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Special Report

## Reversal of Fortune: The Rising Cost of Public Sector Pensions and Other Post-Employment Benefits

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*This report was prepared with the research assistance of Sahil Khera.*

*This report examines the potential credit impact of increasing defined-benefit pension funding requirements on governmental plan sponsors in the U.S. Included also is a discussion of the historical, legal, and accounting contexts for public sector pensions. Other post-employment benefit liabilities are getting attention in light of evolving accounting standards and this topic will also be addressed.*

### ■ Outlook

Public sector sponsors of defined-benefit pension plans have reason to be concerned. The worst three years of domestic equity market performance since World War II have cut deeply into plan funding ratios, in many cases leading to substantial increases to contributions at a time when budgets are already stretched thin. The actuarial practice of smoothing gains and losses on invested assets, usually over a five-year period, takes some of the sting out of the recent market slide because actuaries are still factoring in the great returns earned prior to 2000. However, unless the equity markets quickly revert to late 1990s form, pension expense for state and local governments can be expected to rise sharply over the next several years. Defined-benefit pension plans are estimated to cover 90% of state and local government employees.

Pension funding is an important element of credit analysis because pension expense has a direct effect on current budgets and a long-term impact on overall financial flexibility. Contractually obligated pension expenditures, along with debt service commitments, are amongst a governmental entity's fixed-cost burden, pulling resources from other essential programs. Significant increases in pension expense will further challenge governments already reeling from weak revenue growth and rising costs in areas such as employee health care and social services programs. As economic conditions improve and revenue growth returns, pension costs will compete with other governmental priorities, like restoring programs that were eliminated to save money or rebuilding reserves. Fitch Ratings expects few, if any, downgrades to occur solely as a result of rising pension costs. However, increasing pension expenses can contribute to or exacerbate declines in liquidity and financial flexibility that may lead to downgrades in the absence of corrective action.

Pension funding issues received less attention during the latter half of the 1990s as a buoyant stock market boosted pension plan returns and restored the average funding ratio to 104% in 2000 from 81% in 1990 according to a study by the Public Pension Coordinating Council. From its June 1, 1996 price of 6,677, the Wilshire 5000 Total Market Index, widely considered the broadest measure of U.S. equity performance, rose 121% to 14,752 on March 24, 2000, a period of less than four years. These tremendous gains allowed many governments to take "funding holidays" — dramatically reducing or, in some cases, even eliminating annual pension payments. Also during this period, the widening spread between municipal bond yields and achieved rates of plan returns enticed many governments to issue pension obligation bonds (POBs). As the selloff in equities has demonstrated, reaching

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fully funded status through sale of a POB does not guaranty that a plan will stay fully funded. Some governments may now have to pay both the pension bond debt service and new unfunded liabilities.

Beyond market volatility, several other factors are affecting the fiscal health of pension plans and their sponsors. First, is the fact that many governments were tempted by the strong plan valuations of the late 1990s to enhance member benefits. Many of those overfunded plans are now underfunded, even before the costs of the enhanced benefits are considered. Second, budget shortfalls have led many governments to defer pension contributions or reduce payrolls by offering early retirement incentives, rationalizing that the pension systems are healthy enough in the short-term to meet these obligations. Lastly, accounting and actuarial standards require pension plans to assume rates of return having some relationship to actual investment return experience based on given asset allocations. It now appears likely that some plans may have to reduce their investment return assumptions, which would further increase annual pension expense.

A related issue lurking in the wings is an exposure draft by the Governmental Accounting Standards Board (GASB) that calls for other post-employment benefits (OPEB), consisting principally of retiree health care, to be treated similarly to pensions from an accounting standpoint. Most OPEB benefits are paid from current budgetary resources, but the accounting change could cause annual contributions to explode since new, presumably unfunded liabilities would have to be amortized.

Despite the likelihood of increasing pension costs for plan sponsors, the plans themselves are, on the whole, in good condition at the present time. A recent survey of state and teachers retirement systems showed that these plans averaged a 92.9% funding ratio on an actuarial basis. It should be noted that the average incorporates a wide variance among plans, with many overfunded and some less than 50% funded. The average funding ratio decline from 2001–2002 was a relatively modest 4.2%. However, as the poor investment returns of 2000–2002 work their way into subsequent plan valuations, the average funding ratio may decline more rapidly; some experts predict the average will fall below 80%.

## ■ Credit Considerations

Fitch analyzes pension liabilities in conjunction with the analysis of an issuer's debt profile and future borrowing plans. Pension liabilities are similar to bonded debt in that both are considered long-term liabilities on the balance sheet. However, unlike fixed debt costs, pension liabilities can be altered through changes to plan assumptions or to valuation methods, making direct comparisons difficult. For this reason, pension liabilities are not included in the long-term debt ratios. Moreover, unlike bonded debt, which must be repaid on time and in full, pension payments can be reduced or deferred.

Fitch analysts begin to evaluate pension plan status by reviewing the overall funded ratio, the size of the annually required contribution (ARC) relative to the sponsor's overall budget, and the sponsor's net pension obligation (NPO). Generally, a current funding ratio of 70%–80% or better is considered by Fitch to be adequately funded from a credit perspective. However, in cases where actuarial assumptions are clearly aggressive and outside current norms, this range may be insufficient. Conversely, a lower funding ratio may be acceptable if actuarial assumptions are notably conservative. Below this 70%–80% threshold, the pension plan could be considered to have a potentially significant impact on the sponsor's budget and additional analysis is warranted. This is particularly true in cases where the ARC is a significant and growing part of the sponsor's budget. Similarly, a rising NPO usually reflects a deferral of required pension payments, and the reasons for such a deferral will be explored. *(See later sections for a discussion of key accounting and actuarial concepts related to pension plans.)*

Generally, pension funding status affects rating outcomes at the margins, or only in the more severe cases of underfunding. For example, during the assignment of an initial rating, a low funding ratio and the presence of a large NPO can have a negative impact on the rating outcome, keeping a rating below where other factors might suggest it should be. On the other hand, a fully funded pension plan would not typically result in a higher rating assignment or a rating upgrade since it simply represents the fulfillment of a contractual obligation.

Deferrals of minimum required pension payments can, in some cases, affect a plan sponsor's credit rating over time, depending on the current and

historical funding level of the plan, the reason for the deferrals, and the overall credit profile of the plan sponsor. At a minimum, Fitch considers the deferral of pension expense as a significant indicator of fiscal stress and one that merits closer scrutiny. In some states, annual pension expense payment amounts and deferral rules are governed by constitutional or statutory considerations, which must be factored into the analysis.

The current weakness of the equities markets is causing many pension plan funding ratios to decline, although these market-related swings are normal and are to be expected over the long-run time horizon associated with pension funding. After all, plans that appeared poorly funded in the early 1990s benefited greatly from the strong equities market in the latter half of the decade; a decline from those levels is to be expected. Fitch analysts will work with plan sponsors to gain a complete understanding of the impact on operating budgets of increasing ARCs. Plan sponsors that exhibit a steady history of meeting their pension commitments should not experience rating pressure due to market-driven declines in funding ratios unless it becomes clear that pension expense will have to be significantly deferred.

Economic and demographic assumptions are also reviewed given their direct impact on the aforementioned benchmarks. Aggressive investment return or salary assumptions could inflate a plan's funding ratio. Changes to the benefit structure since the last plan valuation, such as an ad hoc cost of living adjustment for retirees, can also affect plan liabilities. Fitch analysts will work with plan sponsors to gain an understanding of how such assumptions and benefit changes will affect the direction of plan funding ratios and ARCs. If significant unfunded liabilities are present or anticipated, the government's plans for addressing the liability will be reviewed. The current or potential magnitude of pension expenses on the sponsor's cash flow will be factored into the rating analysis.

The analysis will differ somewhat for governments that do not sponsor a pension plan but rather participate in a cost-sharing multiple employer plan. In such cases, information about the cost-sharing pension plan is often not readily obtainable from a participant's financial reports. In these cases, Fitch analysts will look to see that the issuer has been paying 100% of the amount billed by the cost-sharing retirement system. As circumstances warrant, additional information about the cost-sharing plan

may be requested to determine the likely future direction of bills sent to participants.

### ■ History of Public Sector Pensions

Public sector pensions originated as disability benefits granted to soldiers as an incentive to join armies. Such benefits have been used throughout recorded history and were first granted in the U.S. by the Plymouth Colony in 1636.

Pensions for public sector civilian employees did not appear until the 1850s and were largely confined to big cities. Plans were first offered only to public safety personnel as additional compensation for hazardous duty. Some cities extended benefits to teachers; other municipal workers were generally not covered. Benefits typically consisted of a disability payment only, with some plans offering a survivor benefit. Retirement benefits were rarely offered except for "forced savings" plans, which invested the employees' own contributions for future payout.

Widespread coverage of all classes of public sector employees did not begin until the early 20th century, with many workers not receiving coverage until after World War I. The first state retirement system was created by the Commonwealth of Massachusetts in 1911. Still, public sector workers were far more likely to receive some retirement benefit than their private sector counterparts, who did not significantly expand coverage until after World War II.

Even the earliest of public sector plans typically required some contribution from the employee, a practice that continues today. By contrast, most private sector defined-benefit plans are entirely employer funded, probably due to favorable tax treatment afforded employer contributions.

*The historical information in the above section was derived from a book entitled "A History of Public Sector Pensions in the United States," by R. Clark, L. Craig, and J. Wilson.*

### ■ Modern Public Sector Pensions

Public pensions developed unevenly over a long period of time without any significant regulatory oversight. As a result, the modern public pension system is a patchwork of plan types that entails different benefits, different valuation and funding methods, and varying intergovernmental relationships between the states and their subunits. This diversity complicates comparative analysis and heightens the

need for analysts and municipal bond investors to focus on the unique facts of each pension plan and plan sponsor.

The lack of centralized oversight of public pensions reflects both the remoteness of governmental bankruptcy and the unique taxing power of public entities. Governments generally do not go out of business, and their power to tax citizens historically provided, at least in theory, an almost limitless source of revenue to meet pension obligations. However, over the past 25 years, tax limitation measures and anti-tax sentiment have become widespread, dramatically altering the latter point.

In contrast, private sector pensions are highly regulated by the federal government under the Employee Retirement Income Security Act of 1974 (ERISA). Moreover, corporate pension plans are guaranteed by the Pension Benefit Guaranty Corporation, a government enterprise created by ERISA and funded by premiums from covered companies. No such guaranty exists for public sector pension plans.

The vast majority of modern day public sector pension plans are defined benefit plans. A defined benefit plan is one that pays a specific amount to retirees, usually based on a formula that considers length of service and average wages during the final years of employment. Another type of plan that is growing in use is the defined contribution plan. Defined contribution plans invest employee and, in some cases, employer contributions in individual accounts for the benefit of the employee. The chief difference between defined benefit and defined contribution plans is that in the former, the plan sponsor/employer assumes the investment risk, whereas with defined contribution plans, the employee is at risk for investment returns.

## ■ Accounting for Public Pensions

Public sector pension accounting and financial reporting are dictated by Statements 25 and 27 of the GASB. Statement 25 governs financial reporting standards for plan sponsors, including required supplemental information. Statement 27 establishes rules for valuing pension assets and liabilities and determining annual contributions.

There are three types of plans covered by GASB accounting standards. Single-employer plans are administered directly by state and local governments

for their own employees. Agent multiple-employer plans aggregate single-employer plans and pool investment and administration functions. Actuarial valuations are done for each plan and funds are segregated. Cost-sharing multiple-employer plans aggregate the contributions of all participating employers and bill those jurisdictions for pension contributions based on the overall performance of the plan. Most state retirement systems include at least one cost-sharing multiple-employer plan.

Local government financial statements may include data or references to all three plan types. A local unit may have its own plan for certain of its employees, typically public safety personnel, while general employees and teachers may participate in agent or cost-sharing multiple-employer plans. Plan organization varies around the U.S. with the differences primarily reflecting either legislative initiative or collective bargaining between employee unions and plan sponsors.

Analysts and investors should note a key distinction made by the GASB between the accounting treatment of pensions and the actuarial valuation of pensions. GASB 25 sets forth financial reporting requirements for retirement systems and pension trust funds of individual plan sponsors that call for the valuation of assets at fair market value and the reporting of current liabilities. The difference, known as net assets held in trust for pension benefits, is not a true reflection of the actuarial funding status of the plan. The actuarial funding status information, along with the sponsor's required contributions and the compliance with the contribution requirements, is contained in the supplemental reporting information of the financial statement.

## ■ Measurement of Defined-Benefit Pension Costs

Pension accounting includes both a short- and a long-term focus, but in either case is heavily reliant on actuarial assumptions. Over the short term, the focus is on determining annual pension expense and the extent to which the government is meeting its minimal funding requirements. The longer term view seeks to establish the overall funding status of a pension plan — will actuarially valued assets be sufficient to pay for actuarially accrued liabilities?

As mentioned, actuarial assumptions play a critical role in determining a plan's funding status. The purpose of using actuarial funding methods is to

promote the consistent accumulation of assets over time while limiting year-to-year volatility in contribution levels. However, actual plan experience as it relates to actuarial assumptions, including investment return, the level of contributions by the plan sponsor, and employment and wage trends, affect plan performance over time and assumptions must be periodically adjusted.

GASB pronouncements require that all actuarial assumptions used in plan valuation and the related determination of funding requirements be chosen in accordance with the Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations as promulgated by the Actuarial Standards Board (ASB) in 1990. Subsequent to the adoption of GASB Statements 25 and 27 in 1994, the ASB promulgated ASOPs 27 and 35 to provide additional guidance to actuaries in selecting appropriate economic and demographic assumptions, respectively.

Three key metrics may be considered benchmarks of public pension plan analysis: the funded ratio, the ARC, and the NPO.

**Funded Ratio:** The funded ratio is the actuarial value of assets (AVA), expressed as a percentage of the actuarially accrued liabilities. GASB requires the asset valuation method to be market related, not necessarily equivalent to market value. Asset valuations are typically smoothed over a period of five years to reduce short-term volatility related to investment returns. GASB requires the calculation of actuarial costs (liabilities) to be made with one of six methods, each of which yields somewhat different results. The actuarial cost method must be consistent with the method used to value assets.

**ARC:** The ARC is the actuarially determined amount a government must contribute to its pension plan each year. The ARC consists of two components, the normal cost — that portion of future benefits allocated to the current year — and an amount sufficient to amortize any actuarially accrued liability. The ARC will move inversely with respect to the funding ratio. A decline in the funding ratio, by definition, means that either the normal cost has increased due to benefit enhancements or a change in assumptions, or there is a larger amount of unfunded liability to amortize due to reduced asset values, or both.

**NPO:** The NPO is the sum of the any shortfall in pension contributions existing on the effective date of

GASB 27 and any cumulative differences between actual sponsor contributions and the ARCs since the effective date of GASB 27. Any shortfalls in contributions are added to the NPO, along with interest accrued at the discount rate. The NPO attempts to measure how reliably a plan sponsor has kept up with its pension payment obligations.

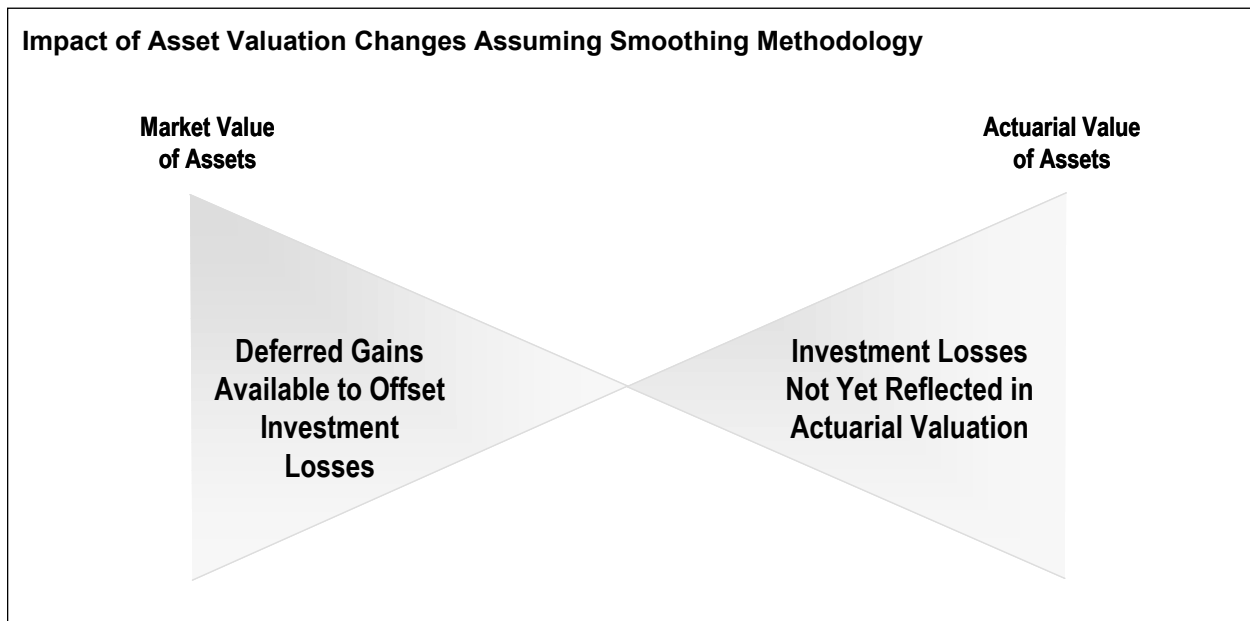
Because most defined-benefit plans use an asset smoothing methodology, actuarial valuations of plan assets tend the lag market valuations. When the market value of assets (MVA) grows due to strong investment returns, the AVA increases at a slower pace because the market returns are gradually phased into the valuation. Accordingly, annual pension costs do not fall in direct correspondence to the rise in asset values due to the smoothing practice. Conversely, in a down market such as the current environment, the AVA will tend to exceed the MVA because investment losses are phased-in over time. In this environment, pension expenses will rise more slowly than if they were correlated directly with market losses; although they will rise as the losses are realized (*see chart, page 6*).

## ■ Actuarial Assumptions

**Economic Assumptions:** The two primary economic assumptions are the investment return/discount rate and the salary scale.

By far the more important assumption is the investment return/discount rate. This rate is used to discount the aggregate value of all future plan benefit payments to present value. Actuarial standards of practice require a number of factors to be considered in selecting the appropriate rate, including the existing allocation of plan assets between equities and fixed-income securities, actual plan return experience, and likely future returns.

The selection of a discount rate that is on the high end of the range that would be considered reasonable could substantially reduce the present value of future liabilities. Obviously, this would reduce the amount of assets needed to meet those future liabilities and the ARC would be lower. While most plans assume discount rates that may be deemed moderate or conservative (the average is about 8%), there are clearly some retirement systems that may have to reduce their discount rates, opening up additional liabilities.



The salary scale assumption attempts to incorporate future wage increases granted to plan beneficiaries. Implicit in the overall assumption is a component related to cost of living (inflation) and one related to bargained step increases or expected merit pay increases.

**Demographic Assumptions:** Major non-economic assumptions in plan valuations include those regarding the pace of retirements from active service, life expectancy, separation rates, disability, and administrative expenses. Life expectancy is emerging as a key assumption due to advances in medical science that allow people to live longer. Implementation of new mortality tables reflecting longer life expectancy will increase future liabilities. The assumption regarding the rate of retirement can also have a short-term impact on some plans as discussed below.

### ■ External Factors

Once a defined benefit plan's assumptions are established, the plan should be largely self-regulating given sponsor compliance in meeting its annual cost. The ARC will adjust based on investment performance, and the amortization of unfunded liability will, over time, allow the plan to reach full funding. However, assumptions are never completely accurate and plan sponsors frequently take actions that must be incorporated in the valuation.

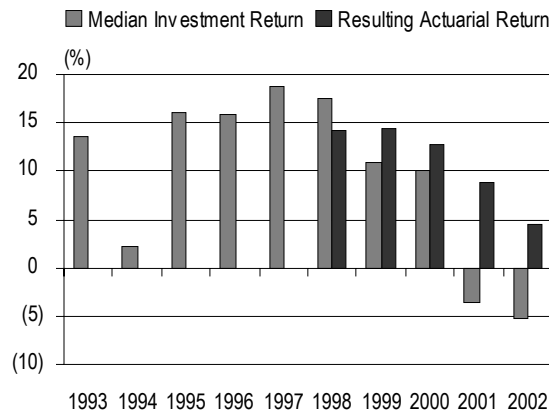
**Pension Deferral:** Governments may reduce or defer entirely their ARC for a given year, usually for

budget relief. While such actions do provide short-term budget savings, the unpaid ARC is added to the NPO and must be made up at some point in the future.

**Benefit Changes:** Benefits may be adjusted as part of the collective bargaining process or to achieve some budgetary goal of the sponsor. Extra retirement benefits are sometimes granted to employees when plans appear well funded, or if resource limitations preclude larger wage increases. During times of fiscal stress, governments often establish early retirement programs to reduce payrolls; these programs usually entail some extra retirement benefit. Also, cost of living adjustments are periodically granted to retirees, some of which may not have been part of the original plan valuation.

**Assumption Changes:** Actuaries are required to apply a reasonableness test to all of their assumptions, which should generally have some basis in market performance or actual experience. Plan sponsors occasionally run experience studies to test the accuracy of assumptions. These studies can result in changes to assumptions that can dramatically alter a plan's funded ratio, to the good or bad. For example, the inflation rate has remained at or below 3% for an extended period, a level below most plans' assumption. Among other possible effects, a reduction in the inflation rate could mean that cost of living adjustments for active and retired beneficiaries will be less, thereby reducing future liabilities.

### Median Public Fund Returns and Resulting Actuarial Valuations Based on Five-Year Asset Smoothing



Source: Public Fund Survey, August 2003.

### ■ Pension Obligation Bonds

The current low interest rate environment is attractive to pension plan sponsors who may be considering an issuance of POBs. POBs are typically secured by the issuer's general obligation pledge — debt service on POBs is not an obligation of the pension plan receiving the bond proceeds. POBs are an arbitrage play that attempts to take advantage of the interest rate differential between taxable municipal bonds and the assumed investment return on plan assets. Bonds are issued to fund all, or a portion of, a sponsor's unfunded pension liability, with the hope that the debt service on the bonds will be less than what the sponsor would otherwise have to pay in annual pension costs over the long term.

If the invested proceeds of the POBs do not realize a rate of return in excess of the cost of capital, new unfunded liabilities could arise. Similarly, if a plan is brought to full funding status by virtue of a POB issuance, there may be a temptation on the part of elected officials to sweeten pension benefits (increase liabilities), particularly in areas where there is significant labor pressure.

Fitch believes that POBs, if used moderately and in conjunction with a prudent approach to investing the proceeds and other pension assets, can be a useful tool in asset-liability management. However, a failure to follow balanced and prudent investment practices with respect to POB proceeds could expose the sponsor to market losses.

Because a sponsor's unfunded pension liability is already factored into the rating, the issuance of POBs simply moves the obligation from one part of the balance sheet to another. However, Fitch notes that POBs create a true debt, one which must be paid on time and in full, rather than a softer pension liability that can be deferred or rescheduled from time to time during periods of fiscal stress. Consequently, POBs can have a significant effect on financial flexibility over time.

The use of POBs to provide near term budget relief can, as one factor considered in the total rating analysis, have a negative impact on credit. Using POB proceeds to pay current and subsequent year pension contributions is considered by Fitch to be a type of deficit financing — the use of borrowing funds to pay for an annually recurring expense.

### ■ Other Post-Employment Benefits

In February 2003, the GASB issued an exposure draft of a new accounting standard that would require governments to account for those post-employment benefits granted to retirees that go beyond simple retirement benefits as if they were pensions. In GASB's view, the accounting change is needed because present accounting rules do not capture the cost of benefits earned by current employees. Rather, employers are only required to book cash outlays actually paid in a given year for OPEB on behalf of existing retirees.

OPEB consists primarily of health care benefits such as hospitalization, prescription drugs, and dental and vision benefits, but can also include such benefits as life insurance or estate planning services. In most instances, the government granting OPEB pays for them on a pay-as-you-go basis, either on a direct billing basis or through payment of insurance premiums. Cost sharing of health care premiums with retirees is considered an implicit rate subsidy and an OPEB expense. If retirees pay 100% of the premium, there is no OPEB expense to the government.

GASB's exposure draft presumes that many governments either already have or will establish defined-benefit plans for OPEB. These plans would be required to determine actuarial assets and liabilities for OPEB every two years, the same timetable as pension benefits. The actuarial standards applied to pension plan valuations would also be applied to OPEB. Fitch anticipates that the new accounting standard will generate a number of new

methods for funding OPEB, including defined-benefit plans, but also new defined-contribution or other arrangements. The magnitude of the cost associated with funding a defined-benefit OPEB plan may force government employers to look at funding arrangements that significantly increase employee contributions.

When the GASB adopts new standards, it typically provides guidance regarding transition from an old accounting practice to the new rules. In the transition to the new OPEB standard, it is expected that governments with defined-benefit plans will have to account for some prior service credit for OPEB benefits already earned by current employees. This will contribute to an unfunded liability at transition for many governments, which they must begin amortizing. However, unlike the GASB 27 pension rules, employers will not be required to “look back” to determine if they have a net OPEB obligation at the time they transition to the new OPEB standard. At transition, the net OPEB obligation will be zero and will change over time as governments either meet or fail to meet their annually required OPEB costs.

This new accounting standard can be expected to apply significant budgetary pressure in coming years

for a number of reasons. First, the requirement to begin amortizing unfunded OPEB liabilities will likely boost OPEB expenses above current pay-as-you-go expenses. Second, the governmental workforce is dominated by the baby boom generation, meaning it will start consuming benefits over the medium term. Since most defined-benefit OPEB plans are unfunded, this will result in higher cash outlays for benefits. As a result, plan sponsors will have to keep a disproportionately large amount of plan assets in shorter term, more liquid assets to meet current benefits, thereby lowering the assumed rate of investment return on assets. Third, the cost of health care continues to rise above the level of general inflation. Fitch expects annually required contributions to OPEB will be significantly pressured by health care cost inflation.

If adopted, GASB would have the standard implemented by governments with revenues of \$100 million or more beginning with the fiscal year starting after June 15, 2006. Governments with revenues between \$10 million–\$100 million would implement one year later, and those with less than \$10 million in revenue would implement for the fiscal year beginning after June 15, 2008.

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