation. For pension plans, these rebalancing adjustments can be made inside a trust fund (see #4 below) and ordinarily can be funded from capital gains in the equity portfolio. At the same time, the retirement plan will continue to amortize the remaining unfunded liability, and those contribution flows should be invested entirely in bonds and other alternatives to equity, to systematically return the overall plan's portfolio toward its ideal long-term asset allocation.

Notice that this new paradigm does not comport with sending bond proceeds off to the state retirement plan or a multi-employer OPEB trust fund that contains both bonds and stocks. That was the naïve thinking behind the old POB paradigm, and again represents a waste of borrowing capacity and an inefficient use of capital markets.

4. Protecting the creditors and the taxpayers. POB bond proceeds generally should be invested in a new POB trust in order to assure that bondholders and taxpayers are protected. As providers of capital, bondholders are entitled to know that their investments will not be squandered by future irreversible benefits increases if capital markets temporarily achieve their desired purpose. Taxpayers also have a giant stake in these transactions, as it is they (not the employees) who bear the entire risk of possible equity market underperformance. In return for that risk, they deserve the reward of reduced debt service payments if equity returns ultimately exceed expectations.

Therefore, proceeds should not just be handed over to the pension trustees to run their portfolio as business-as-usual. State laws governing public pension funds often get in the way of a soundly constructed POB transaction. A successfully designed POB issue can eventually generate a funding surplus that can repay the bond issue earlier than originally scheduled. A separate POB trust may be required to protect investor and taxpayer interests. This obviously requires actuarial cooperation. Working with the actuary to achieve treatment of the POB trust as a valuation asset is a key task for the debt manager, financial adviser and bond counsel while structuring the issue. Fortunately there are legal and financial structures to make this feasible.

The POB trust can provide for a market stabilization reserve that precludes poaching by employee groups if the plan's valuation assets exceed liabilities because of equity appreciation. A taxpayer-protective trust can further provide the POB trustees with the option to redeem outstanding bonds with surplus capital gains, once the stabilization reserve has been properly funded. By design, these decisions can occur only when the stock markets have entered peak valuations or sustained excess returns. As history has painfully shown, taxpayers then are far better served by reducing debt permanently than by increasing employee benefits permanently and irrevocably.

On the debt-management side, this strategy may require use of a long-term call feature after 10 years, or alternatively the use of variable-rate or medium-term notes which can redeemed at the peak of stock market cycles when trustees can "harvest" their gains to the advantage of taxpayers. The bond indenture can also include restrictive covenants to preclude future awards of retroactive benefits increases before the bonds are fully redeemed. Such restrictions provide further protection to bond investors which should improve marketability, reduce yields and enhance the success ratio of the deal.

For OPEB bonds, the problem is less complicated, fortunately. A new OPEB trust requires less clutter and fewer work-arounds than a mature pension fund, from both a governance and investment standpoint. Most OPEB deals can be structured with provisions to assure that excess returns are used to defray future employer contributions. Also, an irrevocable OPEB trust can likely be structured so that if excess assets become available through market appreciation and the plan's requirements have been discharged, the surplus earnings can be used for debt service or to reduce employer contributions. Especially if the issue is right-sized at the smaller levels suggested below, a single well-designed OPEB trust document should suffice.

To simplify the investments in a benefits bonds proceeds trust, I personally favor a strategy to invest proceeds primarily in broad-market institutional stock index funds or portfolios. This reduces both investment and oversight costs, eliminates the risk of portfolio manager underperformance, and keeps the benefits bonds arbitrage strategy on track as a one-variable strategy. Trustees will find this far less complex, especially those who are new to the role. For pension funds, the remaining traditional (pre-POB) portfolio can be invested by the pension trustees in actively managed disciplines, treating the separate POB proceeds as a core, passive portfolio.

5. Diversifying market entry points over time. Acknowledging the conceivable risk that the economy could experience a double-dip recession or a replay of the 1930s, most public employers will be prudent to save some dry powder for the next benefits bond window. Even though stock prices may be higher in the future when a second issue might be deployed, a two-stage approach can reduce long-term risks to taxpayers and to professional careers.

For example, a POB issuer with a real-time 65 percent funded ratio might ordinarily consider a bond issue equal to 20 percent of the plan's total liabilities, to bring its funding ratio to 85 percent. However in this "six-sigma" economic environment, it may be more prudent to issue only 10 percent in 2009 and await the next bear market in stocks before issuing the remaining 10 percent, as long as issuance costs are not a problem. If stocks outperform before the next recession, the second issue can be sized smaller; and if markets underperform, the second issue will be relatively less expensive. So the payoff matrix for a two-step strategy will look attractive to conservative plan sponsors. (Note: Smaller issuers may be unable to bifurcate their deals because of bond-issuance costs.)

Likewise, an OPEB bond issuer might target bond issuance for 65 percent of a startup plan's total unfunded liabilities (the long-term equity allocation), but issue only 33 percent of the total liabilities in the first round of financing. Given that these are startup plans with 25-30 year amortization schedules, there is a strong argument favoring a two-step process to avoid risking all the eggs in a single market basket. A second OPEB-OB issue can be sold in the next recession's bond window and still put the plan on the right track toward proper long-term funding.

Another viable strategy for startup OPEB plans, especially those with insufficient size to enter the taxable bond market twice, would be to fund only 50 percent of the plan's liabilities through the bond issue, and then rebalance the investment portfolio in the future if and when equities represent more than 65 percent of the total liabilities. This "creaming" strategy exploits the power of equity investments, and is likely to capture extraordinary stock market returns during economic expansions and in bull market peaks, by building up an offsetting bond position during periods of higher market yields, to prepare for the next economic down-cycle. The 50 percent strategy also avoids the need to create a special-purpose trust for the bond proceeds because the likelihood of future overfunding during the life of the bond issue is relatively remote.

Always remember that benefits bonds are just one tool for funding a plan. They are not a panacea and should never be presented as an "ultimate solution." By funding less than the full actuarial deficit, the normal fixed-income component of the long-term asset mix will be funded conventionally. This will eventually bring the plan to full funding over the coming decades. The New Paradigm for Benefits Bonds avoids the risk of "overshooting" the ultimate funding target and also allows a second chance to issue again at a later time when confidence in the strategy will have increased with greater experience and familiarity.

Conclusion: complicated, but feasible when done right. By now, many readers will decide that this stratagem is just too complex for them, and they should just rely on conventional actuarial amortization to fund their pension and OPEB plans. And that is fine with me. Benefits bonds are certainly not for everybody, even when market conditions are ideal. Lower-rated entities should avoid them like the plague. Those with strict statutory borrowing limits or fuzzy state OPEB legislation for either the debt side or the investment side will be unable to deploy this strategy. For others with sophisticated debt management teams, deep benefits plan underfunding deficits, specially skilled financial advisers, and sufficient financial flexibility, however, a rare market window may present a timely opportunity to fund some of your pension and retiree medical obligations in 2009 — if you start your groundwork now.

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