



09/10/13

Dr. Ken Moore  
MayorEric S. Stuckey  
City AdministratorHISTORIC  
FRANKLIN  
TENNESSEE

August 26, 2013

To: Board of Mayor and Aldermen

From: Eric Stuckey, City Administrator  
Russell Truell, ACA Finance

**Subject:**

The purpose of this memorandum is to provide information to the Board of Mayor and Aldermen (BOMA) for consideration of an initial resolution to issue pension obligation bonds. (COF# 2013-58)

**Background:**

In January of this year, the financial advisor to our Pension Plan initiated a discussion about the issuance of pension bonds. Through the year, staff has collected information about the subject and asked to be included in Private Chapter 467, passed by the Legislature in this year's term. The legislation allows certain cities to issue pension obligation bonds and sets a high threshold in financial condition to be able to do so. The City of Franklin fits that description.

Having advised against issuing pensions bonds for many years, both Dahab Associates, our pension advisor and PFM, our debt advisor, have concluded that it may be advantageous to issue such bonds given current circumstances. Those circumstances include current low interest rates for municipal debt; rising interest rates for bonds and other investments; changes in Government Accounting Standard Board (GASB) reporting rules that now require unfunded pension liabilities to be included on the balance sheet in future financial statements; and the announcement by Moody's rating services that they will use a stricter standard for calculating unfunded liabilities than that of the GASB.

After several discussions among the Pension Committee, a proposal to issue up to \$10 million in pension obligation bonds was unanimously approved at the August meeting. The Budget and Finance committee reviewed some of the material at their August 25 meeting, and forwarded the issue, without a recommendation, for discussion to the BOMA work session.

**Financial Impact:**

The financial impact of issuing pension bonds is impossible to determine with precision.

PFM reports that bonds with a final maturity of ten years could be issued at an interest rate of approximately 3.05%. Dahab Associates reports that earnings on our pension investment could range between 5% and 8%, on average, over that period. If our advisors are correct, the City would benefit by the differential between the two rates. The City would also benefit by reducing the unfunded liability more quickly than is currently formulated in our actuarially required contributions from operating budgets.



HISTORIC  
FRANKLIN  
TENNESSEE

---

**Recommendations:**

Staff recommends Board approval of the initial bond resolution to initiate the publication period for public protest, as required by law, and establish a date for a public hearing in October.

## DRAFT

### RESOLUTION NUMBER 2013-58

INITIAL RESOLUTION AUTHORIZING THE CITY OF FRANKLIN, TENNESSEE TO ISSUE ITS GENERAL OBLIGATION BONDS IN THE AGGREGATE PRINCIPAL AMOUNT OF NOT TO EXCEED \_\_\_\_ MILLION \_\_\_\_ HUNDRED THOUSAND DOLLARS (\$\_\_\_\_\_)

WHEREAS, the Board of Mayor and Aldermen (the "Board") of the City of Franklin, Tennessee (the "Municipality") desires to authorize not to exceed \$\_\_\_\_\_ to finance certain unfunded pension obligations described below.

BE IT RESOLVED by the Board that for the purpose of financing (i) certain unfunded pension obligations arising from the City of Franklin Employee Pension Plan administered by the Municipality; (ii) payment of legal and fiscal costs incident to the foregoing; and (iii) payment of costs incident to the indebtedness described herein, the Municipality shall borrow money and incur indebtedness through the issuance of its general obligation bonds in the aggregate principal amount of not to exceed \$\_\_\_\_\_ which shall bear interest at a rate or rates not to exceed the maximum rate permitted by law and which shall be payable from ad valorem taxes to be levied on all taxable property within the Municipality in an amount sufficient to pay when due the annual amount payable by the Municipality for the bonds as and when it becomes due and payable.

BE IT FURTHER RESOLVED by the Board that the Recorder of the Municipality be, and is, hereby directed and instructed to cause the foregoing initial resolution relative to the issuance of general obligation bonds in the amount not to exceed \$\_\_\_\_\_ to be published in full in a newspaper having a general circulation in the Municipality, for one issue of said paper followed by the statutory notice, to-wit:

### NOTICE

The foregoing resolution has been adopted. Unless within twenty (20) days from the date of publication hereof a petition signed by at least ten percent (10%) of the registered voters of the Municipality shall have been filed with the Recorder of the Municipality protesting the issuance of the general obligation bonds, such bonds will be issued as proposed.

Recorder

Adopted and approved this \_\_\_\_ day of \_\_\_\_, 201\_.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
Recorder

STATE OF TENNESSEE )

COUNTY OF WILLIAMSON )

I, Eric Stuckey, certify that I am the duly qualified and acting Recorder of the City of Franklin, Tennessee, and as such official I further certify that attached hereto is a copy of excerpts from the minutes of a regular meeting of the governing body of the Municipality held on \_\_\_\_ \_\_, 201\_\_; that these minutes were promptly and fully recorded and are open to public inspection; that I have compared said copy with the original minute record of said meeting in my official custody; and that said copy is a true, correct and complete transcript from said original minute record insofar as said original record relates to not to exceed \$\_\_\_\_\_ general obligation bonds of said Municipality.

WITNESS my official signature and seal of said Municipality on this the \_\_\_\_\_ day of \_\_\_\_\_, 201\_\_.

\_\_\_\_\_  
Recorder

(SEAL)

12283146.1

The Board of Mayor and Aldermen of the City of Franklin, Tennessee, met in regular session on \_\_\_\_\_, 201\_, at 7:00 p.m. at the City Hall, Franklin, Tennessee, with the Honorable Ken Moore, Mayor, presiding.

The following Aldermen were present:

The following Aldermen were absent:

There were also present Eric Stuckey, City Administrator/Recorder, and Russell Truell, Chief Financial Officer.

After the meeting was duly called to order, the following resolution was introduced by \_\_\_\_\_, seconded by \_\_\_\_\_ and after due deliberation, was adopted by the following vote:

AYE:

NAY:



**State of Tennessee**  
**PUBLIC CHAPTER NO. 467**

**SENATE BILL NO. 875**

**By Henry, Johnson**

**Substituted for: House Bill No. 724**

**By Stewart, Powell, Sargent**

**AN ACT to amend Tennessee Code Annotated, Title 9, Chapter 21, relative to the definition of "certain unfunded pension obligations" for which local governments may issue bonds.**

**WHEREAS, pension liabilities for local governments are increasing and becoming a growing financial burden for local governments in this state; and**

**WHEREAS, it would be in the public interest for local governments to have additional means by which to fund their increasing pension liabilities; and**

**WHEREAS, state law currently permits local governments to issue their general obligation bonds and revenue bonds for "certain unfunded pension obligations," as such term is defined in the Tennessee Code Annotated; and**

**WHEREAS, the current historically low interest-rate environment presents local governments with a unique opportunity to borrow monies at a rate cheaper than the rate on which they would earn on the investment of such funds; and**

**WHEREAS, the issuance of bonds by local governments and the subsequent investment of such bond proceeds at a rate higher than the rate at which they were borrowed would provide local governments with profit earnings with which to fund their pension liabilities; and**

**WHEREAS, to permit the greatest number of local governments to take advantage of the opportunities presented by this interest-rate environment to fund their pension liabilities, it is necessary to expand the definition of "certain unfunded pension obligations" for which local governments may issue their bonds; and**

**WHEREAS, the State Funding Board and the Comptroller of the Treasury shall retain their ability under Tennessee Code Annotated, Section 9-21-127, to reject any proposed issuance of bonds by local governments to fund their pension obligations; and**

**WHEREAS, to provide local governments with additional means by which to fund their increasing pension liabilities, the Tennessee General Assembly desires to expand the definition of "certain unfunded pension obligations" in Tennessee Code Annotated, Section 9-21-105, for which local governments may issue their bonds; now, therefore,**

**BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:**

**SECTION 1. Tennessee Code Annotated, Section 9-21-105(4)(A), is amended by inserting the following as a new subdivision:**

**(iv) Pension benefits for past service of employees of a local government which is either (A) a metropolitan government with a general obligation rating of at least Aa1 (or its equivalent) from one or more nationally recognized rating agencies or (B) a municipality with a general obligation rating of Aaa (or its equivalent) from one or more nationally recognized rating agencies that is located within a county with a general obligation rating of Aaa (or its equivalent) from one or more nationally recognized rating agencies and, in either case, whose pension benefits arise from a defined benefit plan administered by the local government;**

**SECTION 2. Tennessee Code Annotated, Section 9-21-105(4)(A)(ii), is amended by deleting the language "or" after the semi-colon at the end of the subdivision.**

SECTION 3. Tennessee Code Annotated, Section 9-21-105(4)(A)(iii), is amended by adding the language "or" after the semi-colon at the end of the subdivision.

SECTION 4. Tennessee Code Annotated, Section 9-21-105(4), is amended by inserting the following as a new subdivision:

(D) Subdivision (4)(A)(iv) shall cease to be effective on July 1, 2015; provided, that no bonds issued pursuant to this subdivision (4) prior to July 1, 2015, shall be rendered ineffectual;

SECTION 5. Tennessee Code Annotated, Section 9-21-127, is amended by inserting the following after the first sentence:

A local government that issues bonds for certain unfunded pension obligations pursuant to § 9-21-105(4)(A)(iv) shall not be required to receive a recommendation by the comptroller of the treasury or the comptroller's designee or the approval of the state funding board if (A) the principal amount of the bonds is amortized over the term of the bonds such that the bonds are not balloon indebtedness (as defined below) and (B) the local government has (i) adopted a debt management policy in compliance with guidelines promulgated by the state funding board; (ii) available for public inspection its financial statements prepared in compliance with generally accepted accounting principles for state and local governments with an unqualified auditor's opinion for the two most recent fiscal years; (iii) presented to its governing body at a public hearing an explanation of the risk exposure associated with such bonds, economic and demographic assumptions used in the funding assumptions, alternative funding options considered, issuance costs associated with the proposed bonds and any conflicts of interest among the professionals involved (if disclosing such conflicts would not violate any rules of professional conduct); (iv) engaged or will engage a financial advisor, bond counsel and actuarial consultant in connection with the issuance of such bonds; (v) a full-time finance staff of at least three (3) persons; and (vi) an audit committee. As used herein, the term "balloon indebtedness" shall mean any bond (A) twenty percent (20%) or more of the principal amount of which is payable during any twelve month period or (B) fifty percent (50%) or more of the principal amount of which is payable in the aggregate twenty (20) years or more after the date of issuance.

SECTION 6. This act shall take effect upon becoming law, the public welfare requiring it.



## **GASB Issues New Pension Standards**

On June 25, 2012, the Governmental Accounting Standards Board (GASB) approved two pronouncements that will significantly impact nearly every governmental entity. These standards were published on August 2, 2012, and are "intended to improve the accounting and financial reporting of public employee pensions by state and local governments." How will these standards do that? The main intent is to have more clarification by showing the liability for pensions on the balance sheet rather than in the notes to the financial statements.

So what exactly does that mean? It means that state and municipal governments must not only report as a liability the difference between "the contributions they are required to make to a pension plan in a given year versus what is actually funded" (the current requirement), but governments must also report the net pension liability, which is the difference between the "total pension liability (the present value of projected benefit payments to employees based on their past service) and the assets (mostly investments reported at fair value set aside to pay current employees, retirees, and beneficiaries.)

You may be thinking that does not seem like a very big deal. Well, according to the Pew Center on the States, "the gap between the promises states have made for public employees' retirement benefits and the money they have set aside to pay these bills was at least \$1.38 trillion in fiscal year 2010" for states and municipal governments. Some believe the idea is that financial users will get a better grasp of how future proposed benefit increases really effect the next generation. In addition, governments need to keep better track of the annual costs of pension benefits so that they can be measured "comprehensively and comparably."

The two statements that are being changed are the following: Statement No. 67, *Financial Reporting for Pension Plans* (which is the change discussed above) and Statement No. 68, *Accounting and Financial Reporting for Pensions*. The adjustments required to conform to Statement No. 68 can be summarized as follows:

### **Note Disclosures and Supplementary Information**

**Statement 68 requires employers to present more extensive note disclosures and RSI, including:**

- Descriptive information about the types of benefits provided.
- How contributions to the pension plan are determined.
- Assumptions and methods used to calculate the pension liability.

**Single and agent employers will disclose additional information, such as:**

- Composition of the employees covered by the benefit terms.
- Sources of changes in the components of the net pension liability for the current year.

**A single or agent employer also will present required supplementary information (RSI) schedules covering the past ten years regarding:**

- Sources of changes in the components of the net pension liability.
- Ratios that assist in assessing the magnitude of the net pension liability.
- Comparisons of actual employer contributions to the pension plan with actuarially determined contribution requirements, if an employer has actuarially determined contributions.

Statement 67 is effective for periods beginning after June 15, 2013, while Statement 68 is effective for fiscal years beginning after June 15, 2014. Early application is permitted and encouraged for both statements.

Compiled by David J. Fitch, CPA of Stone, Rudolph & Henry, PLC from the publication "GASB's New Pension Standards Now Available" published in August 2012 by Accountingweb.com.



# PENSION FUNDING:

## A Guide for Elected Officials

Report from the Pension Funding Task Force 2013

---

**Issued by:**

National Governors Association (NGA)  
National Conference of State Legislatures (NCSL)  
The Council of State Governments (CSG)  
National Association of Counties (NACo)  
National League of Cities (NLC)  
The U.S. Conference of Mayors (USCM)  
International City/County Management Association (ICMA)  
National Council on Teacher Retirement (NCTR)  
National Association of State Auditors, Comptrollers and Treasurers (NASACT)  
Government Finance Officers Association (GFOA)  
National Association of State Retirement Administrators (NASRA)



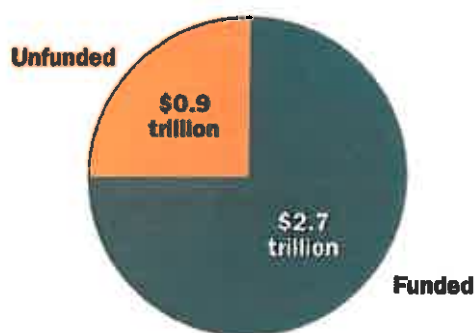
# PENSION FUNDING:

## A Guide for Elected Officials

### Introduction

Defined benefit pension plans have a long history in public sector compensation. These plans are typically funded through a combination of employer and employee contributions and earnings from investments. Public pension plans hold more than \$3 trillion in assets in trust on behalf of more than 15 million working and 8 million retired state and local government employees and their surviving family members. The pie chart below illustrates the 2011 funded status of 109 state-administered plans and 17 locally administered plans. These plans represent 85 percent of total state and local government pension assets and members.

**Figure 1. Funding of Aggregate Pension Liability, 2011**



Source: BC-CRR Estimates based on Public Plans Database (PPD).

The value of securities held by public and private retirement plans declined significantly following the economic crisis of 2008–2009, causing an increase in unfunded pension liabilities. The range of those unfunded public pension liabilities varies widely among governments. These same governments also have enacted major changes in their retirement plans over the past decade. Today, some public pension plans are well funded, while others have seen their funded status decline.

Now another change is on the horizon: new pension accounting standards issued by the Governmental Accounting Standards Board (GASB) in 2012. GASB Statement No. 67, *Financial Reporting for Pension Plans*, takes effect for pension plan fiscal years beginning after June 15, 2013 (fiscal years ending on or after June 30, 2014). GASB Statement No. 68, *Accounting and Reporting for Pensions*, applies to employers (and contributing nonemployers) in fiscal years beginning after June 15, 2014 (fiscal years ending on or after June 30, 2015).

These new accounting standards will change the way public pensions and their sponsoring governments report their pension liabilities. In particular, the new standards no longer provide guidance on how to calculate the actuarially determined annual required contribution (ARC), which many governments have used not only for accounting, but also to budget their pension plan contribution each year. In fact, these new GASB accounting standards end the relationship between pension accounting and the funding of the ARC.

In addition to GASB's new accounting standards, policymakers should be aware that rating agencies such as Moody's may use yet another set of criteria to assess the impact of pension obligations on the creditworthiness of a municipal bond issuer. If the ratings agencies publicize their pension calculations, state and local officials would be faced with the challenge of interpreting three sets of pension numbers: an accounting number to comply with the GASB's financial reporting requirements, an actuarial calculation to determine funding requirements for budgeting purposes, and a financial analysis figure produced by bond rating agencies to evaluate and compare issuers of municipal debt.

This guide provides key facts about public pension plans, why it is essential to have a pension funding policy, a brief overview of the new GASB standards, and which issues state and local officials need to address. The guide also offers guidance for policy makers to use when developing their pension plan's funding policy.

## Pension funding background

In the 1970s, it was not uncommon for state and local governments to fund their pensions on a pay-as-you-go basis. Following the passage of ERISA, which set private sector funding requirements, state and local officials took steps to fully advance-fund their pensions. They were further encouraged to meet their actuarial funding obligations by new accounting and reporting standards issued by the GASB in 1986.

The trend to improve pension funding continued over the next decade. When the GASB issued Statements 25 and 27 in 1994, employers were required to disclose information on plan assets and liabilities in their financial reports. More important, to comply with GASB, employers also had to disclose their actuarially determined ARC and the percentage of the ARC the employer actually paid. The GASB defined the ARC to include the normal cost of pensions for today's employees plus a contribution to pay for any unfunded liabilities, typically amortized over a maximum 30-year period. Paying the full ARC has been an important measure of whether or not a pension plan is on track to fund its pension promises.

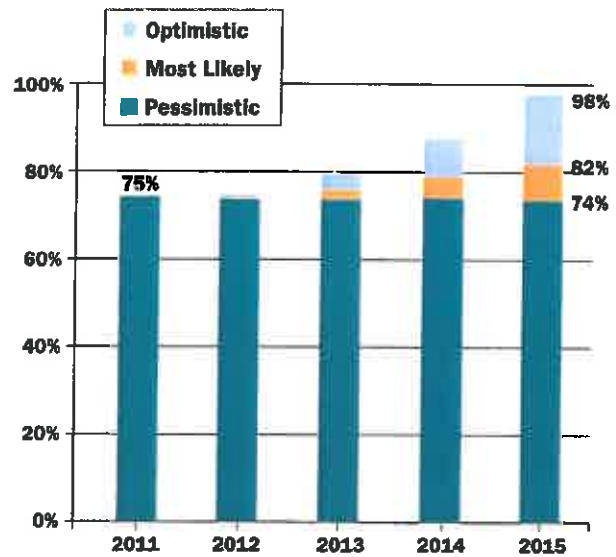
By the turn of the century, public pensions were as well funded as private pensions. In fact, most public plans were nearly 100 percent funded in 2000. Unfortunately, the last decade of economic upheaval and the wide swings in the stock market have reduced pension assets in both public and private plans.

In 2011, the estimated aggregate ratio of assets to liabilities slipped to 75 percent<sup>1</sup>. State and local officials have stepped up their efforts to restore pension funding. According to the National Conference of State Legislatures, 44 states have enacted major changes in state retirement plans from 2009–2012.<sup>2</sup> Changes have included increases in employee contributions to pension plans, longer vesting periods, reduced benefit levels, higher retirement ages, and lower cost-of-living adjustments. Some modifications may apply to new workers only, while others affect current employees and/or retirees.

## Pension funding policies

A variety of state and local laws and policies guide decisions concerning pension funding practices. Many state and local governments have passed legislation that stipulates how pensions should be funded. Others

**Figure 2.** Projected State and Local Funding Ratios Under Three Scenarios, 2011–2015



Source: BC-CRR estimates for 2011–2015 based on *Public Plans Database (PPD)*.

have policies that address how pension assets are to be invested or if pension reserves must be maintained.

Generally speaking, employers with well-funded pension plans take a long-term approach to estimating investment returns, adjust their demographic and other assumptions as needed, and consistently pay their annual required contribution in full.

A clear pension funding policy is important because it:

- Lays out a plan to fund pensions;
- Provides guidance in making annual budget decisions;
- Demonstrates prudent financial management practices;
- Reassures bond rating agencies; and
- Shows employees and the public how pensions will be funded.

## GASB's new approach

Under prior GASB statements, there was a close link between accounting and funding measures. That link has now been broken. The new GASB standards

<sup>1</sup> Munnell, Alicia H., Aubrey, Jean-Pierre, Hurwitz, Josh, Medinica, Madeline, and Quinby, Laura, "The Funding of State and Local Pensions: 2011–2015," Center for State and Local Government Excellence, May 2012.

<sup>2</sup> Snell, Ron, "State Retirement Legislation 2009–2012," National Conference of State Legislatures, July 31, 2012.



focus entirely on accounting measurements of pension liabilities and no longer on how employers fund the cost of benefits or calculate their ARC. This is a significant change for government employers because the ARC historically served as a guide for policy makers, employees, bond rating agencies and the public to determine whether pension obligations were being appropriately funded. The ARC also often was used to inform budget decisions.

Today, employers report a liability on the face of their financial statements only if they fail to fully fund their ARC (just as a homeowner would report a liability only for mortgage payments in arrears). Thus, many government employers today do *not* report a liability for pensions on the face of their financial statements. However, if the plan they sponsor does have an unfunded pension liability, it is reported in the notes to the financial statements, which are considered an integral part of financial reporting. In contrast, under the new GASB standards, employers will report their unfunded pension liability on the face of their financial statements, even if they fully fund each year's ARC (just as a homeowner would report a mortgage liability even if all monthly mortgage payments are paid on time, in full). Thus, in the future, all employers will report any unfunded pension liability on the face of their financial statements, and that amount may be substantial for many.

Furthermore, those seeking to know how much an employer should be contributing each year to the pension plan and how much the employer actually contributed (funding information) today can find that information in the employer's financial report. In contrast, under the new GASB pension accounting standards, employers will no longer *automatically* be required to obtain an actuarially determined ARC and then include information concerning that amount and actual employer contributions in their financial report.

## Filling the gap in funding guidance

Because the GASB's new standards focus entirely on how state and local governments should account for pension liabilities and no longer focus on how employers fund the costs of benefits or calculate their ARC, a new source of guidance is needed.

To help fill that gap, the national associations representing local and state governments established a Pension Funding Task Force (Task Force) to develop policy guidelines.

The "Big 7" (National Governors Association, National Conference of State Legislatures, Council of State Governments, National Association of Counties, National League of Cities, U.S. Conference of Mayors, and the International City/County Management Association) and the Government Finance Officers Association established a pension funding task force in 2012. The National Association of State Auditors, Comptrollers and Treasurers; the National Association of State Retirement Administrators; and the National Council on Teacher Retirement also serve on it. The Center for State and Local Government Excellence is the convening organization for the Task Force.

The Task Force has monitored the work of the actuarial community and the rating agencies, as well as considered recommendations from their own organizations to develop guidelines for funding standards and practices and to identify methods for voluntary compliance with these standards and practices.

The actuarial and finance communities have been working on the pension funding issues and will be invaluable resources as governments make needed changes. Indeed, the California Actuarial Advisory Panel and the Government Finance Officers Association have issued guidelines consistent with the Task Force's recommendations, but with a greater level of specificity. The Conference of Consulting Actuaries is also preparing similar guidance. State and local officials are encouraged to review the guidelines and best practices of these organizations.

It also is important to note that some governments with well-funded pension plans will determine that they need to make few, if any, changes to their funding policies, while others may face many challenges. Keep in mind that changes can be made over time. A transition plan can address changes that may need to be phased in over a period of years. For example, an employer or retirement board that currently amortizes its unfunded liabilities over 30 years could adopt a transition plan to continue that schedule (as a fixed, decreasing period) for current unfunded liabilities and to amortize any new unfunded liabilities over 25 years. In five years, that pension plan would have completed its transition to a 25-year amortization period.

In many cases, governments will need to strike a balance between competing objectives to determine the most appropriate timeframe in which to meet their goals.

## Task force recommendations

States and localities have established distinct statutory, administrative and procedural rules governing

how retirement benefits are financed. While nothing in the new GASB standards or the possible credit rating agency changes *requires* a change in funding policy, the Task Force recommends pension funding policies be based on the following five general policy objectives:

1. Have a pension funding policy that is based on an actuarially determined contribution.
2. Build funding discipline into the policy to ensure that promised benefits can be paid.
3. Maintain intergenerational equity so that the cost of employee benefits is paid by the generation of taxpayers who receives services.
4. Make employer costs a consistent percentage of payroll.
5. Require clear reporting to show how and when pension plans will be fully funded.

A sound pension funding policy should address at least the following three core elements of pension funding in a manner consistent with the policy objectives:

- Actuarial cost method;
- Asset smoothing method; and
- Amortization policy.

These core elements should be consistent with the parameters established by GASB Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, with which most governmental entities currently comply. Such parameters specify an actuarially determined ARC that should comply with applicable Actuarial Standards of Practice (ASOP No. 4), be based on an estimated long-term investment yield for the plan, and should amortize unfunded liabilities over no more than 30 years. The actuarially determined ARC, the parameters for determining the ARC, and the percentage of the ARC the employer actually paid should be disclosed and reassessed periodically to be sure that they remain effective. To that end, the Task Force recommends that state and local governments not only stay within the ARC calculation parameters established in GASB 27, but also consider the following policy objectives when reviewing each core element of their funding policy:

**Actuarial Cost Method:** the method used to allocate the pension costs (and contributions) over an employee's working career.

#### **Policy Objectives:**

1. Each participant's benefit should be fully funded under a reasonable allocation method by the expected retirement date.

2. The benefit costs should be determined as a level percentage of member compensation and include expected income adjustments.

**The Entry Age Normal (level percentage of payroll) actuarial cost method is especially well-suited to meeting these policy objectives.**

**Asset Smoothing Method:** the method used to recognize gains or losses in pension assets over some period of time to reduce the effects of market volatility and provide stability to contributions.

#### **Policy Objectives:**

1. The funding policy should specify all components of asset smoothing, such as the amount of return subject to smoothing and the time period(s) used for smoothing a specific gain or loss.
2. The asset smoothing method should be the same for both gains and losses and should not be reset or biased toward high or low investment returns.

**The use of a five-year period for "smoothing" investment experience is especially well-suited to meeting these policy objectives.**

**Amortization Policy:** the policy that determines the length of time and structure of payments required to systematically fund accrued employee benefits not covered by the actuarial value of assets.

#### **Policy Objectives:**

1. The adjustments to contributions should be made over periods that appropriately balance intergenerational equity against the goal of keeping contributions level as a percentage of payroll over time.
2. The amortization policy should reflect explicit consideration of (a) gains and losses actually experienced by a plan, (b) any changes in assumptions and methods, and (c) benefit or plan changes.
3. The amortization of surplus requires special consideration consistent with the goal of stable costs and intergenerational equity.

**Amortizing the various components of the unfunded actuarial accrued liability over periods that focus on matching participant demographics but also, except for plan amendments, consider managing contribution volatility, is especially well-suited to meeting these policy objectives.**



## Conclusion

The most important step for local and state governments to take is to base their pension funding policy on an actuarially determined contribution (ADC). The ADC should be obtained on an annual or biannual basis. The pension policy should promote fiscal discipline and intergenerational equity, and clearly report when and how pension plans will be fully funded.

Other issues to address in the policy are periodic audits and outside reviews. The ultimate goal is to ensure that pension promises can be paid, employer costs can be managed, and the plan to fund pensions is clear to everyone.

## Resources

1. GFOA best practice, *Guidelines for Funding Defined Benefit Pension Plans*, at: [www.gfoa.org](http://www.gfoa.org)
2. GASB Statements No. 67 and 68 at: [www.GASB.org](http://www.GASB.org)
3. GASB Statement 27: [http://www.gasb.org/cs/ContentServer?site=GASB&c=Document\\_C&pagename=GASB%2FDocument\\_C%2FASBDocumentPage&cid=1176160029312](http://www.gasb.org/cs/ContentServer?site=GASB&c=Document_C&pagename=GASB%2FDocument_C%2FASBDocumentPage&cid=1176160029312)
4. Moody's Request for Comments: Adjustments to US State and Local Government Reported Pension Data at: [http://www.wikipension.com/wiki/Moodys\\_Request\\_For\\_Comments](http://www.wikipension.com/wiki/Moodys_Request_For_Comments)
5. National Conference of State Legislatures, changes to state pension plans at: <http://www.ncsl.org/documents/employ/2012-LEGISLATION-FINAL-Aug-31-2012.pdf>
6. The National Association of State Retirement Administrators for examples of state funding policies at: [www.NASRA.org](http://www.NASRA.org)
7. Center for State and Local Government Excellence for examples of changes to state and local government pension plans at: <http://slge.org>
8. California Actuarial Advisory Panel at: <http://www.sco.ca.gov/caap.html>
9. Conference of Consulting Actuaries at: <http://www.ccactuaries.org/index.cfm>

February 2013



Dahab Associates, Inc.

Bay Shore,  
New York

Hollywood,  
Florida

Franklin,  
Massachusetts

Washington Crossing,  
Pennsylvania

## Pension Obligation Bonds

**Abstract:** Pension Obligation Bonds (POBs) are debt instruments issued a by state or local government to pay its obligation to the pension fund in which its employees are members. Since their introduction in 1985, there have been more than 3,000 POBs issued. Over the past few years the dollar amounts of bonds issued continue to increase rising from \$1.4 billion in 2009 to more than \$5.2 billion in 2011. With public entities having more and more difficulty finding ways to fund pensions this trend is expected in continue in the coming years.

POBs are typically issued by underfunded pension funds to raise money to pay benefits owed to their employees. In a 2009 study conducted by the Center for Retirement Research, their findings suggest that public pension funds as a whole are now less than 80% funded. This is leading to an increased interest in POBs by public pension funds.

However, the use of POBs remains highly controversial as there have been an increasing number of POBs that have been unsuccessful. Critics point to the many risks that are associated with POBs and why they are not right for every fund.

---

## **Introduction**

### **Brief History**

The City of Oakland, California issued the first Pension Obligation Bond or POB in 1985. Originally issued on a tax-exempt basis, POBs were viewed as classic arbitrage opportunities. That is, a public entity could issue a tax-exempt bond at a favorable rate, and invest the proceeds through the pension fund in higher yielding asset classes to gain a positive net return. However, because this strategy deprived the Federal government of tax revenues, Congress put a quick end to it in the Tax Reform Act of 1986. This caused POBs to be viewed as unattractive and many thought the end of their existence.

In the early 1990s, as a result of a strong stock market POBs were once again view as attractive opportunities even without the tax advantage. The lower interest rate environment along with higher allocations to equities meant that even though the bonds were taxable, a net profit could be achieved in the right market. This analysis proved to be true through the mid 1990s, however, not all POBs have been successful. Some have proved to detrimental to the issuing entities, even causing bankruptcy on two occasions.

### **POB Overview**

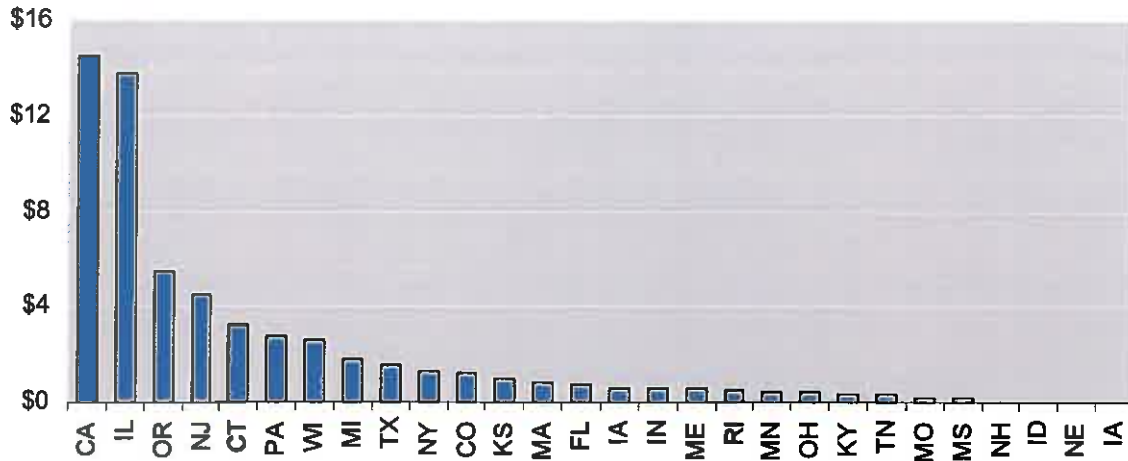
Most POBs are considered to be taxable general obligation bonds and are payable from the general fund of the issuing entity. As such, they must satisfy any debt limitations or be exempt from any debt limitation provisions. Because POBs are considered to be replacing exiting pension obligations, they are not generally viewed as adding to the overall debt burden of the issuing entity. Therefore, the are typically rated the same as other general obligation bonds for the issuer.

Once a POB is issued, the city maybe required to fund the Annual Required Contribution (ARC) in full on a yearly basis as well as the debt service.

## **Who has Issued POBs**

POBs have been issued in a large number of states across the country. However, the majority of issues have been from a select few states. The following chart presents the total amount of POBs issued from 1992-2009 by state in billions of dollars. California is the largest issuer of POBs followed closely by Illinois. Both of these states are among states with the largest underfunded pension plans in the country.

**Figure 1**  
**Total Amount of POBs Issued from 1992-2009**  
**(\$ billions)**



*Source: Center for Retirement Research at Boston College, compiled from Bloomberg*

### **Reasons for Issuing POBs**

POBs can be extremely beneficial if issued under the right circumstances. Although the market is currently small, the amount of POBs issues has been steadily increasing in recent years. The major reasons to issue a POB are as follows:

#### **Budget relief**

During periods of economic stress, POBs are used to fund near term contributions for benefit payments. They are also used to reduce the unfunded liability rather than increasing contributions which can be costly to tax payers.

#### **Cost savings**

Because of the possible arbitrage opportunity, governments utilize POBs to reduce the tax payer burden on benefit payments. If the government can receive favorable borrowing costs, they can invest the proceeds hoping to achieve a greater return then the borrowing costs and utilize the net profit to pay benefit payments.

For example, if the assumed rate is 7.5% on an unfunded accrued actuarial liability of \$100,000,000 the annual cost would be approximately \$8,300,000 assuming a 30 year amortization, daily compounding. However, if the government were to issue a POB at 4.50% interest rate with a 1% cost of issuance, the cost over the same period of time would be approximately \$6,100,000 representing a savings of approximately \$2,200,000.

---

### **Best alternative**

POBs are sometimes used because the other alternatives are not favorable. They are used instead of increasing contributions, reducing benefits or asking employees to contribute more.

### **Risks**

As with any financial investment, POBs do involve risks. These risks can be broken down into four categories: market timing risk, arbitrage risk, leveraging risk and political risk.

**Market timing risk** is arguably the most significant risk when issuing a POB. By investing a large sum of money at one time, the risk cannot be diversified away over time. Therefore it is essential to invest the funds raised at the appropriate time in order to have a successful outcome.

Market timing is the act of trying to predict the future movements of the market through the use of technical indicators or economic data. Although markets tend to move in cycles, no one can predict the future with certainty. The assumption can be made that over a long period of time, a diversified portfolio should be able to earn the actuarial assumption rate. However, this is not always true.

If a POB is issued closely followed by a recession, the invested monies will lose a significant value from the start. This causes the funding status to further decrease putting a public entity further in debt. Because the principal amount has declined, a larger rate of return must be earned in order for the POB to be profitable.

**Arbitrage risk** is the gamble that the pension fund will not earn a rate of return (at or above the actuarial rate of return) needed for the POB to be deemed profitable. The concept behind issuing a POB is to take the large influx of cash raised and invest it over a long-term period to earn a greater return than the borrowing cost. If this can be done, the POB is successful. In not, it will cost the government more than if it just made the contribution directly to the fund.

**Default risk** is the risk of borrowing more money than can be paid back. A POB is designed to earn a rate of return above the cost of borrowing over a long term. However, interest payments must be made every year. If the needed rate of return is not achieved each year, the government runs the risk of owing more money than it can afford to pay in the short term. Since the money must be paid, it is either taken from the fund reducing the potential for future return or taken from another source which will impact the government's yearly budget

**Political risk** can occur in two ways. The first is if the bonds are too successful, causing assets to be greater than liabilities. This can lead to employees demanding increased benefits and pressure on the government to meet these demands.

The second is if the bonds do not perform as desired, there can be public outrage by voters. Since the bonds must be repaid regardless of the outcome, the money will need to be raised either by increasing taxes or cutting benefits. Also, the additional underfunding to pay benefits will need

---

to be made up from the failure of the bonds. Not only are these issues are unpopular with voters, but may cause tax-payers to relocate, further reducing revenues.

### **Successful POBs**

**Sheboygan and Winnebago Counties, Wisconsin** During 2002-2003, the counties issued a combined \$7 million of POBs at an interest rate of less than three percent. The counties earned investment returns greater than 20% resulting in a net profit of more than 17%.

**Los Angeles, California** In 1994 the County issued \$2.1 billion in POBs that was promptly invested. The favorable investment environment served the county well during the 1990s and the County was able to earn a return greater than its borrowing costs.

### **Unsuccessful POBs**

**Stockton, California** In 2007 the City of Stockton issued approximately \$125 of 30 year POBs at an interest rate of 5.8%. The City has an actuarial assumption rate of 7.75%. The following year the City lost approximately 25% on their investment with 29 years remaining on their bond payments. The City has remained under water on their initial investment and in 2012 filed for bankruptcy protection.

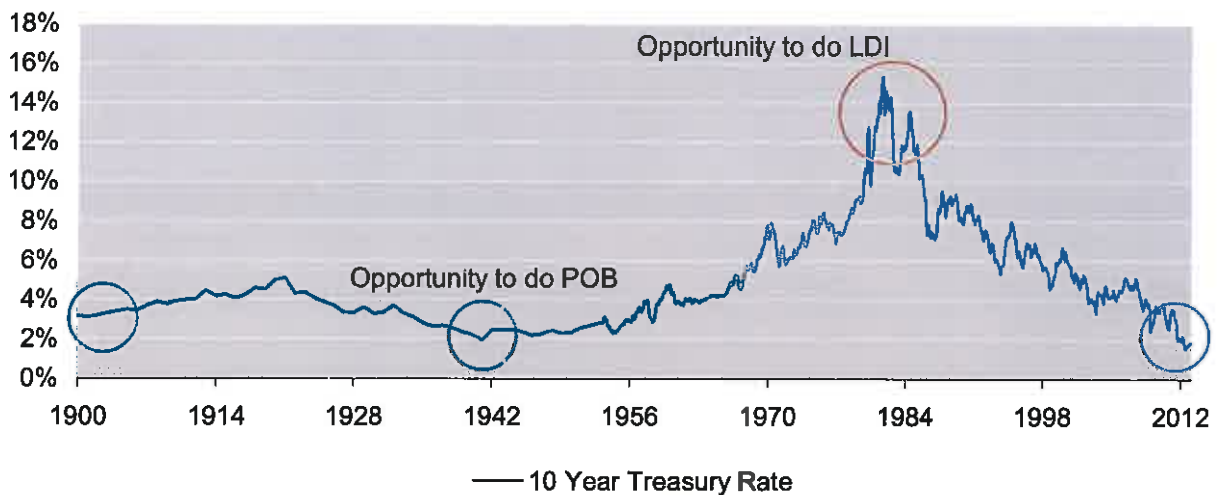
**New Orleans, Louisiana** In 2000, the City sold about \$170 million of POBs to help finance the firefighters' pension fund. Since the City's borrowing cost was on the high side with a rate of 8.2%, they decided to issue variable rate debt combined with derivatives to attempt to hedge against rate increases. In addition to the high borrowing costs, they assumed a return on investment of 10.7% a year. However, the dot-com crash and financial crisis left the City with a return well below their forecast and the variable rate bonds left the City paying 11.2% interest rather than the original 8.2%.

**State of Connecticut** In 2008, the State issued approximately \$2.3 billion in POBs at a rate of 5.9%. The rate was deemed favorable compared to the Teachers' Retirement Fund's assumed rate of 8.5%. When the bonds were issued in April, the Dow Jones was at approximately 13,000. Less than a year later the market bottomed out at 6,600 and the original POB investment was reduced by almost half.

## Conclusion

Pension Obligations Bonds can help public entities close the gap on their unfunded liabilities in their pension funds. However, their success is highly correlated to the market environment. The POBs that have been successful have typically been issued coming out of a recession when interest rates are low and we are in the beginning of a bull market. The POBs that have failed were issued in an opposite environment. Historically, market timing has proved to be the largest factor of their success.

**Figure 2**  
**10 Year Treasury Yield**



Source: U.S. Department of Treasury, Dahab Associates

---

## References

Center of Retirement Research at Boston College, 2010 “Pension Obligations Bonds: Financial Crisis Exposes Risks”

Allan Beckman, 2010 “Pension Obligation Bonds: Are States and Localities Behaving Themselves or Do the Feds Need to Get Involved?”

Nathaniel Popper, 2012 “More Municipalities Betting on Pension Bonds to Cover Obligations”

Mary Williams Walsh, 2012 “How Plan to Help City Pay Pensions Backfired”

Eric Schulzke, 2013 “Pension Obligation Bonds: Risky Gimmick or Smart Investment?”

Roger L. Davis, 2006 “Pension Obligation Bonds and Other Post-Employment Benefits”



# The City of Franklin Employees' Pension Fund

## Liability Driven Investing & Pension Obligation Bond

Barry Bryant, CFA  
DAHAB ASSOCIATES, INC.

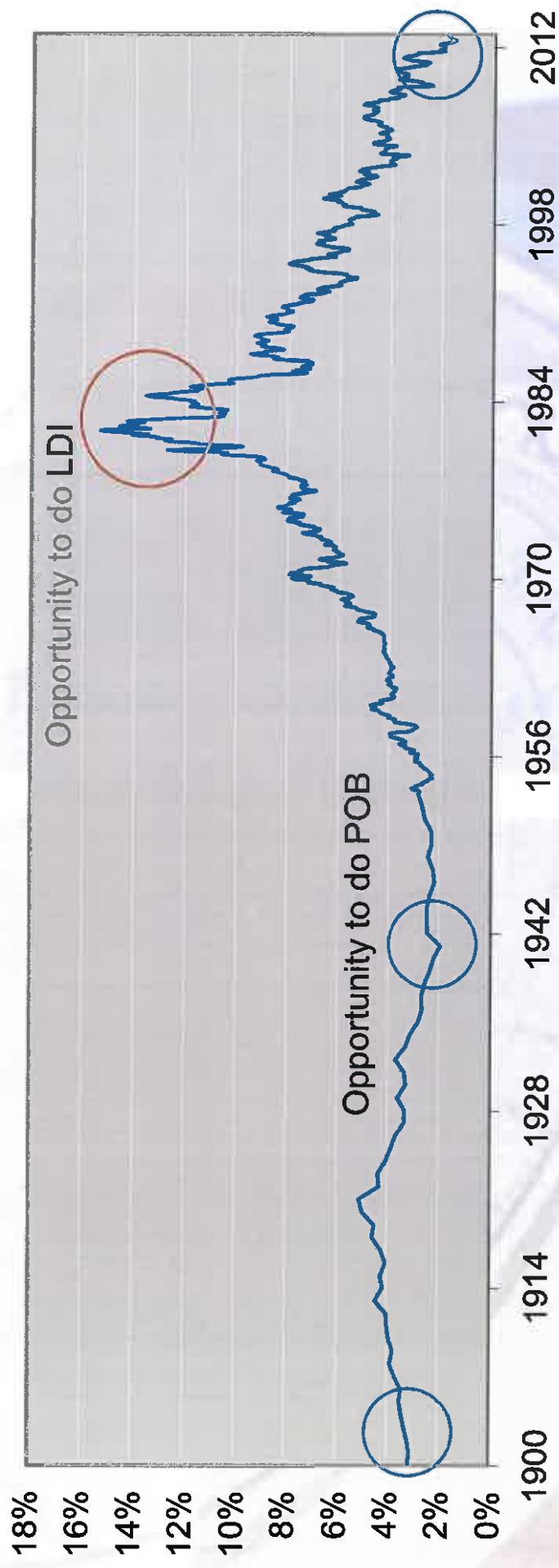
# Liability Driven Investing (LDI)

- LDI is a risk/reward framework that recognizes the plan sponsor's pension liability in the portfolio construction process.
- The strategy seeks to match the average duration of a fixed income portfolio with the average duration of the pension plan liabilities.
- The process typically utilizes long duration corporate bonds with an optimization and hedging practice to help align the average duration of the portfolio with the plan's liabilities.
- Increased duration means increased interest rate risk.
- With rates at historic lows, in order to gain the necessary yield, allocations may have to be weighted more heavily to riskier assets.

# Pension Obligation Bonds (POB's)

- POB's are general obligation taxable municipal bonds backed by the tax revenue of the issuer.
- The strategy seeks to sell low-interest rate bonds and invest the proceeds in riskier, higher-yielding assets.
- Leverage is inherently risky
- Timing is everything

# Historical 10 Year Treasury Rate

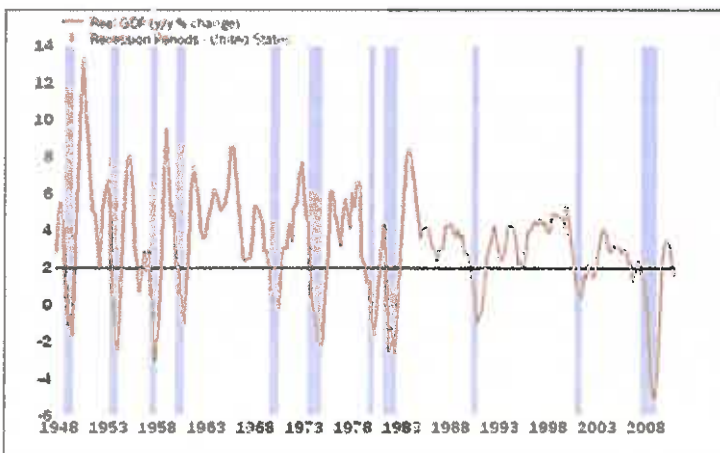




## *New strategies following global recalibration of double-dip recession risks*

In February 2009, PFM Asset Management LLC ("PFM") issued a client update with strategies for the issuance of "Benefits Bonds" – pension obligation bonds and OPEB obligation bonds<sup>1</sup>. Our research then pointed out the fallacies of the traditional POB paradigm and investment strategies, and suggested new criteria for the issuance and investment of such debt. Since then, the stock market recovered significantly from the depressed levels of 1Q09, and our further research on stock market cycles suggested that optimal timing had quickly passed for benefits bonds in the current business cycle which began to show signs of economic recovery in 2H09 and into 2010. Stock market indexes had recovered by 80 percent from their cyclical troughs in April 2011.

Since then, the pace of economic expansion in what has been widely called The New Normal has been much more tepid than historical economic recoveries. GDP growth has slowed to a rate (below 2%) previously associated with recessions, thus raising the risk of a "double dip."



Source: Chart sources: Charles Schwab/Sonders; Bureau of Economic Analysis; FactSet

<sup>1</sup>For an electronic copy of the January 6, 2009 paper, *The New 'Benefits Bond' Paradigm*, please contact your local PFM representative or Jim Link at [linkj@pfm.com](mailto:linkj@pfm.com).

Stock indexes have sold off painfully for investors in 2011 with various news reporters recently referencing an intraday 20 percent cumulative decline as a "new bear market." Meanwhile, the costs of issuing creditworthy taxable municipal bonds have declined in parallel with historically low Treasury bond yields that reflecting a global flight to safety and continued Federal Reserve bond purchases. This pairing of lower interest rates for municipal issuers with lower stock market prices causes us to revisit the topic of Benefits Bonds, to see if a second look is now appropriate.

**Historical cyclical analysis.** Benefits Bonds economics rely on a positive arbitrage relationship between borrowing costs and investment returns. PFM's prior research began with the "POB paradigm-shattering" premise that it makes no sense to sell taxable bonds to fund a pension portfolio that invests in taxable bonds: There is no viable opportunity for interest-rate arbitrage in a pension or OPEB investment portfolio concentrated in taxable bonds, after costs of issuance and investment management fees are considered. Thus, our focus has centered on equity market returns in comparison with taxable borrowing costs. PFM analysis found that although long-term investments in equities have produced returns of about 10 percent over 30 year periods, even during the Great Depression, the first and most important hurdle for a bonding strategy based on this arbitrage is whether it can remain successful through the next subsequent recession -- whenever that occurs.

For context, PFM has found the typical newspaper definition of a bear market as a 20 percent decline in prices to be less informative and relevant than "recessionary bear markets" which coincide with cyclical GDP declines. This important



## The PFM Group

Public Financial Management, Inc.  
PFM Asset Management LLC  
PFM Advisors



distinction eliminates mid-cycle panics and corrections such as the 1987 market crash and other short-term fluctuations that we find to have little or no value to the formulation of a long-term Benefits Bonds financing strategy.

In the 14 previous recessionary bear markets for equities since 1926, prices had declined an average of 30 percent from their previous peak. Our research showed that equity investments initiated after the economy had shifted from a recovery mode to an expansion mode were almost always worth less at the bottom of the next ensuing recession. Thus, the proper and prudent timing for public-sector investments funded with debt proceeds must be limited to a relatively narrow window of opportunity that arises at the bottom of recessions and in the very early stages of a business cycle recovery – before stock prices rally too much in anticipation of better times to come. Statistically, our research found that the historical odds of subsequent success through the next recession declined significantly after stock index levels appreciated by 58% or more from the bear market trough. The early October 2011 market downturn almost returned the equity indexes to that zone, after registering 20% declines from their April recovery peaks. (From the S&P trough of 667 in March 2009, a 58% retracement would be marked at 1054, about 10 percent below market index levels at this writing.)

## 2011 context: “New Normal” and “Lost Decade”

**scenarios.** Most economists and analysts agree that economic conditions in the current era differ from traditional business-cycle recovery-expansion scenarios because the massive debt overhang in real estate markets, household balance sheets and sovereign debt all combine to impede economic growth. Tepid growth and massive debt levels threaten a fragile global banking system so seriously that a secondary recession remains an ominous risk.

Notwithstanding the emerging economies such as China and India, the normal cyclical expansions expected in the developed Western economies and Japan have been stifled by debt burdens. Growth rates have stalled to levels that frequently have augured recessions in the past: In the U.S. a 2% GDP growth rate is believed to be necessary to sustain continued expansion, so recent statistics below that level have raised concerns about a double-dip recession that recently contributed to sell-offs in the equity markets.

Some market mavens point to the example of 1937, when a budding economic recovery from the 1929-32 market plunge and 8 years of economic malaise was followed by a sharp one-year downturn that is now attributed to monetary and

fiscal policy tightening to shore up the dollar and rebalance the federal budget. In their view, a similar outcome could lie ahead of us in this decade, making the prospects for equity investments seem dim indeed. Although PFM research on Depression-era investments (below) shows clearly that long-term results from equity commitments made in that period were even more favorable than the long-term historical averages, the results of investments made in 1937 barely exceeded bond returns for almost a decade.

## Depression-era returns from stock investments over 10 to 30 years

S&P 500 annualized returns for periods beginning January 1

Period starting January 1	10 years	20 years	30 years
1933	9.35	13.15	13.25
1937	4.41	11.20	10.53
1941	13.38	14.76	12.53

Note: average annualized returns on S&P 500 1926 to June 2011 = 9.88%

## Negative real returns on bonds purchased in same periods

Bond Index total returns annualized vs inflation for comparable periods

Period starting January 1	10 years	20 years	30 years
1933	3.38	2.63	2.53
	2.59	3.63	2.85
1937	2.34	1.63	2.01
	4.39	3.46	2.89
1941	1.61	1.64	1.98
	5.91	3.82	3.52

Data Source: Bonds: Ibbotson Associates and Barclays Aggregate, Inflation: Ibbotson Associates

The puzzle for public employers now considering issuance of Benefits Bonds is that it is too early to tell whether the fears of another recession are premature or prescient, and thus it is impossible to know whether issuance now would be criticized if a severe economic contraction or even substandard equity growth were to follow. On the other hand, the market's recent correction has shrunk corporate equity valuations to levels that would otherwise be attractive by some historic market metrics and it is likely that stocks will rally once “the coast is clear” for economic growth.

Public employers facing large unfunded liabilities are thus left with a strategic quandary: is it foolhardy to employ leverage to capture what may subsequently prove to be attractive valuations in a long-term investment strategy, or is it safer to wait and see if the dreaded double-dip recession ensues -- at the risk of losing an opportunity that will not return until the next economic downturn, which could be years away? The most conservative strategy would be to wait until the next declared recession, but that may result in a missed opportunity if today's fears of a double-dip ultimately prove unfounded and interest rates also shift to higher levels. The

lag period between a measured GDP decline and the official retrospective declaration of recession (usually two quarters) can be long enough to miss the optimal investment entry point, stock-market traders typically begin to anticipate economic recovery well ahead of academic economists at the NBER.

### New Considerations and Strategies for Debt Managers

Every public employer with substantial unfunded pension and OPEB liabilities should at least consider whether there ever would be a time when they would consider using debt to fund their obligations, rather than relying on traditional actuarial financing methods. In some cases, the state statutes governing debt issuance and retirement plan investments may be prohibitive, in which case the strategy is moot. Here are some initial considerations:

**State laws.** Some states require that pension fund investments may be made only by the pension board. If their approach to asset allocation is uncooperative or uncoordinated, it would make no sense to issue Benefits Bonds with issuance size based on the intent to invest solely in equities, and have the retirement board turn around and allocate a third of the assets to buying more bonds. Thus, the statutory and organizational framework is an important consideration. Likewise, a few states prohibit investments of OPEB trusts in equities, so this financing technique is impossible to execute for those plans. PFM professionals can work with clients and state associations to achieve legislative reforms necessary to effectively implement prudent strategies. PFM's senior strategist Girard Miller has drafted model legislation published by *Governing* magazine that can be used as a template for state-specific legislative proposals that could also include supplemental taxing authority to defease these obligations.

**GASB accounting changes.** The Governmental Accounting Standards Board is expected to issue new financial reporting standards for pension funds in 2012, and parallel standards for OPEB plans a year later. A key consideration that may drive some employers to consider debt financing will be the amortization schedules and discount rates used for calculating an employer's annual cost. Shorter amortization periods will ultimately increase reported pension and OPEB expenses. If a lower-cost alternative would be to issue taxable debt to reduce unfunded liabilities using current amortization periods and thereby reduce the annual pension

or OPEB expense, some employers may consider this strategy. A longer debt service schedule may be the only way that some employers can manage their current expenses for retirement plans. This may raise issues of intergenerational equity if the result is extended debt service payments by future taxpayers for employees who have since retired or expired, but in some cases there may be no practical alternative.

**Risk aversion and headline risk.** Although nobody can now be accused of "leveraging at the top" as did POB issuers in 1999-2000 and 2007, today's debt managers face headline risk if a Benefits Bond issue is sold, proceeds invested, and the stock market thereafter takes a further turn downward. A thoughtful, well-designed strategy should be put in place and communicated broadly by finance professionals who embark on a Benefits Bond issue. For this reason alone, PFM presently suggests that issuers seek authorization to sell debt in tranches with the understanding that an initial issue may not catch the very bottom of a business cycle, and later tranches would be sold only if markets become more attractive so that the employer can prudently dollar-cost average the market-entry points for the investment portfolio. A sunset date can be inserted in the bond authorization, so that policy-makers can review the strategy at a later date if issuance authority is used only partially because stock prices subsequently move higher for an extended period of time.

**Multi-tranche issuance.** Following the concerns identified in the preceding paragraph, one strategy for public employers to consider at this time is to obtain standing authority to issue sufficient Benefits Bonds to finance no more than 1/2 of the unfunded liability of a plan (or 2/3 of those liabilities which are entirely unfunded in pay-as-you-go OPEB plans). The strategic debt authorization would limit the first issue immediately to no more than 40 to 50 percent of the total amount to be financed with the remainder to be contingent upon (a) a subsequent economic recession or (b) stock prices declining by 25 percent or more from the levels at the time of authorization or issuance of a previous tranche. For larger issuers, a three-tranche strategy would be suggested if issuance costs can be contained. Smaller issuers would probably limit issuance to two tranches, in order to minimize expenses.

**Voluntary OPEB buy-out bonding strategy.** An alternative worth considering for employers with substantial OPEB obligations is a voluntary buy-out program similar to the GFOA award-winning strategy of the city of Beverly Hills,

California. There, the city instituted a defined contribution OPEB plan for new hires, and gave current employees the option to convert the actuarial present value of their accrued retiree medical benefits into a combination of cash, deferred compensation and new balances in the defined-contribution retiree health savings plan. Funding was provided by a taxable note issue secured by a parking structure lease. 58% of the eligible employees took this option, which reduced the city's OPEB liabilities many times more than its cost of debt issuance. Not only did the city reduce the present value of its OPEB liabilities by several times the amount of debt incurred, it eliminated medical inflation risks and market risks which were effectively transferred to the volunteering employees. As their finance director said, they replaced 9 percent medical inflation and 7 percent actuarial discount rates with 4½% taxable interest that is paid off in 11 years instead of 30. According to the city finance director, the program has been so popular that some employees who did not make the initial election now want a second chance. PFM's retirement plan professionals can assist our clients in developing and implementing a similar strategy.

**Special-purpose Benefits Bonds trusts.** PFM encourages prospective issuers to consider a special-purpose investment trust to receive and invest the proceeds of a Benefits Bond issue. For OPEB plans, this can often be accomplished within a standard Section 115 OPEB trust using a modification of the documents PFM Asset Management LLC typically uses with our clients. For pension plans, the purpose of the separate POB trust is to: (1) provide separate investment authority which is generally focused on investing entirely in stocks at inception, and then gradually migrating the asset allocation toward more-traditional mix of stocks and bonds as the value of the trust changes, (2) establishing prudent reserves for market volatility and (3) providing bondholders and taxpayers with assurance that any investment surplus derived from extraordinary investment returns in the future will be devoted to debt service rather than benefits increases.

**Clean-up plan benefits first.** It should go without saying, but all debt issuers are well advised to first initiate changes in benefits plan designs to mitigate costs and future burdens on taxpayers. This may include installing hybrid DB-DC retirement plans, establishing a new and lower-cost benefits tier for new hires, requiring higher employee contributions, introducing employee contributions for OPEB benefits, and establishing an OPEB prefunding trust. This will enhance the market's perceptions of the issuer's management commitment to manage and mitigate these costs and provide assurances that debt financing will not spur even more costly benefits.

*This material is based on information obtained from sources generally believed to be reliable and available to the public, however PFM Asset Management LLC cannot guarantee its accuracy, completeness or suitability. This material is for general information purposes only and is not intended to provide specific advice or a specific recommendation. All statements as to what will or may happen under certain circumstances are based on assumptions, some but not all of which are noted in the presentation. Assumptions may or may not be proven correct as actual events occur, and results may depend on events outside of your or our control. Changes in assumptions may have a material effect on results. Past performance does not necessarily reflect and is not a guaranty of future results. The information contained in this presentation is not an offer to purchase or sell any securities.*