

# Agenda

## ND Teachers' Fund for Retirement Board Meeting

Thursday, March 21, 2013  
1:00 pm

Workforce Safety & Insurance Board Room  
1600 East Century Avenue, Bismarck, ND

1. Call to Order and Approval of Agenda - Pres. Gessner
2. Approval of Minutes of January 24, 2013, Meeting – Pres. Gessner
3. TFFR Funding Policy – Kim Nicholl
4. Actuarial Contract – Fay Kopp
5. 2013 Legislative Update – Fay Kopp
6. SIB Update – Darren Schulz
7. SIB Search Committee Update – Treas. Schmidt, Bob Toso
8. TFFR Centennial – Fay Kopp
9. 2013-14 Board Meeting Schedule – Fay Kopp
10. Consent Agenda
11. Other Business
12. Adjournment

***Next Board Meeting: May 16, 2013***

*Any person who requires an auxiliary aid or service should contact the Retirement and Investment Office at 701-328-9885 at least three (3) days before the scheduled meeting.*

**NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT  
MINUTES OF THE  
JANUARY 24, 2013, BOARD MEETING**

**BOARD MEMBERS PRESENT:** Mike Gessner, President  
Kirsten Baesler, State Superintendent  
Clarence Corneil, Trustee (teleconference)  
Kim Franz, Trustee  
Lowell Latimer, Vice President  
Kelly Schmidt, State Treasurer  
Bob Toso, Trustee

**STAFF PRESENT:** Fay Kopp, Interim Executive Director  
Darlene Roppel, Retirement Assistant  
Darren Schulz, Interim CIO  
Shelly Schumacher, Retirement Program Manager

**OTHERS PRESENT:** Rolland Larson, NDRTA  
Janilyn Murtha, Attorney General's Office  
Kim Nicholl, Segal Company (teleconference)  
Matt Strom, Segal Company (teleconference)  
Armand Tiberio, NDEA

**CALL TO ORDER:**

Mr. Mike Gessner, President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the board meeting to order at 1:00 p.m. on Thursday, January 24, 2013, at the Workforce Safety & Insurance Office (WSI), 1600 E Century Avenue, Bismarck, ND. Mr. Gessner welcomed State Superintendent Kirsten Baesler to her first TFFR meeting.

**THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: PRESIDENT GESSNER, SUPT. BAESLER, MR. CORNEIL (TELECONFERENCE), MRS. FRANZ, DR. LATIMER, TREASURER SCHMIDT, AND MR. TOSO.**

**APPROVAL OF AGENDA:**

The Board considered the revised meeting agenda. The agenda includes the same items, but the order of business has been changed.

**TREASURER SCHMIDT MOVED AND MRS. FRANZ SECONDED TO APPROVE THE REVISED AGENDA AS PRESENTED.**

**AYES: TREASURER SCHMIDT, SUPT. BAESLER, MR. TOSO, MRS. FRANZ, DR. LATIMER, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: MR. CORNEIL**

**MINUTES:**

The Board considered the minutes of the regular board meeting held October 25, 2012.

**DR. LATIMER MOVED AND TREASURER SCHMIDT SECONDED TO APPROVE THE MINUTES OF THE REGULAR TFFR BOARD MEETING HELD OCTOBER 25, 2012, AS PRESENTED.**

**AYES: MR. TOSO, DR. LATIMER, TREASURER SCHMIDT, SUPT. BAESLER, MRS. FRANZ, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: MR. CORNEIL**

Mr. Corneil joined the meeting by teleconference.

**TFFR FUNDING POLICY:**

Ms. Kim Nicholl and Mr. Matt Strom, Segal Company, joined the meeting by teleconference, to provide more information on the different funding policy components and how they relate to the new Governmental Accounting Standards Board (GASB) requirements. This is a follow up to funding policy discussions in July and October 2012.

Segal recommends that TFFR adopt a funding policy since new GASB standards eliminate the annual required contribution (ARC). There are three funding policy components:

Actuarial cost method allocates present value of member's future benefits to years of service. Segal recommends continued use of entry age normal, using the Traditional Normal Cost method which is based on each member's tier of benefits and required by GASB.

Asset smoothing method manages short term market volatility while tracking the market value of assets (MVA). Segal recommends continued use of the 5 year smoothing method and adding an 80%-120% corridor.

Amortization method sets contributions to systematically pay off the unfunded actuarial accrued liability (UAAL). Segal recommends keeping the level percentage of payroll amortization because contributions are collected as a percentage of payroll. They also recommend either a 30-year closed or a 20-year rolling amortization period.

The presentation is on file at the Retirement and Investment Office (RIO).

After board questions and discussion,

**MR. CORNEIL MOVED AND MR. TOSO SECONDED TO HAVE STAFF AND SEGAL DEVELOP A NEW FUNDING POLICY INCORPORATING SEGAL'S RECOMMENDATIONS: ENTRY AGE NORMAL COST METHOD BASED ON TRADITIONAL METHOD, ACTUARIAL ASSETS BASED ON 5-YEAR SMOOTHING WITH AN 80%/120% CORRIDOR, AND AMORTIZATION PERIOD**

OF 30-YEAR CLOSED WITH FLEXIBILITY TO MANAGE THE VOLATILITY AT 10-YEAR PERIOD OR AS DEEMED APPROPRIATE.

**AYES: TREASURER SCHMIDT, SUPT. BAESLER, MR. CORNEIL, MRS. FRANZ, DR. LATIMER, MR. TOSO, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**BOARD EDUCATION: RETIREE RE-EMPLOYMENT PROVISIONS:**

Mrs. Shelly Schumacher, Retirement Program Manager, reviewed information in the "Working After Retirement" pamphlet as it relates to retirees who return to covered employment.

Mrs. Schumacher also gave a summary of the retiree re-employment statistics for 2011-12. To date, 252 retirees have been reported back to work in 2012-13, with a total of 300 or more expected by the end of the year.

The Board discussed current retiree re-employment provisions and statistics.

**LEGISLATIVE UPDATE:**

Mrs. Fay Kopp, Interim Executive Director, gave an update on 2013 legislative issues.

HB 1203 would remove the requirement for TFFR member contributions to be paid on salary earned by re-employed retirees. According to the actuary, this is expected to have a negative effect, reducing contributions into the plan by about \$780,000 in 2013-14, and up to \$1,000,000+ in future years. Mrs. Kopp asked the board for direction on this bill. After discussion,

**DR. LATIMER MOVED AND MRS. FRANZ SECONDED THAT TFFR IS IN OPPOSITION TO HB 1203.**

**AYES: MRS. FRANZ, MR. CORNEIL, MR. TOSO, DR. LATIMER, TREASURER SCHMIDT, SUPT. BAESLER, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

Supt. Baesler left the meeting at 3:15 p.m.

The board recessed at 3:15 p.m. and reconvened at 3:25 p.m.

Mrs. Kopp shared a letter from a retiree with questions about the 2% multiplier, and her response to the retiree.

Mrs. Kopp continued reviewing the 2013 Legislative Update, which is sent out every Friday during the legislative session.

SB 2061 - TFFR Administrative Changes - support.  
SB 2150 - Board member compensation - neutral.  
HB 1022 - RIO Budget - support.  
HB 1203 - Discontinue member contributions on re-employed retirees - oppose.  
HB 1230 - Reduce contributions at 100% funding - support.  
HB 1304 - Divestiture of state investment funds - board directive requested.  
HCR 3003- Public Employee's Retirement Stabilization Fund - monitor.

**INVESTMENT POLICY STATEMENT-SOCIAL INVESTMENTS:**

Mr. Darren Schulz, Interim CIO, reviewed the meaning of "social investing". It is defined in the TFFR Investment Policy Statement as "the investment or commitment of public pension fund money for the purpose of obtaining an effect other than a maximized return to the intended beneficiaries." Social investing is prohibited unless it meets the Exclusive Benefit Rule and it can be substantiated that the investment must provide an equivalent or superior rate of return for a similar investment with a similar time horizon and similar risk.

HB 1304 would require the SIB to identify, monitor, and restrict or divest from investments in companies that have scrutinized business operations subject or liable to sanctions under the Iran Sanctions Act of 1996. There would be an administrative burden and large cost that would impact TFFR as well as all the other SIB clients.

After board discussion of fiduciary, cost, and SIB implementation issues,

**MR. TOSO MOVED AND MRS. FRANZ SECONDED TO GO ON RECORD THAT TFFR IS OPPOSED TO HB 1304.**

**AYES: DR. LATIMER, MR. TOSO, MRS. FRANZ, MR. CORNEIL, TREASURER SCHMIDT, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: SUPT. BAESLER**

**SIB UPDATE:**

Mr. Schulz reported the estimated total investment return fiscal year to January 22, 2013, is 9.28%. Mr. Schulz reviewed the agenda for the SIB meeting to be held January 25, 2013. Mr. Schulz also commented on a report of Asset Allocation Definitions for various asset classes included in the board mailing.

**ANNUAL PENSION PLAN COMPARISONS REPORT:**

Mrs. Kopp presented a comparison of TFFR to the 2011 Public Fund Survey conducted by National Council on Teacher Retirement (NCTR) and National

Association of State Retirement Administrators (NASRA). The survey provides information on key characteristics of most of the nation's largest public retirement systems. It does not include the recent legislative changes made to TFFR benefits and contributions.

The survey and report are on file at RIO.

**MR. TOSO MOVED AND TREASURER SCHMIDT SECONDED TO APPROVE THE ANNUAL PENSION PLAN COMPARISON REPORT.**

**AYES: MRS. FRANZ, DR. LATIMER, TREASURER SCHMIDT, MR. TOSO, MR. CORNEIL, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: SUPT. BAESLER**

**ANNUAL RETIREMENT TRENDS REPORT:**

Mrs. Schumacher presented the annual TFFR Retirement Trends Report. Of the 10,269 active TFFR members, 1,360 members (13%) are currently eligible to retire. This report is on file at RIO.

**DR. LATIMER MOVED AND MR. TOSO SECONDED TO APPROVE THE ANNUAL TFFR RETIREMENT TRENDS REPORT.**

**AYES: MRS. FRANZ, MR. TOSO, TREASURER SCHMIDT, MR. CORNEIL, DR. LATIMER, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: SUPT. BAESLER**

**2012 CAFR AND PPCC AWARD:**

Mrs. Kopp referred the board to the 2012 Comprehensive Annual Financial Report (CAFR) which was included in the board mailing and is also available on the TFFR website. Mrs. Kopp reported that the Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to RIO for the fourteenth consecutive year for its comprehensive annual financial report for the fiscal year ended June 30, 2012. TFFR also received the 2012 Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council (PPCC), which has been received since 1992.

President Gessner expressed the board's appreciation for a job well done by the RIO-TFFR staff.

**MEMBER ANNUAL STATEMENTS:**

Mrs. Kopp provided information to the board as it relates to TFFR Policy C-5, Disclosure to Membership. Due to extenuating circumstances, exceptions to the policy were explained.

Annual statements are sent to all active TFFR members in August of every year. The statements include benefit estimates, but as a result of legislation passed in 2011, estimates will not be included in the 2011, 2012, and 2013 annual statements. Programming of the computer system has not been completed to reflect benefit eligibility for grandfathered and nongrandfathered members. Any member can contact the office for individual benefit estimates.

The retiree annual statement is typically mailed in late December and includes calendar year-to-date benefit totals as well as changes to monthly benefits due to new federal and state tax withholding tables each year. Due to delays by Congress in passing the "fiscal cliff" bill, new 2013 federal tax rates were not published until January 3, 2013, therefore the new tables will be put into effect with the February 1 retiree benefit payments. Consequently, annual statements were delayed until the end of January so the statements would reflect the tax changes.

**SIB SEARCH COMMITTEE UPDATE:**

Treasurer Schmidt and Mr. Toso updated the board on the progress in hiring the SIB Executive Director/Chief Investment Officer. The SIB Search Committee is being assisted by staff from the State Human Resource Management Division in advertising this position. There have been many applications, with the application closing date of January 31, 2013. Plans are to review applications in February, and conduct interviews in March.

Mr. Corneil left the meeting at 4:55 p.m.

**CONSENT AGENDA:**

**MR. TOSO MOVED AND DR. LATIMER SECONDED TO APPROVE THE CONSENT AGENDA WHICH INCLUDES THREE DISABILITY APPLICATIONS - 2013-1D, 2013-2D, AND 2013-3D.**

**AYES: MRS. FRANZ, DR. LATIMER, TREASURER SCHMIDT, MR. TOSO, AND PRESIDENT GESSNER.**

**NAYS: NONE**

**MOTION CARRIED.**

**ABSENT: SUPT. BAESLER AND MR. CORNEIL**

**OTHER BUSINESS:**

Mrs. Kopp reminded the board that 2013 is TFFR's 100<sup>th</sup> anniversary. Plans to commemorate this milestone will be discussed at a future meeting.

The next board meeting is scheduled for February 21. If there is no legislative business to be discussed, Mrs. Kopp will confer with the board president on cancelling that meeting.

Mr. Corneil will not be able to attend the TFFR and SIB meetings in February. The Board selected Mrs. Franz to attend the February 22, 2013, SIB meeting as the TFFR alternate.

Dr. Latimer announced that his term in office ends June 30, 2013, and he will not be accepting another term.

**ADJOURNMENT:**

With no further business to come before the Board, President Gessner adjourned the meeting at 5:09 p.m.

Respectfully Submitted:

---

Mr. Mike Gessner, President  
Teachers' Fund for Retirement Board

---

Darlene Roppel  
Reporting Secretary

# MEMORANDUM

**TO:** TFFR Board

**FROM:** Fay Kopp

**DATE:** March 14, 2013

**SUBJ:** TFFR Funding Policy

A plan's funding policy determines how much should be contributed each year by the employer and the members to provide for the secure funding of benefits in a systematic fashion. The statutory contribution rate can then be compared to the contribution rate determined under the funding policy in order to assess the appropriateness of the statutory contributions. Based on this annual comparison, the Board can decide what action to take, if any.

At the July, October, and January board meetings, TFFR trustees received information from Segal relating to development of a funding policy. The Board discussed the need, objectives, and components of a funding policy. Segal made recommendations relating to actuarial cost method, asset smoothing method, and amortization method to be used by the plan. Segal also provided long term projections illustrating the impact of recommended changes on TFFR's funded ratio, unfunded actuarial accrued liability, and actuarially recommended contribution rates.

At the January 2013 meeting, the TFFR Board approved Segal recommendations and asked that they be included in a funding policy for review at the March board meeting. Attached is a DRAFT funding policy for your review. Segal will be available via teleconference to review the draft policy with the Board, and respond to any questions.

Attachment

## **North Dakota Teachers' Fund for Retirement**

### **Statement of Actuarial Funding Policy**

#### **Introduction**

The purpose of this Actuarial Funding Policy is to record the funding objectives and policy set by the Board of Trustees (Board) for the North Dakota Teachers' Fund for Retirement (TFFR). Effective with the July 1, 2013 actuarial valuation, the Board establishes this Actuarial Funding Policy to help ensure the systematic funding of future benefit payments for members of TFFR. The contributions made to TFFR are set by statute. These statutory contributions will be compared to the contributions determined under the funding policy in order to assess the appropriateness of the statutory contributions. Based upon this comparison, the Board will decide what action to take, if any. The employer contribution determined under the funding policy is called the actuarially determined employer contribution (ADEC). In addition, this document records certain guidelines established by the Board to assist in administering TFFR in a consistent and efficient manner.

This Actuarial Funding Policy supersedes any previous Actuarial Funding Policies and may be modified as the Board deems necessary.

#### **Goals of Actuarial Funding Policy**

1. To achieve long-term full funding of the cost of benefits provided by TFFR;
2. To seek reasonable and equitable allocation of the cost of benefits over time;
3. To maintain a policy that is both transparent and accountable to the stakeholders of TFFR, including plan participants, employers, and residents of the State of North Dakota.

#### **Actuarially Determined Employer Contribution and Funding Policy Components**

TFFR's actuarially determined employer contribution is comprised of the Normal Cost and an amortization of the Unfunded Actuarial Accrued Liability (UAAL). The Normal Cost and the amortization of the UAAL are determined by the following three components of this funding policy:

- I. Actuarial Cost Method: the techniques to allocate the cost/liability of retirement benefits to a given period;
- II. Asset Smoothing Method: the techniques that spread the recognition of investment gains or losses over a period of time for the purposes of determining the Actuarial Value of Assets used in the actuarial valuation process; and
- III. Amortization Policy: the decisions on how, in terms of duration and pattern, to reduce the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets in a systematic manner.

## **I. Actuarial Cost Method:**

The Entry Age Normal method shall be applied to the projected benefits in determining the Normal Cost and the Actuarial Accrued Liability. The Normal Cost shall be determined as a level percentage of pay on an individual basis for each active member.

## **II. Asset Smoothing Method:**

The investment gains or losses of each valuation period, as a result of comparing the actual market return to the expected market return, shall be recognized in level amounts over 5 years in calculating the Actuarial Value of Assets. Deferred investment gains or losses cannot exceed 20% of the Market Value of Assets (i.e., the Actuarial Value of Assets cannot be more than 120%, nor less than 80%, of the Market Value of Assets as of any valuation date).

## **III. Amortization Policy:**

- The UAAL, (i.e., the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets), as of July 1, 2013, shall be amortized over a “closed” 30-year period. In other words, the UAAL as of July 1, 2014 shall be amortized over 29 years, the UAAL as of July 1, 2015 shall be amortized over 28 years, etc.
- Beginning with the July 1, 2024 valuation, the Board shall have the discretion to continue the “closed” amortization period, or instead to amortize the UAAL over another period, not to exceed 20 years.
- Any new UAAL as a result of change in actuarial assumptions or methods will be amortized over a period equal to the amortization period of the UAAL. The Board shall have the discretion to amortize the new UAAL as a result of change in actuarial assumptions or methods over a period of 20 years.
- Unless an alternative amortization period is recommended by the Actuary and accepted by the Board based on the results of an actuarial analysis, the increase in UAAL as a result of any plan amendments will be amortized over a period not to exceed 20 years.
- In a situation where the amortization of the UAAL has more than one component, a single equivalent amortization period will be determined by the Actuary.
- UAAL shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase.
- If an overfunding exists (i.e., the UAAL becomes negative so that there is a surplus), such surplus and any subsequent surpluses will be amortized over an “open” amortization period of 30 years. Any subsequent UAAL will be amortized over 20 years as the first of a new series of closed period UAAL amortization.

## Actuarial Assumptions Guidelines

The actuarial assumptions directly affect only the timing of contributions; the ultimate contribution level is determined by the benefits and the expenses actually paid offset by actual investment returns. To the extent that actual experience deviates from the assumptions, experience gains and losses will occur. These gains (or losses) then serve to reduce (or increase) the future contribution requirements.

Actuarial assumptions are generally grouped into two major categories:

- Demographic assumptions – including rates of termination, retirement, disability, mortality, etc.
- Economic assumptions – including investment return, salary increase, payroll growth, inflation, etc.

The actuarial assumptions are described in detail in the actuarial valuation report. They represent the Board's best estimate of anticipated experience under TFFR and are intended to be long term in nature. Therefore, in developing the actuarial assumptions, the Board considers not only past experience but also trends, external forces and future expectations.

Actuarial experience studies are completed every five years or at the Board's direction.

## Glossary of Funding Policy Terms

- **Present Value of Benefits (PVB) or total cost:** the “value” at a particular point in time of all projected future benefit payments for current plan members. The “future benefit payments” and the “value” of those payments are determined using actuarial assumptions as to future events. Examples of these assumptions are estimates of retirement patterns, salary increases, investment returns, etc. Another way to think of the PVB is that if the plan has assets equal to the PVB and all actuarial assumptions are met, then no future contributions would be needed to provide all future service benefits for all current members, including future service and salary increases for current active members.
- **Actuarial Cost Method:** allocates a portion of the total cost (PVB) to each year of service, both past service and future service.
- **Normal Cost:** the cost allocated under the Actuarial Cost Method to each year of active member service.
- **Entry Age Normal Actuarial Cost Method:** A funding method that calculates the Normal Cost as a level percentage of pay or level dollar amount over the working lifetime of the plan's members.
- **Actuarial Accrued Liability (AAL):** the value at a particular point in time of all past Normal Costs. This is the amount of assets the plan would have today if the current plan provisions, actuarial assumptions and participant data had always been in effect,

# DRAFT

---

contributions equal to the Normal Cost had been made and all actuarial assumptions came true.

- **Market Value of Assets (MVA):** the fair value of assets of the plan as reported in the plan's audited financial statements.
- **Actuarial Value of Assets (AVA):** the market value of assets less the deferred investment gains or losses not yet recognized by the asset smoothing method.
- **Unfunded Actuarial Accrued Liability (UAAL):** the portion of the AAL that is not currently covered by the AVA. It is the positive difference between the AAL and the AVA.
- **Surplus:** the positive difference, if any, between the AVA and the AAL.
- **Actuarial Value Funded Ratio:** the ratio of the AVA to the AAL.
- **Market Value Funded Ratio:** the ratio of the MVA to the AAL.
- **Actuarial Gains and Losses:** changes in UAAL or surplus due to actual experience different from what is assumed in the actuarial valuation. For example, if during a given year the assets earn more than the investment return assumption, the amount of earnings above the assumption will cause an unexpected reduction in UAAL, or "actuarial gain" as of the next valuation. These include contribution gains and losses that result from actual contributions made being greater or less than the level determined under the policy.
- **Valuation Date:** July 1 of every year.

Adopted: \_\_\_\_\_

Amended: \_\_\_\_\_

# MEMORANDUM

**TO:** TFFR Board  
**FROM:** Fay Kopp  
**DATE:** March 14, 2013  
**SUBJ:** Actuarial Contract

As fiduciaries, the Board has a duty to select plan services providers prudently, and once selected, to monitor the quality of their work regularly. Trustees also have an obligation to review the fees paid to those service providers periodically to ensure that the fees are reasonable. Over the last 10 years, actuarial fees paid averaged about \$135,000 per year. For the fiscal year ending June 30, 2012, actuarial fees paid (\$94,000) were less than .006% (6/1000 of 1%) of market value (\$1.65 billion). Actuarial costs are largely impacted by legislative proposals, special studies, compliance issues, and board initiatives.

In 2011, the TFFR Board requested bids for the actuarial consulting contract. Segal was awarded the contract for the July 1, 2011 – June 30, 2013 time period, with an option to renew the contract.

Enclosed is a proposal from Segal to extend their contract for an additional 2 years for the July 1, 2013 – June 30, 2015 time frame. This proposal includes a fixed fee of \$40,000 each for the 2013 and 2014 actuarial reports (5.3% increase); \$33,000 for 2014 Experience Study; and \$280 per hour for legislative and general consulting (5.7% increase). This does not include the additional schedules and actuarial work that will be necessary in the next few years to implement the new GASB requirements.

Please review the Segal proposal and plan to discuss. Thanks.

Attachment



101 North Wacker Drive Suite 500 Chicago, IL 60606-1724  
T 312.984.8527 F 312.984.8590 www.segalco.com

**Kim M. Nicholl**  
Senior Vice President & Actuary  
knicholl@segalco.com

March 5, 2013

***VIA E-MAIL***

Ms. Fay Kopp  
Deputy Executive Director - Retirement Officer  
North Dakota Retirement and Investment Office  
North Dakota Teachers' Fund for Retirement  
1930 Burnt Boat Drive  
P. O. Box 7100  
Bismarck, ND 58507-7100

**Re: Proposal to Continue Providing Actuarial and Consulting Services for the North Dakota Teachers' Fund for Retirement**

Dear Ms. Kopp:

The Segal Company is pleased to submit this proposal to continue performing professional actuarial and consulting services for the North Dakota Teachers' Fund for Retirement. Segal has been serving in this capacity to the TFFR for the past two years and we look forward to continue to build upon the relationship we have established with you. We believe that we have demonstrated our ability to provide quality, timely and accurate consulting advice. Our proposal describes our qualifications and experience and demonstrates our continued commitment to deliver strategic and technical insight in a responsive manner. Our fees are included as an Attachment in the back of this proposal.

### *Consulting Services and Deliverables*

Segal has the experience to continue providing a full range of actuarial consulting services to TFFR. Under this engagement, we understand that the consulting services include, but are not limited to the following.

1. Prepare annual pension valuation.
2. Provide actuarial and technical analysis of proposed legislation.
3. Provide actuarial factors, tables and other calculations as required.



4. Assist with the ongoing administration of TFFR, including the review and calculation of benefits, service purchases, QDROS, and other calculations.
5. Assist with the development of procedures, forms, publications, tables, and computer systems.
6. Provide information and assistance with Federal and State tax issues affecting TFFR plan, members, and employers.
7. Summarize and discuss actuarial and administrative implications of federal and state laws and rules governing TFFR.
8. Develop and implement statutes, rules, policies, and procedures.
9. Provide periodic educational presentations or discussions with TFFR Board, staff, legislative committees, or others, as requested.
10. Assist with compliance with federal rules and regulations for qualified defined benefit government pension plans including minimum participation rules, Section 415 limits, maximum compensation limits, maximum benefit limits, minimum distribution requirements, tax withholding, and other federal and Internal Revenue Code requirements for qualified plans.
11. Provide asset/liability modeling support work as requested.
12. Provide assistance with special projects or studies as requested.
13. Conduct experience studies as requested.

Our consulting approach is ideally suited to meeting the needs and objectives of TFFR. While we will draw upon our years of experience with North Dakota as well as other public sector retirement systems, with the diverse talents of our actuaries, consultants, and other professionals, we will also focus upon the particular environment in which TFFR functions. We will seek to be innovative and to recognize the special needs and requirements of TFFR, rather than to replicate a particular approach just because it happened to work well in another situation in a different state.

*Timeline*

Following is a timeline containing various tasks and deliverables for the project, as well as target completion dates for each step.

Service Element	Time Frame	Methodology
<b>Valuation Consulting Services</b>		
Planning meeting: discussion for plan year beginning July	July	Discussion with the TFFR staff to plan the engagement and to establish timeframes and expectations for delivery of services.
Actuarial data request	July	Instructions/discussions concerning the actuarial data required for conducting the actuarial valuation.
Program review and update	July – August	Actuarial valuation programs will be updated as necessary (e.g., enacted legislative changes) and accuracy tests performed (including test lives).
Retiree and inactive data review and actuarial valuation processing	August	Resolution of any data questions. Processing of retiree and inactive valuations.
Active data review and actuarial valuation processing	August – September	Resolution of any data questions. Processing of the active valuations.
Financial data review and actuarial values/results calculated	First week of October	Determination of actuarial value of assets, valuation results, and contribution rates.
Draft report to TFFR	September 2013	Draft report will be forwarded to TFFR for review, prior to the release of final report.
Final report delivered	No later than October 15	The final report will be delivered within 2 weeks after approval of the draft report by TFFR.
Presentation of report	October Board Meeting	Preparation of PowerPoint presentations and handouts to present to the Retirement Board.
<b>Consulting Services and Projections</b>		
General consulting services	As requested	Delivery of these consulting services will depend on the nature of the issue. In most instances, we anticipate to be able to provide these services by telephone, through written and electronic correspondence or a combination of both. Where appropriate and as requested by TFFR, we will attend scheduled meetings to deliver these services.
Actuarial tables and factors	As requested by TFFR	We will make recommendations for necessary or appropriate changes.

Service Element	Time Frame	Methodology
Projection services	As requested by TFFR	<p>The general projection studies performed during the year illustrating the impact of emerging experience or assumptions will balance the sophistication needed to accomplish the projections with TFFR required timing for the results.</p> <p>Any projections of population and pension costs will be performed showing alternative assumptions (e.g., number of actives, investment return) in consultation with TFFR. Results will be presented at the Board meeting as desired by TFFR.</p>
<p>Proposed legislative benefit changes:</p> <p>(a) Review of proposal (if possible, a copy of the actual bill draft is preferred)</p>	Upon receipt	For most typical benefit change proposals, we are able to provide responses within five working days of the request. During the legislative session, we will provide the legislative analysis within one day.
(b) Preliminary review and assessment of time requirement to complete	Upon receipt	For more complicated benefit modification proposals, a timeframe of providing our responses within 10 working days time may be warranted.
(c) Delivery of actuarial and cost analysis	As requested by TFFR – generally within 1-10 working days	
Improvements in financing and benefits structure	Ongoing	<p>The Segal Company actively participates in a variety of national public sector retirement organizations, including NASRA, NCTR, NAGDCA, NCPERS, and the pension related activities of the GFOA, GASB and the NCSL. We also engage in independent research activities through which we monitor new and creative efforts of state retirement systems to enhance their funding and benefit structures. We will inform TFFR of new developments and their applications and potential impact on a proactive basis through a combination of direct communications and our governmental benefits bulletins.</p>
Drafting legislation and related services	As requested	We will assist TFFR staff in drafting proposed changes to existing retirement laws.

Service Element	Time Frame	Methodology
New developments and federal legislation	Ongoing	<p>The Segal Company closely monitors federal legislative and regulatory activity impacting the design, funding and operations of public sector retirement plans. Through a combination of activities of our National Market Leader, Legal Research Division and public sector pension consultants and actuaries, we will be able to provide to TFFR a current outlook on these federal activities and issues.</p> <p>We actively participate in the National Association of Public Pension Attorneys and maintain independent contacts with legal Counsel for NCTR and with legislative staff members of the NASRA and GFOA.</p>
Specifications for data files	Ongoing	We will review the proposed form and content of the data files and make suggestions for appropriate modifications.
Special benefit cases	As requested	These services will be performed on an as needed basis for TFFR.
Experience study	Fall 2014	Analyze experience for period July 1, 2009 to June 30, 2014.

*Proposed Legislation*

Segal will continue to assist the TFFR Board and ND legislative committees relating to proposed legislation based on an hourly fee for services rate. We understand that prior to initiating any efforts under this area, authorization must be given by the Deputy Executive Director. Segal will provide actuarial and technical analysis of proposed legislation, including, but not limited to, the following:

1. Proposed changes to governing laws and administrative rules;
2. Technical and fiscal impact studies of proposed state or federal legislation;
3. Analysis of the applicability of IRS or other federal requirements, as well as any general retirement plan design or administrative issues;
4. Testimony before legislative committees as requested by TFFR;
5. Discussion of proposed legislation with TFFR Board and staff; and
6. Attendance at selected meetings and hearings as requested by TFFR.

### *Onsite Meetings and Consultant Accessibility*

Segal will serve in an advisory and review capacity to the TFFR Board and staff and various other officials (as coordinated through TFFR). In this capacity, we will provide actuarial consultation and advice on any technical, policy, legislative, or administrative challenges arising during the course of operations. As we are not a law firm, we will consult with the TFFR legal advisors on the impact of changes to the retirement benefit structure. The consultation and advisory services will be provided by telephone calls, correspondence, electronic mail, attendance at meetings, and/or hearings, as requested, and possibly in other forms requested by the Deputy Executive Director or the Board (including an average of two to five meeting days in Bismarck, which include one meeting per year to review the annual actuarial valuation with the Board and one meeting per year to review the annual actuarial valuation with the Legislative Employee Benefits Programs Committee).

The supervising actuary and/or support actuaries will be readily accessible to the TFFR director or designee by telephone within one working day of such request.

### *National Trends, Retirement Industry Developments, and State and Federal Activities*

A consulting service with growing significance is to keep clients like TFFR advised on shifts in national retirement trends, developments in federal legislation and/or regulations. We have special expertise in advising state retirement systems regarding the rapidly changing structure of public sector retirement and retiree health plans. Cathie Eitelberg, Segal's Director of the Public Sector Market, and Kim Nicholl, Segal's Public Sector Retirement Practice Leader, will bring their vast experience in public policy and retirement plan developments to TFFR through regular contact. We will provide our legislative and regulatory updates and governmental publications to TFFR, and any other interested personnel, and we will keep TFFR aware of developments as they occur and their potential impact.

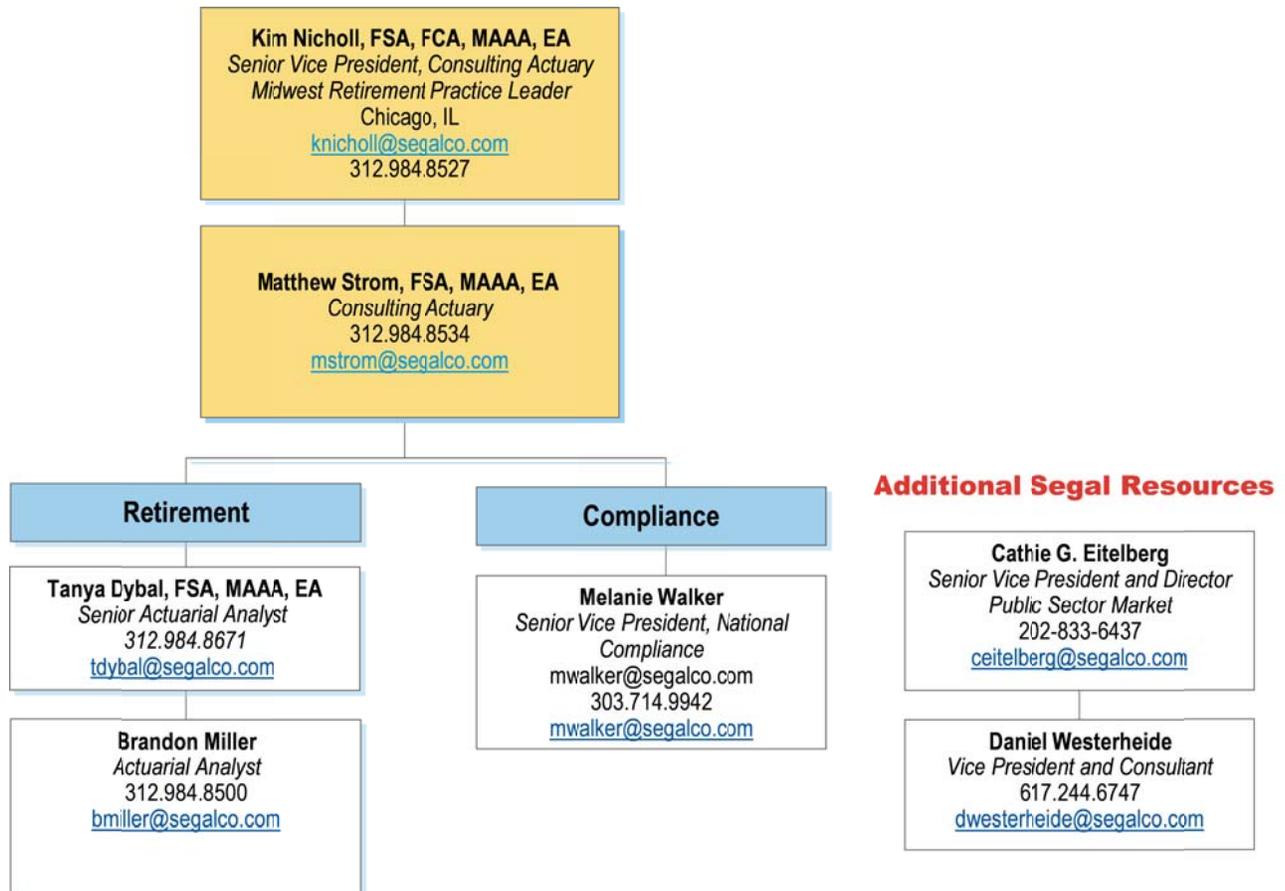
We will leverage our experience tracking and contributing to retirement legislation to assist TFFR in drafting proposed changes to state retirement laws.

### *Project Team*

The Segal Company has assigned experienced professional actuaries to the valuation tasks.

A dedicated team of actuaries and consultants that are familiar with TFFR will continue performing the work associated with the contract. We believe that our team structure and our actuarial processes provide adequate resources to complete the work within the requisite timeframe while permitting adequate sharing of information and having familiarity with all aspects of the assignment. Our TFFR team will continue to be led by Kim Nicholl, who will serve as Lead Actuary. Matt Strom will continue as Secondary Actuary and peer review actuary. The team will also include a reviewing actuary, as well as actuarial analysts who will perform most of the data reconciliation and valuation work. To the extent that additional special assignments are requested, we have numerous additional actuaries and other staff to draw upon.

An organizational chart for the project team is shown below:



### Experience Study

A five-year experience study will be performed beginning with the completion of the July 1, 2014 actuarial valuation. The five-year experience analysis reports will include recommendations regarding all actuarial assumptions, including but not limited to rates of termination, service retirement rates, progression and promotion salary scales, pre- and post-retirement mortality, disability rates and rates of termination from disability.

We will maintain the participant data necessary to complete this experience analysis from our annual valuation databases. We have completed experience analyses for many statewide pension systems. Our familiarity with the process enables us to provide customized and efficient results with a perspective that other firms are unable to offer.

Segal performs experience reviews for our public sector retirement clients, typically every three to five years. The analyses will describe the reasons for changes in the contribution rates based on a comparison of actual changes in liabilities with expected changes according to each of the various actuarial assumptions.

Ms. Fay Kopp  
North Dakota Teachers' Fund  
for Retirement  
March 5, 2013  
Page 8

### *Summary*

Segal would be privileged to continue to be retained as the consultant for the TFFR. We bring a useful balance of technical depth and strategic sense to this project and believe that our recommendations will help the Fund address the future of its retirement program.

We appreciate the opportunity to offer this proposal and will be pleased to meet with you to discuss this material or provide additional materials and explanations as needed.

Sincerely,

A handwritten signature in black ink that reads "Kim Nicholl". The signature is written in a cursive, slightly slanted style.

Kim Nicholl

kn/sd

# Attachment: Cost Proposal

**COST PROPOSAL  
ACTUARIAL AND CONSULTING SERVICES  
ND TEACHERS FUND FOR RETIREMENT  
JULY 1, 2013 – JUNE 30, 2015**

<b>2 YEAR CONTRACT COST</b>	<b>FIXED FEE</b>
2013 Actuarial Report	\$40,000
2014 Actuarial Report	\$40,000
2014 Experience Study	\$33,000
Total Fixed Fees	\$113,000

*Note: Total fixed fees include presentation of valuation reports to TFFR Board and LEBPC each year, plus a presentation of the experience study to TFFR Board. Travel expenses are not included in the fixed fee and will be reimbursed upon approval. The quoted fees for the 2013 and 2014 actuarial reports do not include costs associated with implementation of GASB 67.*

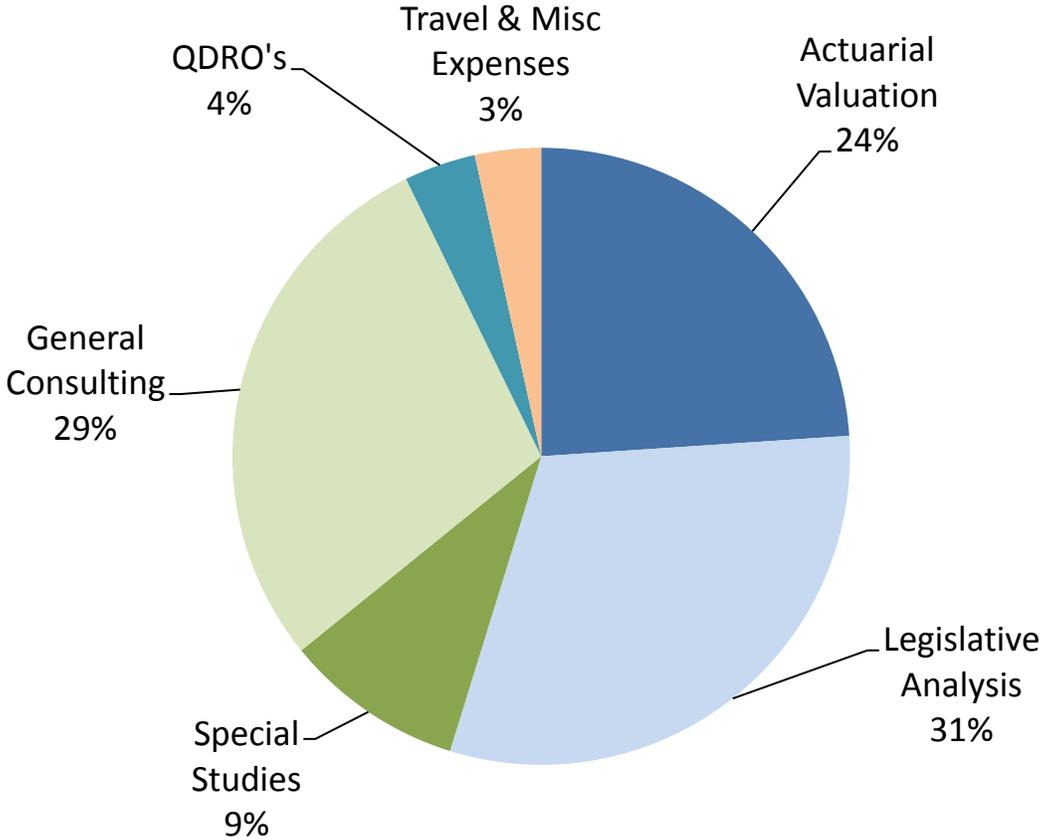
<b>2 YEAR CONTRACT TERM</b>	<b>FIXED HOURLY FEE FOR SERVICES</b>
Legislative and General Consulting	\$ 280 per hour

Segal is fully aware of the sensitivity of budget allocations for public sector employers. Our pricing approach is focused toward achieving the client's objectives in the most cost-effective manner consistent with quality, accuracy, and timeliness. If our proposed fees are inconsistent with your understanding of the engagement, we request the opportunity to explain our pricing assumptions or to modify the scope of services to best fit your objectives for this important assignment.

Our fixed fees are determined based on an estimate of the time needed by our professional staff to complete the tasks required and the expertise of the staff involved. We make every effort to assign tasks to the appropriate professional level staff member to assure timely and accurate completion of the work.

Our fees are all-inclusive and there are no additional administration, start-up, or implementation fees associated with the engagement. We do not bill separately for services performed by our clerical staff, duplicating, telephone calls, computer time, postage, etc. In situations where additional projects can have a project scope outlined in advance, we can devise an agreed-upon fee quote prior to beginning work if so desired.

# Actuarial Consulting Fees 2003-2012



**ND TEACHERS FUND FOR RETIREMENT  
SUMMARY OF ACTUARY FEES**

<b>FISCAL YEAR</b>	<b>TOTAL BILL</b>	<b>ACTUARIAL VALUATION</b>	<b>LEGISLATIVE ANALYSIS</b>	<b>SPECIAL STUDIES (FIXED FEE)</b>	<b>GENERAL CONSULTING</b>	<b>QDRO WORK</b>	<b>TRAVEL &amp; MISC. EXPENSES</b>
2003	\$ 93,132.00	\$ 26,500.00	\$ 23,406.00		\$ 33,213.00	\$ 5,765.00	\$ 4,248.00
2004	\$ 122,315.00	\$ 31,180.50	\$ 27,351.00		\$ 48,421.50	\$ 8,565.00	\$ 6,797.00
2005	\$ 160,453.42	\$ 31,143.50	\$ 13,211.50	\$ 70,000.00	\$ 32,206.00	\$ 6,984.00	\$ 6,908.42
2006	\$ 104,531.72	\$ 24,676.00	\$ 14,137.00	\$ 7,296.50	\$ 49,876.61	\$ 6,364.50	\$ 2,181.11
2007	\$ 118,260.81	\$ 31,000.00	\$ 33,388.75	\$ 13,165.00	\$ 34,121.25	\$ 4,278.75	\$ 2,307.06
2008	\$ 132,107.90	\$ 32,000.00	\$ 21,723.75		\$ 72,906.25	\$ 2,930.00	\$ 2,547.90
2009	\$ 81,541.84	\$ 34,500.00	\$ 14,767.50		\$ 20,810.00	\$ 7,727.50	\$ 3,736.84
2010	\$ 196,991.27	\$ 36,000.00	\$ 84,736.25	\$ 37,000.00	\$ 32,490.00	\$ 2,651.25	\$ 4,113.77
2011	\$ 254,290.25	\$ 37,400.00	\$ 183,987.50		\$ 25,857.50	\$ 1,127.50	\$ 5,917.75
2012	\$ 93,776.98	\$ 40,583.75	\$ 1,855.00		\$ 38,541.25	\$ 4,571.25	\$ 8,225.73
<b>TOTALS</b>	<b>\$ 1,357,401.19</b>	<b>\$ 324,983.75</b>	<b>\$ 418,564.25</b>	<b>\$127,461.50</b>	<b>\$388,443.36</b>	<b>\$ 50,964.75</b>	<b>\$ 46,983.58</b>

# TFFR Legislative Update

## March 21, 2013

BILL NO.	DESCRIPTION	SPONSOR	POSITION
----------	-------------	---------	----------

<b>HB 1022</b>	<b><u><a href="#">RIO Budget</a></u></b>	Governor's Office	Support
----------------	--	-------------------	---------

HB 1022 includes the budget authority and continuing appropriations for the Retirement and Investment Office (RIO) administrative expenses for operating the retirement program for the TFFR Board and the investment program for the SIB. HB 1022 also contains budget for PERS.

The bill was assigned to the House Appropriations Committee – Government Operations Division. Committee hearing was held on 1/16/13. On 2/15, the House Approp - Gov Ops subcommittee worked on HB 1022. The subcommittee also discussed the potential costs of HB 1304 (Iran divestiture) and how it would impact RIO's budget bill, HB 1022. The subcommittee approved an amendment to HB 1022 to include one additional FTE for an Investment Analyst position for the SIB program, and gave the bill a “do pass” recommendation (7-0). The amended bill was given a 19-3 “do pass” recommendation by the Appropriations Committee. On 2/25, the House approved the amended bill 92-0.

**HB 1022 was referred to Senate Appropriations Committee. At the hearing on 3/14, Fay, Connie, and Darren provided testimony and responded to questions on TFFR, SIB, and RIO budget issues. Most questions related to the Legacy Fund and SIB investment program. To date, no action has been taken by the Committee.**

<b>HB 1230</b>	<b><u><a href="#">Reduce contributions at 100% Funding</a></u></b>	Rep. Louser	Support
----------------	--	-------------	---------

HB 1230 would maintain the TFFR member and employer contribution rates approved by the 2011 Legislature until the Fund reaches 100% funded ratio (not 90%) at which time contribution rates would be reduced to 7.75% for members and 7.75% for employers.

This bill was assigned to the House GVA Committee. At the Committee hearing on 1/25, Rep. Louser explained the bill, and Fay provided testimony in support. There were questions relating to TFFR funding, 2011 legislation, 8% investment return assumption, etc. Additional information was requested and provided. The Committee voted 14-0 to give the bill a “do pass” recommendation. On 1/30, the House approved the bill (92-0).

**HB 1230 was referred to Senate GVA Committee. At the hearing on 3/7, Fay provided TFFR testimony in support of the bill. NDEA and NDCEL were also in support. The Committee voted 7-0 to give the bill a “do pass” recommendation. On 3/12, the Senate voted unanimously to approve the bill (47-0). The bill now goes to the Governor for signature.**

**HB 1304**      [Divestiture of state investment funds](#)      **Rep. Grande**      **Oppose**

HB 1304 would require certain restrictions, monitoring and reporting of “scrutinized companies” relating to the Iran Sanctions Act of 1996, within state investment board portfolios.

This bill was assigned to the House GVA Committee. At the Committee hearing on 2/7, Rep. Grande and a representative of the Jewish Community Relations Council of Minnesota and the Dakotas spoke in favor of the bill. TFFR testified in opposition to the bill focusing on costs and fiduciary concerns. PERS also opposed the bill, and offered an amendment which would require the SIB to apply the Exclusive Benefit Rule to any pension investment, and the SIB would not need to divest the assets if by doing so it would violate the Exclusive Benefit Rule. This would be consistent with current PERS and TFFR investment policy statements on social investing. Treasurer Schmidt also testified in strong opposition to the bill. SIB provided neutral testimony highlighting the costs and implementation efforts required. There were a number of questions regarding the bill’s implications. The GVA Committee approved the amendment proposed by PERS, and voted 8-5-1 to give HB1304 a “do pass recommendation.” The bill was re-referred to House Appropriations Committee since it carries a fiscal note. After consideration, the House Appropriations Committee also gave this bill a 20-2 “do pass” recommendation. On 2/21, the House voted 84-9 to approve HB 1304.

**HB1304 was referred to Senate GVA Committee. At the hearing on 3/7, the bill’s primary sponsor, Rep. Grande explained the bill. On behalf of the SIB, Darren testified in opposition, as did Fay on behalf of TFFR Board, and Treasurer Schmidt on behalf of the Treasurer’s Office. Lots of good questions and discussion on the complex technical and administrative requirements of the bill. No Committee action has been taken as of this date.**

**HCR 3003**      [State Retirement Stabilization Fund](#)      **Rep. Delzer**      **Monitor**

HCR 3003 would amend the ND State Constitution and transfer certain revenues to a new state retirement stabilization fund which would be used to address unfunded retirement benefit obligations of the public employees retirement system. If approved, HCR 3003 would be voted on in the 2014 general election.

This bill was assigned to the House Judiciary Committee. At the Committee hearing on 2/25, Rep. Delzer and Sen. Schaible spoke in favor of the resolution. NDCEL and NDEA opposed the resolution. **There is some question as to whether or not this stabilization fund might apply to TFFR. In follow up discussions, we understand that it was not the sponsor’s intent for the stabilization fund to apply specifically to TFFR, although future legislatures may wish to do so. If that is the case, the bill would need to be amended to broaden the language so it could encompass any state public employee retirement fund (which would then include TFFR, in addition to PERS).**

**HCR 3003 was amended by the House Judiciary Committee. The engrossed version of the resolution provides for the deposit of certain oil extraction taxes into various funds and provides for the determination of balances in each fund. The engrossed resolution would require 20% of the revenue from oil extraction taxes from taxable oil to be allocated as follows: 50% deposited in common schools trust fund; 30% deposited in the state retirement stabilization fund; and 20% deposited in the foundation aid stabilization fund. Moneys in the state retirement stabilization fund may be expended by the Legislature only for the purpose of addressing unfunded retirement**

**benefit obligations to which members of state retirement systems may be entitled. The balance of monies to be maintained in the fund must be determined by law.**

**On 3/19, the Committee gave the amended resolution a “do pass” recommendation by a vote of 12 – 2. On 3/20, the House approved the amendments, and placed the resolution on the calendar for vote.**

**SB 2059      [PERS funding recovery](#)      PERS      Monitor**

SB 2059 increases PERS member and employer contributions by 1% each in 2014 and 2015 (total 4%). This bill does not directly impact TFFR. However, the bill was amended in the House to include a study of existing and possible state retirement plans, therefore it is likely TFFR would be included.

The bill was heard by Senate GVA Committee on 1/17, and amended on 2/11. The amendment adds a Legislative Management Study of North Dakota retirement plans during the 2013-14 interim. The study would include the feasibility and desirability of existing and possible state retirement plans, and would also include an analysis of both a defined benefit plan and a defined contribution plan with considerations and possible consequences for transitioning to a state defined contribution plan. The study may not be conducted by the employee benefits committee. Legislative Management shall report the findings and recommendations, together with any legislation needed to implement the recommendations, to the 64<sup>th</sup> legislative assembly. While this amendment does not specifically include TFFR, the study language is written broadly enough that it could also include TFFR since it is a ND state retirement plan. The bill was re-referred to Senate Appropriations Committee, where it was given a 10-3 “do pass” recommendation. On 2/20, the Senate approved the amended bill by a vote of 35-12.

**SB 2059 was referred to House GVA Committee. There was a hearing on 3/7 which I attended in order to monitor. Lots of discussion on this bill. The Committee has not taken any action to date.**

**SB 2061      [TFFR Administrative Changes](#)      TFFR Board      Support**

SB 2061 includes technical and administrative changes to the TFFR program. The bill updates definitions, incorporates federal tax law changes, and adds a savings clause. The proposed changes have no financial impact on the Fund.

The bill was assigned to the Senate GVA Committee. Committee hearing was held on 1/17/13. Fay provided testimony. Follow up discussion with Committee regarding IRS requirements. The Committee gave the bill a “do pass” recommendation (7-0). On 1/29, the Senate approved unanimously (44-0).

**SB 2061 was referred to House GVA Committee. Shelly Schumacher provided the testimony on SB 2061 at the hearing on 3/7. After questions, the Committee voted unanimously to give the bill a “do pass” recommendation (12 -0-2). On 3/13, the House approved SB 2061 by a vote of 94-0. On 3/19, the Governor signed the bill.**

\*\*\*\*\*

TFFR website: [http://www.nd.gov/rio/TFFR/Legislation/default\\_2013.htm](http://www.nd.gov/rio/TFFR/Legislation/default_2013.htm)  
ND Legislative website: <http://www.legis.nd.gov/assembly/63-2013/regular>

# TFFR Legislative Update

## March 15, 2013

BILL NO.	DESCRIPTION	SPONSOR	POSITION
----------	-------------	---------	----------

<b>HB 1022</b>	<b><u><a href="#">RIO Budget</a></u></b>	<b>Governor's Office</b>	<b>Support</b>
----------------	--	--------------------------	----------------

HB 1022 includes the budget authority and continuing appropriations for the Retirement and Investment Office (RIO) administrative expenses for operating the retirement program for the TFFR Board and the investment program for the SIB. HB 1022 also contains budget for PERS.

The bill was assigned to the House Appropriations Committee – Government Operations Division. Committee hearing was held on 1/16/13. On 2/15, the House Approp - Gov Ops subcommittee worked on HB 1022. The subcommittee also discussed the potential costs of HB 1304 (Iran divestiture) and how it would impact RIO's budget bill, HB 1022. The subcommittee approved an amendment to HB 1022 to include one additional FTE for an Investment Analyst position for the SIB program, and gave the bill a “do pass” recommendation (7-0). The amended bill was given a 19-3 “do pass” recommendation by the Appropriations Committee. On 2/25, the House approved the amended bill 92-0.

**HB 1022 was referred to Senate Appropriations Committee. At the hearing on 3/14, Fay, Connie, and Darren provided testimony and responded to questions on TFFR, SIB, and RIO budget issues. Most questions related to the Legacy Fund and SIB investment program. No action was taken by the Committee.**

<b>HB 1230</b>	<b><u><a href="#">Reduce contributions at 100% Funding</a></u></b>	<b>Rep. Louser</b>	<b>Support</b>
----------------	--	--------------------	----------------

HB 1230 would maintain the TFFR member and employer contribution rates approved by the 2011 Legislature until the Fund reaches 100% funded ratio (not 90%) at which time contribution rates would be reduced to 7.75% for members and 7.75% for employers.

This bill was assigned to the House GVA Committee. At the Committee hearing on 1/25, Rep. Louser explained the bill, and Fay provided testimony in support. There were questions relating to TFFR funding, 2011 legislation, 8% investment return assumption, etc. Additional information was requested and provided. The Committee voted 14-0 to give the bill a “do pass” recommendation. On 1/30, the House approved the bill (92-0).

**HB 1230 was referred to Senate GVA Committee. At the hearing on 3/7, Fay provided TFFR testimony in support of the bill. NDEA and NDCEL were also in support. The Committee voted 7-0 to give the bill a “do pass” recommendation. On 3/12, the Senate voted unanimously to approve the bill (47-0). The bill now goes to the Governor for signature.**

**HB 1304**      [Divestiture of state investment funds](#)      **Rep. Grande**      **Oppose**  
HB 1304 would require certain restrictions, monitoring and reporting of “scrutinized companies” relating to the Iran Sanctions Act of 1996, within state investment board portfolios.

This bill was assigned to the House GVA Committee. At the Committee hearing on 2/7, Rep. Grande and a representative of the Jewish Community Relations Council of Minnesota and the Dakotas spoke in favor of the bill. TFFR testified in opposition to the bill focusing on costs and fiduciary concerns. PERS also opposed the bill, and offered an amendment which would require the SIB to apply the Exclusive Benefit Rule to any pension investment, and the SIB would not need to divest the assets if by doing so it would violate the Exclusive Benefit Rule. This would be consistent with current PERS and TFFR investment policy statements on social investing. Treasurer Schmidt also testified in strong opposition to the bill. SIB provided neutral testimony highlighting the costs and implementation efforts required. There were a number of questions regarding the bill’s implications. The GVA Committee approved the amendment proposed by PERS, and voted 8-5-1 to give HB1304 a “do pass recommendation.” The bill was re-referred to House Appropriations Committee since it carries a fiscal note. After consideration, the House Appropriations Committee also gave this bill a 20-2 “do pass” recommendation. On 2/21, the House voted 84-9 to approve HB 1304.

**HB1304 was referred to Senate GVA Committee. At the hearing on 3/7, the bill’s primary sponsor, Rep. Grande explained the bill. On behalf of the SIB, Darren testified in opposition, as did Fay on behalf of TFFR Board, and Treasurer Schmidt on behalf of the Treasurer’s Office. Lots of good questions and discussion on the complex technical and administrative requirements of the bill. No Committee action has been taken as of this date.**

**HCR 3003**      [Public Employees Retirement Stabilization Fund](#)      **Rep. Delzer**      **Monitor**  
HCR 3003 would add two new sections to the Constitution. The resolution would limit the growth of the foundation aid stabilization fund and transfer the excess revenues to a new public employees retirement stabilization fund. This fund would be used to address unfunded retirement benefit obligations of the public employees retirement system. If approved, HCR 3003 would be voted on in the 2014 general election.

This bill was assigned to the House Judiciary Committee. At the Committee hearing on 2/25, Rep. Delzer and Sen. Schaible spoke in favor of the resolution. NDCEL and NDEA opposed the resolution. **There is some confusion related to whether or not this stabilization might apply to TFFR. In follow up discussions with Rep. Delzer, he indicated he did not intend for the stabilization fund to apply to TFFR, although future legislatures may wish to do so. If that is the case, the bill would need to be amended to broaden the language so it could encompass any state public employee retirement fund (which would then include TFFR, in addition to PERS). This is a gray area which we are working on clarifying. No Committee action has yet been taken on the resolution.**

**SB 2059**      [PERS funding recovery](#)      **PERS**      **Monitor**  
SB 2059 increases PERS member and employer contributions by 1% each in 2014 and 2015 (total 4%). This bill does not directly impact TFFR. However, the bill was amended in the House to include a study of existing and possible state retirement plans, therefore it is likely TFFR would be included.

The bill was heard by Senate GVA Committee on 1/17, and amended on 2/11. The amendment adds a Legislative Management Study of North Dakota retirement plans during the 2013-14 interim. The study would include the feasibility and desirability of existing and possible state retirement plans, and would also include an analysis of both a defined benefit plan and a defined contribution plan with considerations and possible consequences for transitioning to a state defined contribution plan. The study may not be conducted by the employee benefits committee. Legislative Management shall report the findings and recommendations, together with any legislation needed to implement the recommendations, to the 64<sup>th</sup> legislative assembly. While this amendment does not specifically include TFFR, the study language is written broadly enough that it could also include TFFR since it is a ND retirement plan. The bill was re-referred to Senate Appropriations Committee, where it was given a 10-3 “do pass” recommendation. On 2/20, the Senate approved the amended bill by a vote of 35-12.

**SB 2059 was referred to House GVA Committee. There was a hearing on 3/7 which I attended in order to monitor. Lots of discussion on this bill. The Committee has not taken any action.**

SB 2061	<a href="#">TFFR Administrative Changes</a>	TFFR Board	Support
---------	---	------------	---------

SB 2061 includes technical and administrative changes to the TFFR program. The bill updates definitions, incorporates federal tax law changes, and adds a savings clause. The proposed changes have no financial impact on the Fund.

The bill was assigned to the Senate GVA Committee. Committee hearing was held on 1/17/13. Fay provided testimony. Follow up discussion with Committee regarding IRS requirements. The Committee gave the bill a “do pass” recommendation (7-0). On 1/29, the Senate approved unanimously (44-0).

**SB 2061 was referred to House GVA Committee. Shelly Schumacher provided the testimony on SB 2061 at the hearing on 3/7. After questions, the Committee voted unanimously to give the bill a “do pass” recommendation (12 -0-2). On 3/13, the House approved SB 2061 by a vote of 94-0. The bill now goes to the Governor for signature.**

\*\*\*\*\*

TFFR website: [http://www.nd.gov/rio/TFFR/Legislation/default\\_2013.htm](http://www.nd.gov/rio/TFFR/Legislation/default_2013.htm)  
 ND Legislative website: <http://www.legis.nd.gov/assembly/63-2013/regular>

Sixty-third  
Legislative Assembly  
of North Dakota

**ENGROSSED HOUSE CONCURRENT  
RESOLUTION NO. 3003**

Introduced by

Representatives Delzer, Monson, Streyle

Senators Lyson, Schaible

1 A concurrent resolution to amend and reenact section 24 of article X of the Constitution of North  
2 Dakota, relating to allocation of revenue from oil extraction taxes.

3 **STATEMENT OF INTENT**

4 This measure provides for the deposit of certain oil extraction taxes into the state retirement  
5 stabilization fund and the foundation aid stabilization fund and provides for the determination of  
6 balances in each fund.

7 **BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF NORTH DAKOTA, THE**  
8 **SENATE CONCURRING THEREIN:**

9 That the following proposed amendment to section 24 of article X of the Constitution of  
10 North Dakota is agreed to and must be submitted to the qualified electors of North Dakota at the  
11 general election to be held in 2014, in accordance with section 16 of article IV of the  
12 Constitution of North Dakota.

13 **SECTION 1.** Section 24 of article X of the Constitution of North Dakota is amended and  
14 reenacted as follows:

15 **Section 24.**

16 1. Twenty percent of the revenue from oil extraction taxes from taxable oil produced in  
17 this state must be allocated as follows:

18 ~~4. a.~~ a. Fifty percent must be deposited in the common schools trust fund;

19 ~~2.~~ Fifty

20 b. Thirty percent must be deposited in the state retirement stabilization fund; and

21 c. Twenty percent must be deposited in the foundation aid stabilization fund in the  
22 state treasury, the

23 2. Moneys in the state retirement stabilization fund may be expended by the legislative  
24 assembly only for the purpose of addressing unfunded retirement benefit obligations to

1           which members of state retirement systems may be entitled. The balance of monies to  
2           be maintained in the fund must be determined by law.  
3        3. The interest income of whichthe foundation aid stabilization fund must be transferred  
4           to the state general fund on July first of each year. The principal of the foundation aid  
5           stabilization fund may be expended only upon order of the governor, who may direct  
6           such a transfer only to offset foundation aid reductions that were made by executive  
7           action pursuant to law due to a revenue shortage.

# Public pension problem

## Bismarck Tribune

March 14, 2013 1:30 am • [By C.T. MARHULA Grand Forks](#)

Conservative pundits criticize public pensions without the courtesy of a fact check. Let's examine the origins of the problem in North Dakota.

Between 1979 and 2001, the state Legislature increased the retirement formula by 200 percent and added unfunded cost-of-living increases. Funding increased by only 30 percent.

Is it any surprise the fund is now 40 percent underfunded?

A perfect example: House Bill 1102 in 2001, the last increase to pensions.

What follows is actual wording from the fiscal note: "no cost to the state ... additional benefit payments ... are taxable and will result in additional income and sales taxes being paid to the state."

Yes, the fiscal note actually claimed increasing state payments would have no cost and would provide \$301,500 additional revenue to the state. Only in Lake Wobegone and conservative North Dakota will an increase in state expenditures increase state revenue. The bill was carried by Ralph Kilzer and Bette Grande, passed unanimously, and was signed by the governor.

Currently, according to the state teacher retirement board, employees are funding 99 percent of their own retirement. It will increase in 2014.

Local districts are funding 99 percent of the legislative unfunded increases at an annual cost of \$5 million in Grand Forks.

Why teachers and boards accept this is a mystery.

Hypothetically speaking, if you happened to teach 30 years and spend over 30 years in the state Legislature starting in 1977, you were able to double your pension and give the bill to future generations.

Today's employees and taxpayers should not have to pay for past mistakes made by the Legislature. This is especially true in North Dakota where there is a budget surplus.

The Legislature should appropriate 33 percent of the shortfall in each of the next three bienniums.

That will keep promises made to current retirees and not punish current employees. It would reduce employee and local taxpayer funding to 5 to 6 percent of salary from each, down from the projected employee 11.75 percent and district 12.75 percent rates.

ND TEACHERS FUND FOR RETIREMENT  
INVESTMENT PERFORMANCE REPORT AS OF JANUARY 31, 2013

	January-13					December-12					September-12					Current		Prior		3 Years Ended		5 Years
	Allocation					Allocation					Allocation					Fiscal YTD		FY12		6/30/2012		Ended
	Market Value	Actual	Policy	Gross (%)	Net	Market Value	Actual	Policy	Gross (%)	Net	Market Value	Actual	Policy	Gross (%)	Net	Gross (%)	Net	Gross (%)	Net	Gross	Net	6/30/2012
<b>TOTAL FUND</b>	<b>1,763,564,854</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2.64%</b>	<b>2.62%</b>	<b>1,721,114,269</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2.89%</b>	<b>2.80%</b>	<b>1,683,110,433</b>	<b>100.0%</b>	<b>100.0%</b>	<b>4.53%</b>	<b>4.44%</b>	<b>10.39%</b>	<b>10.18%</b>	<b>-0.62%</b>	<b>-0.97%</b>	<b>12.29%</b>	<b>11.88%</b>	<b>-1.23%</b>
<b>POLICY TARGET BENCHMARK</b>				<b>2.80%</b>	<b>2.80%</b>				<b>2.16%</b>	<b>2.16%</b>				<b>4.37%</b>	<b>4.37%</b>	<b>9.62%</b>	<b>9.62%</b>	<b>-0.82%</b>	<b>-0.82%</b>	<b>11.17%</b>	<b>11.17%</b>	<b>1.19%</b>
ATTRIBUTION ANALYSIS																						
Asset Allocation			<b>0.02%</b>	<b>0.02%</b>					<b>-0.01%</b>	<b>-0.01%</b>				<b>0.01%</b>	<b>0.01%</b>	<b>0.03%</b>	<b>0.03%</b>	<b>0.27%</b>	<b>0.27%</b>			
Manager Selection			<b>-0.18%</b>	<b>-0.20%</b>					<b>0.73%</b>	<b>0.64%</b>				<b>0.14%</b>	<b>0.06%</b>	<b>0.74%</b>	<b>0.53%</b>	<b>-0.07%</b>	<b>-0.43%</b>			
TOTAL RELATIVE RETURN			<b>-0.16%</b>	<b>-0.19%</b>					<b>0.72%</b>	<b>0.64%</b>				<b>0.16%</b>	<b>0.07%</b>	<b>0.77%</b>	<b>0.56%</b>	<b>0.20%</b>	<b>-0.16%</b>			
<b>GLOBAL EQUITIES</b>	<b>1,033,078,953</b>	<b>58.6%</b>	<b>57.0%</b>	<b>4.45%</b>	<b>4.42%</b>	<b>991,157,414</b>	<b>57.6%</b>	<b>57.0%</b>	<b>2.80%</b>	<b>2.71%</b>	<b>975,918,182</b>	<b>58.0%</b>	<b>57.0%</b>	<b>5.81%</b>	<b>5.72%</b>	<b>13.62%</b>	<b>13.39%</b>					
<b>Benchmark</b>				<b>4.70%</b>	<b>4.70%</b>				<b>2.68%</b>	<b>2.68%</b>				<b>6.01%</b>	<b>6.01%</b>	<b>13.97%</b>	<b>13.97%</b>					
Epoch (1)	82,365,672	4.7%	4.5%	4.51%	4.50%	78,948,234	4.6%	4.5%	2.68%	2.43%	77,035,363	4.6%	4.5%	4.91%	4.66%	12.58%	11.95%	-1.33%	-2.28%	11.26%	10.15%	0.02%
Calamos	23,893,466	1.4%	1.5%	2.84%	2.83%	23,228,979	1.3%	1.5%	0.10%	-0.08%	23,245,618	1.4%	1.5%	6.14%	5.95%	9.27%	8.81%	N/A	N/A	N/A	N/A	N/A
LSV	181,810,007	10.3%	10.0%																			
<b>Total Global Equities</b>	<b>288,069,145</b>	<b>16.3%</b>	<b>16.0%</b>	<b>4.13%</b>	<b>4.12%</b>	<b>102,177,213</b>	<b>5.9%</b>	<b>6.0%</b>	<b>2.08%</b>	<b>1.85%</b>	<b>100,280,981</b>	<b>6.0%</b>	<b>6.0%</b>	<b>5.19%</b>	<b>4.96%</b>	<b>11.82%</b>	<b>11.23%</b>					
<b>MSCI World (2)</b>				<b>5.09%</b>	<b>5.09%</b>				<b>2.49%</b>	<b>2.49%</b>				<b>6.71%</b>	<b>6.71%</b>	<b>14.93%</b>	<b>14.93%</b>					
<b>Domestic - broad</b>	<b>378,498,176</b>	<b>21.5%</b>	<b>21.5%</b>	<b>5.46%</b>	<b>5.43%</b>	<b>472,195,950</b>	<b>27.4%</b>	<b>27.4%</b>	<b>0.82%</b>	<b>0.73%</b>	<b>472,834,867</b>	<b>28.1%</b>	<b>27.4%</b>	<b>6.22%</b>	<b>6.13%</b>	<b>12.94%</b>	<b>12.72%</b>					
<b>Benchmark</b>				<b>5.61%</b>	<b>5.61%</b>				<b>0.51%</b>	<b>0.51%</b>				<b>6.08%</b>	<b>6.08%</b>	<b>12.61%</b>	<b>12.61%</b>					
<b>Large Cap Domestic</b>																						
LA Capital	109,277,291	6.2%	5.1%	4.08%	4.07%	106,051,999	6.2%	6.7%	-1.61%	-1.66%	109,445,344	6.5%	6.7%	5.74%	5.69%	8.29%	8.15%	6.79%	6.56%	17.64%	17.43%	2.00%
<b>Russell 1000 Growth</b>				<b>4.29%</b>	<b>4.29%</b>				<b>-1.32%</b>	<b>-1.32%</b>				<b>6.11%</b>	<b>6.11%</b>	<b>9.19%</b>	<b>9.19%</b>	<b>5.76%</b>	<b>5.76%</b>	<b>17.50%</b>	<b>17.50%</b>	<b>2.87%</b>
LSV	157,542	0.0%	0.0%	6.25%	6.23%	112,056,980	6.5%	6.7%	3.35%	3.27%	108,316,199	6.4%	6.7%	7.51%	7.43%	18.05%	17.85%	-1.21%	-1.51%	15.39%	15.02%	-3.25%
<b>Russell 1000 Value</b>				<b>6.50%</b>	<b>6.50%</b>				<b>1.52%</b>	<b>1.52%</b>				<b>6.50%</b>	<b>6.50%</b>	<b>15.15%</b>	<b>15.15%</b>	<b>3.00%</b>	<b>3.00%</b>	<b>15.80%</b>	<b>15.80%</b>	<b>-2.19%</b>
LA Capital	74,934,539	4.2%	2.9%	4.83%	4.81%	72,184,062	4.2%	3.8%	-0.40%	-0.45%	73,757,095	4.4%	3.8%	5.41%	5.36%	10.06%	9.93%	6.37%	6.15%	17.26%	16.97%	0.99%
<b>Russell 1000</b>				<b>5.42%</b>	<b>5.42%</b>				<b>0.12%</b>	<b>0.12%</b>				<b>6.31%</b>	<b>6.31%</b>	<b>12.21%</b>	<b>12.21%</b>	<b>4.37%</b>	<b>4.37%</b>	<b>16.64%</b>	<b>16.64%</b>	<b>0.39%</b>
Northern Trust	37,728,414	2.1%	2.1%	5.78%	5.75%	36,010,671	2.1%	2.1%	-0.81%	-0.91%	36,231,281	2.2%	2.2%	7.05%	6.95%	12.32%	12.07%	6.46%	6.05%	16.89%	16.74%	0.00%
Prudential	-	0.0%	0.0%	N/A	N/A	-	0.0%	0.0%	N/A	N/A	163,192	0.0%	0.0%	0.00%	-0.04%	N/A	N/A	6.42%	6.25%	30.88%	30.72%	N/A
Clifton	37,532,457	2.1%	6.5%	5.24%	5.22%	36,013,077	2.1%	1.9%	-0.27%	-0.33%	36,576,554	2.2%	1.9%	6.56%	6.49%	11.85%	11.68%	6.57%	6.30%	N/A	N/A	N/A
<b>S&amp;P 500</b>				<b>5.18%</b>	<b>5.18%</b>				<b>-0.38%</b>	<b>-0.38%</b>				<b>6.35%</b>	<b>6.35%</b>	<b>11.44%</b>	<b>11.44%</b>	<b>5.45%</b>	<b>5.45%</b>	<b>16.40%</b>	<b>16.40%</b>	<b>0.22%</b>
<b>Total Large Cap Domestic</b>	<b>259,630,244</b>	<b>14.7%</b>	<b>16.6%</b>	<b>5.18%</b>	<b>5.16%</b>	<b>362,316,788</b>	<b>21.1%</b>	<b>21.2%</b>	<b>0.34%</b>	<b>0.27%</b>	<b>364,489,664</b>	<b>21.7%</b>	<b>21.2%</b>	<b>6.40%</b>	<b>6.33%</b>	<b>12.29%</b>	<b>12.13%</b>	<b>3.68%</b>	<b>3.35%</b>	<b>17.27%</b>	<b>16.86%</b>	<b>-4.31%</b>
<b>Russell 1000 (2)</b>				<b>5.42%</b>	<b>5.42%</b>				<b>0.12%</b>	<b>0.12%</b>				<b>6.31%</b>	<b>6.31%</b>	<b>12.21%</b>	<b>12.21%</b>	<b>5.34%</b>	<b>5.34%</b>	<b>16.36%</b>	<b>16.36%</b>	<b>0.20%</b>
<b>Small Cap Domestic</b>																						
SEI	223,937	0.0%	0.0%	-0.92%	-0.92%	354,211	0.0%	0.0%	371.62%	371.62%	75,044	0.0%	0.0%	-0.49%	-0.49%	364.98%	364.98%	-27.98%	-27.98%	-3.92%	-4.12%	-17.53%
Callan	59,435,757	3.4%	2.4%	6.42%	6.35%	54,860,069	3.2%	3.1%	2.17%	1.97%	53,743,850	3.2%	3.1%	5.14%	4.94%	14.32%	13.80%	-3.11%	-3.87%	19.05%	18.33%	0.63%
Clifton	59,208,237	3.4%	2.4%	6.35%	6.31%	54,664,882	3.2%	3.1%	2.15%	2.05%	54,526,309	3.2%	3.1%	6.12%	6.01%	15.29%	15.01%	-0.63%	-1.05%	N/A	N/A	N/A
<b>Total Small Cap Domestic</b>	<b>118,867,932</b>	<b>6.7%</b>	<b>4.8%</b>	<b>6.36%</b>	<b>6.31%</b>	<b>109,879,162</b>	<b>6.4%</b>	<b>6.2%</b>	<b>2.42%</b>	<b>2.27%</b>	<b>108,345,204</b>	<b>6.4%</b>	<b>6.2%</b>	<b>5.63%</b>	<b>5.47%</b>	<b>15.07%</b>	<b>14.67%</b>	<b>0.23%</b>	<b>-0.37%</b>	<b>23.45%</b>	<b>22.72%</b>	<b>-0.06%</b>
<b>Russell 2000</b>				<b>6.26%</b>	<b>6.26%</b>				<b>1.85%</b>	<b>1.85%</b>				<b>5.25%</b>	<b>5.25%</b>	<b>13.92%</b>	<b>13.92%</b>	<b>-2.08%</b>	<b>-2.08%</b>	<b>17.80%</b>	<b>17.80%</b>	<b>0.54%</b>
<b>International - broad</b>	<b>269,581,172</b>	<b>15.3%</b>	<b>14.5%</b>	<b>4.46%</b>	<b>4.41%</b>	<b>317,695,185</b>	<b>18.5%</b>	<b>18.6%</b>	<b>6.67%</b>	<b>6.53%</b>	<b>299,730,142</b>	<b>17.8%</b>	<b>18.6%</b>	<b>7.22%</b>	<b>7.07%</b>	<b>19.47%</b>	<b>19.09%</b>					
<b>Benchmark</b>				<b>4.53%</b>	<b>4.53%</b>				<b>6.39%</b>	<b>6.39%</b>				<b>7.09%</b>	<b>7.09%</b>	<b>19.10%</b>	<b>19.10%</b>					
<b>Developed International</b>																						
State Street	22,315,920	1.3%	1.3%	5.74%	5.67%	21,425,468	1.2%	1.7%	8.40%	8.17%	19,777,366	1.2%	1.7%	7.38%	7.15%	23.09%	22.47%	-17.85%	-18.59%	4.88%	4.18%	-8.34%
<b>MSCI EAFE (3)</b>				<b>5.28%</b>	<b>5.28%</b>				<b>6.57%</b>	<b>6.57%</b>				<b>6.92%</b>	<b>6.92%</b>	<b>19.96%</b>	<b>19.96%</b>	<b>-13.83%</b>	<b>-13.83%</b>	<b>5.96%</b>	<b>5.96%</b>	<b>-6.10%</b>
Capital Guardian	30,165,109	1.7%	2.4%	4.75%	4.70%	29,260,135	1.7%	3.8%	6.09%	5.93%	27,586,983	1.6%	3.8%	7.45%	7.29%	19.40%	19.00%	-11.29%	-11.83%	6.93%	6.40%	-6.44%
LSV	-	0.0%	0.0%	5.42%	5.37%	56,673,814	3.3%	3.8%	6.85%	6.70%	53,051,809	3.2%	3.8%	8.36%	8.21%	22.05%	21.66%	-15.65%	-16.14%	4.91%	4.41%	-9.09%
<b>MSCI EAFE (4)</b>				<b>5.28%</b>	<b>5.28%</b>				<b>6.57%</b>	<b>6.57%</b>				<b>6.92%</b>	<b>6.92%</b>	<b>19.96%</b>	<b>19.96%</b>	<b>-13.83%</b>	<b>-13.83%</b>	<b>4.92%</b>	<b>4.92%</b>	<b>-6.49%</b>
Clifton	96,770,703	5.5%	5.5%	5.37%	5.36%	93,279,646	5.4%	2.4%	6.79%	6.76%	87,282,832	5.2%	2.4%	6.10%	6.07%	19.38%	19.31%	-15.37%	-15.46%	N/A	N/A	N/A
<b>MSCI EAFE</b>				<b>5.28%</b>	<b>5.28%</b>				<b>6.57%</b>	<b>6.57%</b>				<b>6.92%</b>	<b>6.92%</b>	<b>19.96%</b>	<b>19.96%</b>	<b>-13.83%</b>	<b>-13.83%</b>			

**ND TEACHERS FUND FOR RETIREMENT  
INVESTMENT PERFORMANCE REPORT AS OF JANUARY 31, 2013**

	January-13					December-12					September-12					Current		Prior		3 Years Ended		5 Years
	Allocation		Month			Allocation		Quarter			Allocation		Quarter			Fiscal YTD		FY12		6/30/2012		6/30/2012
	Market Value	Actual	Policy	Gross (%)	Net	Market Value	Actual	Policy	Gross (%)	Net	Market Value	Actual	Policy	Gross (%)	Net	Gross (%)	Net	Gross (%)	Net	Gross (%)	Net	Net
DFA	27,681,216	1.6%	1.3%	5.20%	5.13%	26,729,855	1.6%	1.7%	8.89%	8.67%	24,562,387	1.5%	1.7%	8.38%	8.16%	24.16%	23.56%	-17.09%	-17.81%	7.91%	7.22%	N/A
Wellington	30,687,845	1.7%	1.3%	5.00%	4.92%	29,663,333	1.7%	1.7%	5.20%	4.95%	28,227,279	1.7%	1.7%	7.56%	7.31%	18.82%	18.16%	-7.52%	-8.42%	13.15%	12.25%	-2.98%
<b>S&amp;P/Citigroup BMI EPAC &lt; \$2BN</b>				<b>4.68%</b>	<b>4.68%</b>				<b>5.28%</b>	<b>5.28%</b>				<b>6.96%</b>	<b>6.96%</b>	<b>17.88%</b>	<b>17.88%</b>	<b>-15.07%</b>	<b>-15.07%</b>	<b>7.45%</b>	<b>7.45%</b>	<b>-6.11%</b>
<b>Total Developed International</b>	<b>207,620,793</b>	<b>11.8%</b>	<b>11.8%</b>	<b>5.28%</b>	<b>5.24%</b>	<b>257,032,250</b>	<b>14.9%</b>	<b>15.0%</b>	<b>6.88%</b>	<b>6.75%</b>	<b>240,488,656</b>	<b>14.3%</b>	<b>15.0%</b>	<b>7.25%</b>	<b>7.12%</b>	<b>20.69%</b>	<b>20.34%</b>	<b>-14.72%</b>	<b>-15.15%</b>	<b>8.42%</b>	<b>7.93%</b>	<b>-6.05%</b>
<b>MSCI EAFE (4)</b>				<b>5.28%</b>	<b>5.28%</b>				<b>6.57%</b>	<b>6.57%</b>				<b>6.92%</b>	<b>6.92%</b>	<b>19.96%</b>	<b>19.96%</b>	<b>-13.83%</b>	<b>-13.83%</b>	<b>4.92%</b>	<b>4.92%</b>	<b>-6.49%</b>
<b>Emerging Markets</b>																						
JP Morgan	16,672,438	0.9%	0.5%	0.17%	0.10%	16,449,893	1.0%	0.6%	6.63%	6.42%	15,960,447	0.9%	0.6%	6.49%	6.28%	13.75%	13.22%	-12.96%	-13.67%	10.63%	9.87%	0.43%
PanAgora	6,964,775	0.4%	0.5%	1.92%	1.84%	6,753,313	0.4%	0.6%	4.36%	4.12%	6,682,088	0.4%	0.6%	8.11%	7.86%	14.99%	14.37%	-14.67%	-15.49%	9.90%	9.15%	-1.25%
UBS	16,485,700	0.9%	0.8%	0.40%	0.33%	16,228,119	0.9%	1.1%	4.16%	3.93%	16,088,098	1.0%	1.1%	7.66%	7.42%	12.58%	12.01%	-15.06%	-15.82%	11.31%	10.48%	-0.03%
NTGI	7,926,427	0.4%	0.5%	1.31%	1.31%	7,732,088	0.4%	0.6%	5.75%	5.75%	7,550,007	0.4%	0.6%	5.15%	5.15%	12.65%	12.65%					
DFA	13,911,038	0.8%	0.5%	1.92%	1.84%	13,499,523	0.8%	0.7%	7.73%	7.47%	12,960,845	0.8%	0.7%	7.40%	7.15%	17.92%	17.27%	-16.19%	-17.02%	15.04%	14.26%	1.06%
<b>Total Emerging Markets</b>	<b>61,960,378</b>	<b>3.5%</b>	<b>2.8%</b>	<b>0.96%</b>	<b>0.90%</b>	<b>60,662,935</b>	<b>3.5%</b>	<b>3.5%</b>	<b>5.83%</b>	<b>5.63%</b>	<b>59,241,486</b>	<b>3.5%</b>	<b>3.5%</b>	<b>7.09%</b>	<b>6.88%</b>	<b>14.42%</b>	<b>13.90%</b>	<b>-9.21%</b>	<b>-9.98%</b>	<b>12.70%</b>	<b>12.00%</b>	<b>0.96%</b>
<b>MSCI Emerging Markets</b>				<b>1.38%</b>	<b>1.38%</b>				<b>5.58%</b>	<b>5.58%</b>				<b>7.74%</b>	<b>7.74%</b>	<b>15.32%</b>	<b>15.32%</b>	<b>-15.95%</b>	<b>-15.95%</b>	<b>9.98%</b>	<b>9.98%</b>	<b>0.14%</b>
<b>Private Equity</b>																						
Brinson IVCF III	40,180	0.0%		0.00%	0.00%	40,180	0.0%		-0.24%	-0.24%	40,278	0.0%		0.00%	0.00%	-0.24%	-0.24%	9.19%	9.19%	19.22%	19.22%	14.97%
Coral Partners V	1,429	0.0%		0.00%	0.00%	1,429	0.0%		0.00%	0.00%	1,487	0.0%		0.00%	0.00%	0.00%	0.00%	12.85%	12.85%	75.73%	75.73%	38.62%
Coral Partners V - Supplemental	92,044	0.0%		0.00%	0.00%	92,044	0.0%		0.00%	0.00%	95,761	0.0%		0.00%	0.00%	0.00%	0.00%	-58.37%	-58.37%	-15.87%	-15.87%	-14.90%
Coral Momentum Fund (Formerly Fund VI)	1,125,158	0.1%		0.00%	0.00%	2,054,608	0.1%		1.99%	1.99%	2,095,983	0.1%		-5.18%	-5.18%	-3.29%	-3.29%	4.47%	4.47%	-14.90%	-14.90%	-16.04%
Brinson 1998 Partnership Fund	54,349	0.0%		0.00%	0.00%	54,349	0.0%		3.83%	3.83%	54,460	0.0%		1.44%	1.44%	5.33%	5.33%	-14.46%	-14.46%	-1.43%	-1.43%	-7.20%
Brinson 1999 Partnership Fund	516,856	0.0%		0.00%	0.00%	516,856	0.0%		2.49%	2.49%	524,650	0.0%		3.42%	3.42%	6.00%	6.00%	-5.66%	-5.66%	8.72%	8.72%	0.81%
Brinson 2000 Partnership Fund	1,660,697	0.1%		0.00%	0.00%	1,660,697	0.1%		1.97%	1.97%	1,931,983	0.1%		2.43%	2.43%	4.44%	4.44%	6.74%	6.74%	14.10%	14.10%	5.38%
Brinson 2001 Partnership Fund	2,065,828	0.1%		0.00%	0.00%	2,065,828	0.1%		4.94%	4.94%	2,199,468	0.1%		-0.22%	-0.22%	4.71%	4.71%	4.90%	4.90%	12.44%	12.44%	2.58%
Brinson 2002 Partnership Fund	1,127,503	0.1%		0.00%	0.00%	1,127,503	0.1%		2.98%	2.98%	1,309,434	0.1%		-0.29%	-0.29%	2.69%	2.69%	12.41%	12.41%	22.51%	22.51%	3.79%
Brinson 2003 Partnership Fund	378,345	0.0%		0.00%	0.00%	378,345	0.0%		2.61%	2.61%	416,104	0.0%		-0.58%	-0.58%	2.02%	2.02%	-5.78%	-5.78%	10.46%	10.46%	-0.59%
Total Brinson Partnership Funds	5,803,578	0.3%		0.00%	0.00%	5,803,578	0.3%		3.25%	3.25%	6,436,099	0.4%		0.88%	0.88%	4.16%	4.16%	4.35%	4.35%	13.60%	13.60%	3.89%
Brinson 1999 Non-US Partnership Fund	213,011	0.0%		0.00%	0.00%	213,011	0.0%		2.46%	2.46%	216,285	0.0%		9.24%	9.24%	11.93%	11.93%	-0.36%	-0.36%	18.50%	18.50%	2.79%
Brinson 2000 Non-US Partnership Fund	519,634	0.0%		0.00%	0.00%	519,634	0.0%		-0.45%	-0.45%	622,195	0.0%		0.04%	0.04%	-0.42%	-0.42%	-3.49%	-3.49%	12.53%	12.53%	2.59%
Brinson 2001 Non-US Partnership Fund	344,526	0.0%		0.00%	0.00%	344,526	0.0%		8.52%	8.52%	384,710	0.0%		-3.59%	-3.59%	4.62%	4.62%	-14.12%	-14.12%	5.11%	5.11%	-7.15%
Brinson 2002 Non-US Partnership Fund	1,254,512	0.1%		0.00%	0.00%	1,366,133	0.1%		4.43%	4.43%	1,434,234	0.1%		2.74%	2.74%	7.29%	7.29%	-2.78%	-2.78%	12.99%	12.99%	-1.62%
Brinson 2003 Non-US Partnership Fund	801,562	0.0%		0.00%	0.00%	876,862	0.1%		7.51%	7.51%	848,524	0.1%		9.23%	9.23%	17.43%	17.43%	-11.60%	-11.60%	16.11%	16.11%	4.71%
Brinson 2004 Non-US Partnership Fund	584,406	0.0%		0.00%	0.00%	613,191	0.0%		1.26%	1.26%	629,998	0.0%		1.53%	1.53%	2.81%	2.81%	-8.24%	-8.24%	9.51%	9.51%	0.91%
Total Brinson Non-US Partnership Fund	3,717,652	0.2%		0.00%	0.00%	3,933,357	0.2%		4.15%	4.15%	4,135,946	0.2%		3.21%	3.21%	7.49%	7.49%	-6.71%	-6.71%	12.87%	12.87%	0.73%
Adams Street 2008 Non-US Partnership Fd	1,964,221	0.1%		0.00%	0.00%	1,964,221	0.1%		1.73%	1.73%	1,904,878	0.1%		3.75%	3.75%	5.55%	5.55%	-1.84%	-1.84%	3.99%	3.99%	N/A
Brinson BVCF IV	1,744,589	0.1%		0.00%	0.00%	1,744,589	0.1%		-3.65%	-3.65%	1,883,774	0.1%		0.00%	0.00%	-3.65%	-3.65%	64.19%	64.19%	89.31%	89.31%	44.31%
Adams Street Direct Co-investment Fund	7,924,163	0.4%		0.00%	0.00%	7,924,163	0.5%		-1.87%	-1.87%	8,869,298	0.5%		0.00%	0.00%	-1.87%	-1.87%	5.82%	5.82%	14.37%	14.37%	1.24%
Adams Street 2010 Direct Fund	355,674	0.0%		0.00%	0.00%	355,674	0.0%		-0.86%	-0.86%	348,088	0.0%		0.00%	0.00%	-0.86%	-0.86%	22.19%	22.19%	N/A	N/A	N/A
Adams Street 2010 Non-US Emerging Mkts	124,499	0.0%		0.00%	0.00%	124,499	0.0%		-1.61%	-1.61%	109,865	0.0%		-0.62%	-0.62%	-2.23%	-2.23%	-21.77%	-21.77%	N/A	N/A	N/A
Adams Street 2010 Non-US Developed Mkts	545,865	0.0%		0.00%	0.00%	530,315	0.0%		4.05%	4.05%	487,997	0.0%		3.38%	3.38%	7.57%	7.57%	4.57%	4.57%	N/A	N/A	N/A
Adams Street 2010 Partnership Fund	1,189,102	0.1%		0.00%	0.00%	1,189,102	0.1%		3.47%	3.47%	1,106,337	0.1%		1.41%	1.41%	4.93%	4.93%	8.84%	8.84%	N/A	N/A	N/A
Total Adams Street 2010 Funds	2,215,139	0.1%		0.00%	0.00%	2,199,590	0.1%		2.60%	2.60%	2,052,288	0.1%		1.52%	1.52%	4.16%	4.16%	8.71%	8.71%	N/A	N/A	N/A
Matlin Patterson Global Opportunities	5,891	0.0%		0.00%	0.00%	5,891	0.0%		1.64%	1.64%	6,031	0.0%		24.07%	24.07%	26.10%	26.10%	-21.48%	-21.48%	58.17%	58.17%	-0.76%
Matlin Patterson Global Opportunities II	776,169	0.0%		0.00%	0.00%	776,169	0.0%		0.02%	0.02%	807,371	0.0%		0.00%	0.00%	0.02%	0.02%	-79.03%	-79.03%	-53.26%	-53.26%	-45.01%
Matlin Patterson Global Opportunities III	11,336,141	0.6%		0.00%	0.00%	11,336,141	0.7%		10.22%	10.22%	11,199,258	0.7%		0.00%	0.00%	10.22%	10.22%	124.86%	124.86%	44.50%	44.50%	5.42%
InvestAmerica (Lewis and Clark Fund)	2,659,637	0.2%		0.00%	0.00%	2,659,637	0.2%		0.00%	0.00%	3,284,605	0.2%		0.00%	0.00%	0.00%	0.00%	6.13%	6.13%	8.60%	8.60%	7.72%
L&C II	3,973,060	0.2%		0.00%	0.00%	3,973,060	0.2%		0.00%	0.00%	4,017,598	0.2%		0.00%	0.00%	0.00%	0.00%	-3.26%	-3.26%	-10.62%	N/A	N/A
Corsair III (2)	5,476,809	0.3%		-0.56%	-0.56%	5,488,830	0.3%		-6.23%	-6.23%	5,980,998	0.4%		-0.60%	-0.60%	-7.31%	-7.31%	-1.10%	-1.10%	1.97%	1.61%	5.38%
Corsair III - ND Investors LLC (2)	4,886,595	0.3%		0.47%	0.47%	4,886,595	0.3%		-0.47%	-0.47%	5,083,961	0.3%		0.00%	0.00%	0.00%	0.00%	5.30%	5.04%	1.15%	1.06%	N/A
Corsair IV	4,218,524	0.2%		-0.72%	-0.72%	4,451,879	0.3%		-1.74%	-1.74%	4,843,042	0.3%		-1.20%	-1.20%	-3.62%	-3.62%	-15.55%	-16.03%	N/A	N/A	N/A
Capital International (CIPEF V)	11,866,466	0.7%		-0.48%	-0.48%	11,896,058	0.7%		-0.55%	-0.55%	11,631,956	0.7%		-0.47%	-0.47%	-1.48%	-1.48%	-4.74%	-4.74%	13.64%	13.57%	N/A
Capital International (CIPEF VI)	3,023,081	0.2%		0.00%	0.00%	3,023,081	0.2%		-4.12%	-4.12%	2,367,140	0.1%		-2.95%	-2.95%	-6.95%	-6.95%	N/A				

ND TEACHERS FUND FOR RETIREMENT  
INVESTMENT PERFORMANCE REPORT AS OF JANUARY 31, 2013

	January-13					December-12					September-12					Current Fiscal YTD		Prior FY12		3 Years Ended 6/30/2012		5 Years Ended 6/30/2012	
	Market Value	Allocation		Month		Market Value	Allocation		Quarter		Market Value	Allocation		Quarter		Gross (7)	Net	Gross (7)	Net	Gross	Net	Gross	Net
		Actual	Policy	Gross (8)	Net		Actual	Policy	Gross (8)	Net		Actual	Policy	Gross (8)	Net								
<b>GLOBAL FIXED INCOME</b>	<b>385,216,703</b>	<b>21.8%</b>	<b>22.0%</b>	<b>0.74%</b>	<b>0.72%</b>	<b>382,688,047</b>	<b>22.2%</b>	<b>22.0%</b>	<b>2.89%</b>	<b>2.82%</b>	<b>375,572,494</b>	<b>22.3%</b>	<b>22.0%</b>	<b>4.19%</b>	<b>4.13%</b>	<b>7.99%</b>	<b>7.84%</b>						
<i>Benchmark</i>				<i>-0.32%</i>	<i>-0.32%</i>				<i>0.62%</i>	<i>0.62%</i>				<i>2.88%</i>	<i>2.88%</i>	<i>3.19%</i>	<i>3.19%</i>						
<b>Domestic Fixed Income</b>	<b>294,217,626</b>	<b>16.7%</b>	<b>17.0%</b>	<b>1.00%</b>	<b>0.98%</b>	<b>291,600,781</b>	<b>16.9%</b>	<b>17.0%</b>	<b>3.42%</b>	<b>3.36%</b>	<b>286,690,303</b>	<b>17.0%</b>	<b>17.0%</b>	<b>3.91%</b>	<b>3.86%</b>	<b>8.54%</b>	<b>8.40%</b>						
<i>Benchmark</i>				<i>-0.10%</i>	<i>-0.10%</i>				<i>1.11%</i>	<i>1.11%</i>				<i>2.44%</i>	<i>2.44%</i>	<i>3.48%</i>	<i>3.48%</i>						
<b>Investment Grade Fixed Income</b>																							
PIMCO (DISCO II) (8)	41,751,640	2.4%	1.9%	4.12%	4.12%	40,140,981	2.3%	1.9%	14.74%	14.74%	34,973,450	2.1%	1.9%	9.64%	9.64%	30.97%	30.97%	N/A	N/A	N/A	N/A	N/A	N/A
<i>BC Aggregate</i>				<i>-0.70%</i>	<i>-0.70%</i>				<i>0.21%</i>	<i>0.21%</i>				<i>1.58%</i>	<i>1.58%</i>	<i>1.09%</i>	<i>1.09%</i>	<i>7.47%</i>	<i>7.47%</i>	<i>6.93%</i>	<i>6.93%</i>	<i>6.79%</i>	
Bank of ND	19,020,927	1.1%	1.2%	-3.48%	-3.48%	19,727,199	1.1%	1.2%	-0.63%	-0.64%	19,848,156	1.2%	1.2%	-1.20%	-1.21%	-5.24%	-5.27%	9.53%	9.47%	7.95%	7.89%	7.73%	
<i>BC Long Treasuries</i>				<i>-3.50%</i>	<i>-3.50%</i>				<i>-0.77%</i>	<i>-0.77%</i>				<i>0.20%</i>	<i>0.20%</i>	<i>-4.06%</i>	<i>-4.06%</i>	<i>15.86%</i>	<i>15.86%</i>	<i>9.62%</i>	<i>9.62%</i>	<i>8.26%</i>	
PIMCO (Unconstrained)	24,568,034	1.4%	1.4%	0.49%	0.49%	24,471,302	1.4%	1.4%	0.76%	0.76%	28,336,708	1.7%	1.4%	2.65%	2.65%	3.94%	3.94%	N/A	N/A	N/A	N/A	N/A	N/A
<i>3m LIBOR</i>				<i>0.03%</i>	<i>0.03%</i>				<i>0.08%</i>	<i>0.08%</i>				<i>0.11%</i>	<i>0.11%</i>	<i>0.22%</i>	<i>0.22%</i>						
Declaration (Total Return)	23,973,317	1.4%	1.4%	0.96%	0.91%	23,756,419	1.4%	1.4%	2.92%	2.76%	23,075,219	1.4%	1.4%	3.49%	3.34%	7.54%	7.16%	N/A	N/A	N/A	N/A	N/A	N/A
<i>3m LIBOR</i>				<i>0.03%</i>	<i>0.03%</i>				<i>0.08%</i>	<i>0.08%</i>				<i>0.11%</i>	<i>0.11%</i>	<i>0.22%</i>	<i>0.22%</i>						
Western Asset	40,815,616	2.3%	2.4%	-0.41%	-0.42%	41,036,466	2.4%	2.4%	-0.24%	-0.28%	41,139,291	2.4%	2.4%	1.33%	1.29%	0.68%	0.57%	N/A	N/A	N/A	N/A	N/A	N/A
PIMCO (MBS)	60,370,694	3.4%	3.6%	-0.37%	-0.38%	60,778,912	3.5%	3.6%	-0.04%	-0.07%	60,810,157	3.6%	3.6%	2.05%	2.02%	1.63%	1.57%	N/A	N/A	N/A	N/A	N/A	N/A
<i>BC Mortgage Backed Securities Index</i>				<i>-0.50%</i>	<i>-0.50%</i>				<i>-0.20%</i>	<i>-0.20%</i>				<i>1.13%</i>	<i>1.13%</i>	<i>0.42%</i>	<i>0.42%</i>						
<b>Total Investment Grade Fixed Income</b>	<b>210,500,227</b>	<b>11.9%</b>	<b>12.0%</b>	<b>0.44%</b>	<b>0.43%</b>	<b>209,911,279</b>	<b>12.2%</b>	<b>12.0%</b>	<b>2.82%</b>	<b>2.78%</b>	<b>208,182,981</b>	<b>12.4%</b>	<b>12.0%</b>	<b>3.02%</b>	<b>2.99%</b>	<b>6.39%</b>	<b>6.31%</b>	<b>6.24%</b>	<b>6.01%</b>	<b>6.53%</b>	<b>5.91%</b>	<b>4.55%</b>	
<i>BC Aggregate</i>				<i>-0.70%</i>	<i>-0.70%</i>				<i>0.21%</i>	<i>0.21%</i>				<i>1.58%</i>	<i>1.58%</i>	<i>1.09%</i>	<i>1.09%</i>	<i>7.47%</i>	<i>7.47%</i>	<i>6.93%</i>	<i>6.93%</i>	<i>6.79%</i>	
<b>Below Investment Grade Fixed Income</b>																							
Loomis Sayles	77,182,161	4.4%	4.6%	2.66%	2.62%	75,155,791	4.4%	4.6%	4.41%	4.29%	72,288,176	4.3%	4.6%	6.38%	6.25%	14.03%	13.71%	2.57%	2.07%	16.71%	16.20%	6.96%	
Goldman Sachs 2006 Fund (8)	1,854,931	0.1%	0.1%	0.00%	0.00%	1,854,931	0.1%	0.1%	2.92%	2.92%	1,842,965	0.1%	0.1%	0.37%	0.37%	3.30%	3.30%	-20.28%	-20.28%	31.00%	31.00%	-2.25%	
Goldman Sachs Fund V (8)	4,678,780	0.3%	0.3%	0.00%	0.00%	4,678,780	0.3%	0.3%	6.04%	6.04%	4,376,180	0.3%	0.3%	-1.00%	-1.00%	4.98%	4.98%	7.04%	7.04%	22.19%	22.19%	N/A	
PIMCO (8)	1,527	0.0%	0.0%	N/A	N/A	0	0.0%	0.0%	N/A	N/A	0	0.0%	0.0%	386.85%	386.85%	N/A	N/A	5.54%	5.54%	30.43%	30.43%	N/A	
<b>Total Below Investment Grade Fixed Income</b>	<b>83,717,398</b>	<b>4.7%</b>	<b>5.0%</b>	<b>2.45%</b>	<b>2.41%</b>	<b>81,689,502</b>	<b>4.7%</b>	<b>5.0%</b>	<b>4.98%</b>	<b>4.86%</b>	<b>78,507,322</b>	<b>4.7%</b>	<b>5.0%</b>	<b>6.33%</b>	<b>6.22%</b>	<b>14.36%</b>	<b>14.07%</b>	<b>3.45%</b>	<b>3.06%</b>	<b>17.33%</b>	<b>16.95%</b>	<b>3.99%</b>	
<i>LB High Yield 2% Issuer Constrained Index</i>				<i>1.34%</i>	<i>1.34%</i>				<i>3.29%</i>	<i>3.29%</i>				<i>4.53%</i>	<i>4.53%</i>	<i>9.42%</i>	<i>9.42%</i>	<i>7.21%</i>	<i>7.21%</i>	<i>16.20%</i>	<i>16.20%</i>	<i>8.62%</i>	
<b>International Fixed Income</b>	<b>90,999,077</b>	<b>5.2%</b>	<b>5.0%</b>	<b>-0.09%</b>	<b>-0.12%</b>	<b>91,087,266</b>	<b>5.3%</b>	<b>5.0%</b>	<b>1.20%</b>	<b>1.11%</b>	<b>88,882,192</b>	<b>5.3%</b>	<b>5.0%</b>	<b>5.11%</b>	<b>5.02%</b>	<b>6.27%</b>	<b>6.06%</b>						
<i>Benchmark</i>				<i>-1.08%</i>	<i>-1.08%</i>				<i>-1.03%</i>	<i>-1.03%</i>				<i>4.37%</i>	<i>4.37%</i>	<i>2.18%</i>	<i>2.18%</i>						
<b>Developed Investment Grade Int'l FI</b>																							
UBS Global (Brinson)	43,394,036	2.5%	2.5%	-1.18%	-1.20%	43,903,978	2.6%	2.5%	-0.84%	-0.92%	43,731,242	2.6%	2.5%	4.77%	4.69%	2.66%	2.48%	-0.87%	-1.16%	5.36%	5.05%	6.72%	
<i>BC Global Aggregate ex-US (6)</i>				<i>-1.08%</i>	<i>-1.08%</i>				<i>-1.03%</i>	<i>-1.03%</i>				<i>4.37%</i>	<i>4.37%</i>	<i>2.18%</i>	<i>2.18%</i>	<i>-0.64%</i>	<i>-0.64%</i>	<i>5.23%</i>	<i>5.23%</i>	<i>7.45%</i>	
Brandywine	47,605,041	2.7%	2.5%	0.92%	0.89%	47,183,288	2.7%	2.5%	3.17%	3.07%	45,150,950	2.7%	2.5%	5.45%	5.35%	9.80%	9.55%	9.67%	9.25%	13.36%	12.95%	9.36%	
<i>BC Global Aggregate (ex-US)</i>				<i>-0.91%</i>	<i>-0.91%</i>				<i>-0.48%</i>	<i>-0.48%</i>				<i>3.27%</i>	<i>3.27%</i>	<i>1.84%</i>	<i>1.84%</i>	<i>2.73%</i>	<i>2.73%</i>	<i>6.31%</i>	<i>6.31%</i>	<i>7.11%</i>	
<b>Total Developed Investment Grade Int'l FI</b>	<b>90,999,077</b>	<b>5.2%</b>	<b>5.0%</b>	<b>-0.09%</b>	<b>-0.12%</b>	<b>91,087,266</b>	<b>5.3%</b>	<b>5.0%</b>	<b>1.20%</b>	<b>1.11%</b>	<b>88,882,192</b>	<b>5.3%</b>	<b>5.0%</b>	<b>5.11%</b>	<b>5.02%</b>	<b>6.27%</b>	<b>6.06%</b>	<b>4.61%</b>	<b>4.25%</b>	<b>9.76%</b>	<b>9.40%</b>	<b>8.29%</b>	
<i>BC Global Aggregate ex-US</i>				<i>-1.08%</i>	<i>-1.08%</i>				<i>-1.03%</i>	<i>-1.03%</i>				<i>4.37%</i>	<i>4.37%</i>	<i>2.18%</i>	<i>2.18%</i>	<i>-0.64%</i>	<i>-0.64%</i>	<i>5.23%</i>	<i>5.23%</i>	<i>7.45%</i>	

ND TEACHERS FUND FOR RETIREMENT  
INVESTMENT PERFORMANCE REPORT AS OF JANUARY 31, 2013

	January-13					December-12					September-12					Current Fiscal YTD		Prior FY12		3 Years Ended 6/30/2012		5 Years Ended 6/30/2012	
	Allocation		Month			Allocation		Quarter			Allocation		Quarter			Gross (7)	Net	Gross (7)	Net	Gross	Net	Net	
	Market Value	Actual	Policy	Gross (8)	Net	Market Value	Actual	Policy	Gross (8)	Net	Market Value	Actual	Policy	Gross (8)	Net								
<b>GLOBAL REAL ASSETS</b>	<b>322,209,222</b>	<b>18.3%</b>	<b>20.0%</b>	<b>-0.46%</b>	<b>-0.49%</b>	<b>325,523,640</b>	<b>18.9%</b>	<b>20.0%</b>	<b>3.28%</b>	<b>3.17%</b>	<b>322,866,740</b>	<b>19.2%</b>	<b>20.0%</b>	<b>1.36%</b>	<b>1.26%</b>	<b>4.20%</b>	<b>3.95%</b>						
<b>Benchmark</b>				<b>0.97%</b>	<b>0.97%</b>				<b>2.48%</b>	<b>2.48%</b>				<b>1.59%</b>	<b>1.59%</b>	<b>5.13%</b>	<b>5.13%</b>						
<b>Global Real Estate</b>																							
INVESCO - Core	60,732,339			2.12%	2.09%	59,551,703			-0.10%	-0.20%	60,772,364			2.80%	2.70%	4.87%	4.63%	8.97%	8.54%	8.03%	7.54%	-1.28%	
INVESCO - Fund II (8)	18,605,016			-1.52%	-1.52%	20,752,901			9.32%	9.32%	19,782,387			0.00%	0.00%	7.66%	7.66%	28.70%	28.70%	-3.10%	-3.10%	N/A	
INVESCO - Fund III (9)	9,244,376			-1.56%	-1.56%	9,394,137			4.34%	4.34%	9,178,937			0.00%	0.00%	2.71%	2.71%	N/A	N/A	N/A	N/A	N/A	
INVESCO - Asia Real Estate Fund (8)	8,811,385			0.00%	0.00%	8,814,404			8.07%	8.07%	8,315,072			-3.39%	-3.39%	4.41%	4.41%	1.09%	1.09%	-22.90%	-22.90%	N/A	
J.P. Morgan Strategic & Special Funds	55,291,100			1.00%	0.93%	54,887,648			2.74%	2.52%	54,593,439			3.65%	3.43%	7.55%	7.02%	13.33%	12.37%	8.42%	7.42%	-2.25%	
J.P. Morgan Alternative Property Fund	2,805,470			4.54%	4.52%	2,684,553			7.61%	7.54%	7,794,835			3.11%	3.04%	15.99%	15.81%	27.71%	27.38%	2.93%	2.15%	-9.30%	
J.P. Morgan Greater Europe Fund (8)	1,973,194			2.95%	2.95%	1,929,444			-23.63%	-23.63%	3,127,503			-16.43%	-16.43%	-34.29%	-34.29%	-100.01%	-100.01%	N/A	N/A	N/A	
J.P. Morgan Greater China Property Fund (8)	10,366,056			0.05%	0.05%	10,369,607			1.73%	1.73%	10,691,423			-4.30%	-4.30%	-2.59%	-2.59%	-4.20%	-4.20%	3.62%	3.62%	N/A	
<b>Total Global Real Estate</b>	<b>167,828,937</b>	<b>9.5%</b>	<b>10.0%</b>	<b>0.91%</b>	<b>0.87%</b>	<b>168,384,396</b>	<b>9.8%</b>	<b>10.0%</b>	<b>2.57%</b>	<b>2.45%</b>	<b>174,255,960</b>	<b>10.4%</b>	<b>10.0%</b>	<b>1.42%</b>	<b>1.32%</b>	<b>4.98%</b>	<b>4.71%</b>	<b>12.97%</b>	<b>12.46%</b>	<b>7.34%</b>	<b>6.72%</b>	<b>-2.97%</b>	
<b>NCREIF TOTAL INDEX</b>				<b>0.84%</b>	<b>0.84%</b>				<b>2.54%</b>	<b>2.54%</b>				<b>2.34%</b>	<b>2.34%</b>	<b>5.82%</b>	<b>5.82%</b>	<b>12.04%</b>	<b>12.04%</b>	<b>8.82%</b>	<b>8.82%</b>	<b>2.51%</b>	
<b>Timber</b>																							
TIR - Teredo (7)	34,417,435	2.0%		-5.49%	-5.49%	36,416,561	2.1%		6.97%	6.97%	32,948,859	2.0%		0.00%	0.00%	1.10%	1.10%	-2.76%	-2.76%	4.79%	4.79%	8.28%	
TIR - Springbank	55,780,150	3.2%		-1.78%	-1.78%	56,805,785	3.3%		0.19%	0.19%	54,886,635	3.3%		0.02%	0.02%	-1.58%	-1.58%	-5.48%	-5.48%	-8.06%	-8.06%	-1.70%	
<b>Total Timber</b>	<b>90,197,584</b>	<b>5.1%</b>	<b>5.0%</b>	<b>-3.23%</b>	<b>-3.23%</b>	<b>93,222,345</b>	<b>5.4%</b>	<b>5.0%</b>	<b>2.73%</b>	<b>2.73%</b>	<b>87,835,494</b>	<b>5.2%</b>	<b>5.0%</b>	<b>0.01%</b>	<b>0.01%</b>	<b>-0.57%</b>	<b>-0.57%</b>	<b>8.78%</b>	<b>8.78%</b>	<b>-3.83%</b>	<b>-0.56%</b>	<b>4.43%</b>	
<b>NCREIF Timberland Index(8)</b>				<b>1.94%</b>	<b>1.94%</b>				<b>5.92%</b>	<b>5.92%</b>				<b>0.75%</b>	<b>0.75%</b>	<b>8.78%</b>	<b>8.78%</b>	<b>1.49%</b>	<b>1.49%</b>	<b>-3.83%</b>	<b>-0.56%</b>	<b>4.43%</b>	
<b>Infrastructure</b>																							
JP Morgan (Asian)	8,975,611	0.5%		0.13%	0.13%	8,971,625	0.5%		21.99%	21.99%	7,491,263	0.4%		0.00%	0.00%	22.15%	22.15%	-4.29%	-4.29%	-0.51%	-0.68%	N/A	
JP Morgan (IIF)	43,077,462	2.4%		0.00%	-0.11%	43,058,330	2.5%		4.42%	4.09%	42,053,403	2.5%		4.61%	4.28%	9.23%	8.43%	4.51%	3.22%	5.87%	4.40%	-0.91%	
Credit Suisse	12,129,628	0.7%		-0.28%	-0.28%	11,886,945	0.7%		1.77%	1.77%	11,230,619	0.7%		-0.31%	-0.31%	1.18%	1.18%	N/A	N/A	N/A	N/A	N/A	
<b>Total Infrastructure (8)</b>	<b>64,182,701</b>	<b>3.6%</b>	<b>5.0%</b>	<b>-0.03%</b>	<b>-0.11%</b>	<b>63,916,900</b>	<b>3.7%</b>	<b>5.0%</b>	<b>6.02%</b>	<b>5.79%</b>	<b>60,775,286</b>	<b>3.6%</b>	<b>5.0%</b>	<b>3.09%</b>	<b>2.86%</b>	<b>9.25%</b>	<b>8.70%</b>						
<b>CPI</b>				<b>0.28%</b>	<b>0.28%</b>				<b>-1.01%</b>	<b>-1.01%</b>				<b>0.95%</b>	<b>0.95%</b>	<b>0.21%</b>	<b>0.21%</b>						
<b>Cash Equivalents</b>																							
Northern Trust STIF	23,059,975			0.02%	0.02%	21,745,167			0.03%	0.03%	8,753,017			0.03%	0.03%	0.08%	0.08%	0.13%	0.13%	0.14%	0.14%	0.42%	
<b>Total Cash Equivalents</b>	<b>23,059,975</b>	<b>1.3%</b>	<b>1.0%</b>	<b>0.02%</b>	<b>0.02%</b>	<b>21,745,167</b>	<b>1.3%</b>	<b>1.0%</b>	<b>0.03%</b>	<b>0.03%</b>	<b>8,753,017</b>	<b>0.5%</b>	<b>1.0%</b>	<b>0.03%</b>	<b>0.03%</b>	<b>0.08%</b>	<b>0.08%</b>	<b>0.13%</b>	<b>0.13%</b>	<b>0.19%</b>	<b>0.19%</b>	<b>0.46%</b>	
<b>90 Day T-Bill</b>				<b>0.00%</b>	<b>0.00%</b>				<b>0.04%</b>	<b>0.04%</b>				<b>0.03%</b>	<b>0.03%</b>	<b>0.07%</b>	<b>0.07%</b>	<b>0.06%</b>	<b>0.06%</b>	<b>0.13%</b>	<b>0.13%</b>	<b>0.99%</b>	

NOTE: Monthly returns and market values are preliminary and subject to change.  
New asset class structure began October 1, 2011. Composite returns for new composites not available prior to that date.  
Portfolios moved between asset classes will show historical returns in new position.

(1) Epoch was included in the Large Cap Domestic Equity composite through 12/31/11.  
(2) Prior to January 1, 2012, the benchmark was S&P 500.  
(3) This benchmark was changed to the MSCI EAFE (unhedged) as of December 1, 2004.  
(4) This benchmark was changed to the MSCI EAFE (unhedged) as of April 1, 2011.  
(5) Prior to January 1, 2005, the benchmark was the First Boston Convertible Index.  
(6) Prior to December 1, 2009, the benchmark was the Citigroup World Gov't Bond Index ex-US  
(7) Prior to June 1, 2006, the Teredo properties were under the management of RMK.  
(8) All limited partnership-type investments' returns will only be reported net of fees, which is standard practice by the investment consultant.



# ND STATE INVESTMENT BOARD MEETING

Friday, March 22, 2013, 8:30 a.m.  
Workforce Safety & Insurance  
1600 E Century, Bismarck, ND

## AGENDA

**I. CALL TO ORDER AND ACCEPTANCE OF AGENDA**

**II. ACCEPTANCE OF MINUTES (February 22, 2013)**

**III. EDUCATION**

- A. Risk Factor Asset Allocation - Mr. Schulz (Enclosure) (45 min)

**IV. INVESTMENTS**

- A. Bank of North Dakota
- B. "Watch List" Discussion (Enclosure) (30 min)

**V. GOVERNANCE**

- A. Administration
  - 1. Search Committee Update - Search Committee (Enclosure)
  - 2. Interim Executive Director & Interim CIO Annual Review Committee (10 min)
  - 3. Audit Committee Liaison Report - Mr. Gessner (Enclosed) (5 min)

**VI. LEGISLATIVE UPDATE - Mr. Schulz, Ms. Flanagan (enclosed) (15 min)**

**VII. OTHER**

Next Meetings:  
SIB meeting - April 26, 2013, 8:30 a.m. - Workforce Safety & Insurance  
SIB Audit Committee meeting - May 17, 2013, 1:00 p.m. - State Capitol Peace Garden Room

**VIII. ADJOURNMENT**

**NORTH DAKOTA STATE INVESTMENT BOARD  
MINUTES OF THE  
FEBRUARY 22, 2013, BOARD MEETING**

**BOARD MEMBERS PRESENT:** Drew Wrigley, Lt. Governor, Chair  
Mike Sandal, Vice Chair  
Levi Erdmann, PERS Board  
Kim Franz, TFFR Board  
Lance Gaebe, Land Commissioner  
Mike Gessner, TFFR Board  
Adam Hamm, Insurance Commissioner  
Howard Sage, PERS Board  
Kelly Schmidt, State Treasurer  
Cindy Ternes, Workforce Safety & Insurance  
Bob Toso, TFFR Board

**STAFF PRESENT:** Connie Flanagan, Fiscal & Investment Officer  
Bonnie Heit, Office Manager  
Fay Kopp, Interim Executive Director  
Leslie Moszer, Compliance Officer  
Darren Schulz, Interim CIO  
Susan Walcker, Investment Accountant

**OTHERS PRESENT:** Paul Erlendson, Callan  
Jan Murtha, Attorney General's Office  
Bryan Reinhardt, PERS

**CALL TO ORDER:**

Lt. Governor Wrigley called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, February 22, 2013, at Workforce Safety & Insurance, 1600 E Century, Bismarck, ND.

A quorum was present for the purpose of conducting business.

**AGENDA:**

**MR. SANDAL MOVED AND MR. GESSNER SECONDED TO ACCEPT THE FEBRUARY 22, 2013, AGENDA.**

**AYES: COMMISSIONER GAEBE, TREASURER SCHMIDT, MR. SANDAL, COMMISSIONER HAMM, MS. FRANZ, MS. TERNES, MR. GESSNER, MR. ERDMANN, MR. TOSO, MR. SAGE, AND LT. GOVERNOR WRIGLEY**

**NAYS: NONE**

**MOTION CARRIED**

**MINUTES:**

The minutes were considered from the January 25, 2013, meeting,

**MR. ERDMANN MOVED AND MR. SAGE SECONDED TO ACCEPT THE JANUARY 25, 2013, MINUTES AS WRITTEN.**

**AYES: MR. GESSNER, COMMISSIONER GAEBE, MR. SAGE, MS. TERNES, TREASURER SCHMIDT, MR. TOSO, COMMISSIONER HAMM, MS FRANZ, MR. ERDMANN, MR. SANDAL, AND LT. GOVERNOR WRIGLEY**

**NAYS: NONE**

**MOTION CARRIED**

**INVESTMENTS:**

Bank of North Dakota (BND) - Mr. Schulz informed the SIB staff and Ms. Murtha have had ongoing discussions with BND representatives on the transition of the Pension Trust assets from a Barclays Capital Government Index mandate to a Barclays Capital Long Treasury Index. Both entities are in favor of a third party review to analyze the loss incurred as a result of the implementation delay. Staff had reached out to Brady Martz and EideBailly of which both firms declined.

After discussion, the SIB directed staff to contact the State Auditor's Office and if that is not a viable option, continue searching for a party preferably in state.

**COMMISSIONER GAEBE MOVED AND TREASURER SCHMIDT SECONDED TO DIRECT STAFF AND COUNSEL TO CONTINUE TO SEARCH FOR A QUALIFIED THIRD PARTY AND AUTHORIZED THE SIB CHAIR, ON BEHALF OF THE SIB, TO ENTER INTO A CONTRACT BASED ON STAFF RECOMMENDATION.**

**AYES: MS. FRANZ, MR. ERDMANN, COMMISSIONER GAEBE, MR. GESSNER, COMMISSIONER HAMM, MR. SAGE, MR. SANDAL, TREASURER SCHMIDT, MS. TERNES, MR. TOSO, AND LT. GOVERNOR WRIGLEY**

**NAYS: NONE**

**MOTION CARRIED**

Callan Associates - Mr. Erlendson provided an update on the economy, capital markets and expectations, and asset class performance for the quarter ending December 31, 2012. Mr. Erlendson followed up with performance reviews of the Pension Trust and Insurance Trusts for the quarter ending December 31, 2012.

Discussion took place on Calamos. Calamos manages a global opportunity equity product in the Pension Trust global equities asset class. Performance concerns and personnel changes have occurred in the firm which warrants additional due diligence.

**TREASURER SCHMIDT MOVED AND MR. GESSNER SECONDED TO PLACE CALAMOS ON WATCH FOR ADDITIONAL DUE DILIGENCE AND DIRECTED STAFF TO PLACE CALAMOS ON THE AGENDA TO REVIEW PERFORMANCE CONCERNS AND PERSONNEL CHANGES.**

**AYES: TREASURER SCHMIDT, MR. GESSNER, COMMISSIONER HAMM, MS. TERNES, COMMISSIONER GAEBE, MR. SAGE, MR. TOSO, MR. SANDAL, MR. ERDMANN, MS. FRANZ, AND LT. GOVERNOR WRIGLEY**

**NAYS: NONE**

**MOTION CARRIED**

Discussion took place on Governance Policy E-11, Investments/Performance Related Investment Manager Review and to place review of the policy on the agenda at a future meeting.

Mr. Erlendson reviewed an analysis of management fees paid by the SIB for the period of July 2011 - June 2012. The analysis determined fees paid during this time period are in line with industry standards.

The SIB recessed at 10:35 a.m. and reconvened at 10:50 a.m.

**GOVERNANCE:**

Search Committee - Mr. Sandal updated the SIB on the ED/CIO search. The closing date for receipt of applications was January 31, 2013. HRMS received 200 applications and is in the process of completing their evaluation of the applications received based on the evaluation criteria established for minimum qualifications. The Search Committee received input from the SIB, Callan, staff, and Mr. Geissinger on the evaluation criteria for minimums and attributes above and beyond minimums. After HRMS completes their screening, the top 30 will be evaluated for their qualifications above and beyond the minimums. After completing telephone interviews and background checks, the Search Committee is hoping to narrow the field and bring candidates before the SIB in April.

Mr. Sandal also stated HRMS did a very good job. They were timely and thorough.

**LEGISLATIVE UPDATE:**

Ms. Flanagan and Mr. Schulz reviewed the following bills with the SIB; HB 1022 - RIO Budget Bill, HB1143 - Relating to investment of the Legacy and Budget Stabilization Funds, HB 1167 - relating to the definition of earnings of the Legacy Fund, HB 1249 - relating to the membership of the State Investment Board, HB1304 - relating to the divestiture of state investment funds in certain companies liable to sanctions under the Iran Sanctions Act of 1996; and to provide an expiration date, HB1395 - relating to membership of the Legacy and Budget Stabilization Fund Advisory Board, SB2124 - provides for the legislative management to study methods to assure that the Legacy Fund provides the lasting benefits intended by the voters, and SB2150 - relating to restriction of per diem compensation for members of boards and commissions established by statute, and HCR3018 - relating to transfer of a portion of the earnings of the Legacy Fund to the Legacy Scholarship Fund.

The SIB discussed HB1304 and their actions at their January 25, 2013, meeting where they voted in favor of a neutral stance and directed staff that testimony to the Legislative committees, on behalf of the SIB, be neutral and include factual information, administrative time, and costs of implementation. HB1304 passed the House 84-9 on February 21, 2013.

After taking into consideration the timeframe stated in the bill for divestment of the funds, costs that would be allocated to all of the SIB client's funds, implications, and staff time,

**MS. TERNES MOVED AND TREASURER SCHMIDT SECONDED THAT THE SIB OPPOSE HB1304 AND DIRECTED STAFF TO PROVIDE TESTIMONY IN OPPOSITION OF THE BILL.**

**AYES: MR. SANDAL, MS. FRANZ, MR. GESSNER, MR. TOSO, MR. ERDMANN, MS. TERNES, COMMISSIONER HAMM, AND TREASURER SCHMIDT**

**NAYS: MR. SAGE, COMMISSIONER GAEBE, AND LT. GOVERNOR WRIGLEY**  
**MOTION CARRIED**

Mr. Schulz informed the SIB RV Kuhns is nearing completion of the asset allocation study and spending policy of the Legacy Fund and is expecting a draft in the next couple of weeks.

**ADJOURNMENT:**

With no further business to come before the SIB, Lt. Governor Wrigley adjourned the meeting at 11:55 a.m.

---

Lt. Governor Wrigley, Chair  
State Investment Board

---

Bonnie Heit  
Assistant to the Board



# ND Retirement and Investment Office

*Teachers' Fund for Retirement  
State Investment Board*

1930 Burnt Boat Drive  
P.O. Box 7100  
Bismarck, ND 58507-7100  
Telephone 701-328-9885  
Toll Free 800-952-2970  
Fax 701-328-9897  
[www.nd.gov/rio](http://www.nd.gov/rio)

March 15, 2013

Mike Gessner  
President  
ND Teachers' Fund for Retirement  
4871 46th Avenue NE  
Minot ND 58703-4912

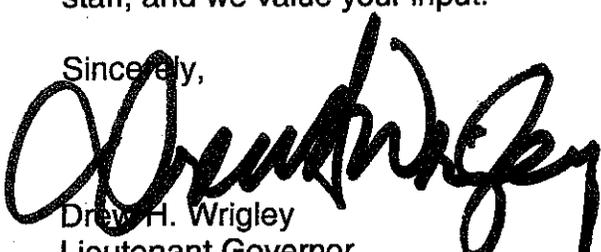
Dear Mike:

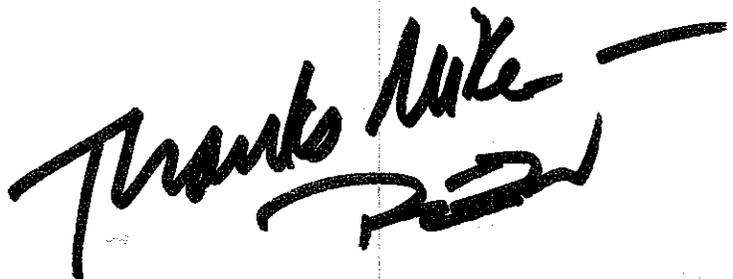
As Chairman of the State Investment Board, I wanted to give you an update on the recruitment process for the Executive Director/Chief Investment Officer position of the ND Retirement and Investment Office.

The State Investment Board's Search Committee, with assistance from the State's Human Resource Management Services (HRMS) agency, placed the job opening in various relevant newspapers and with investment related associations throughout the nation. HRMS received 200 applications. The applications were reviewed by HRMS personnel and a sub-set of the Search Committee. After review of the applications, the Search Committee has decided that it is necessary to expand the search for the Executive Director/Chief Investment Officer position and we will be enlisting the services of an executive recruitment service. The Search Committee is in the process of selecting an executive recruitment consultant and hopes to have a consultant in place by the first part of May 2013. Updates and information will be made available on the State Investment Board's web site <http://www.nd.gov/rio/News/default.htm>.

Please do not hesitate to contact me during this interim period. We appreciate the confidence that you have placed in the State Investment Board and our professional staff, and we value your input.

Sincerely,

  
Drew H. Wrigley  
Lieutenant Governor  
Chairman, State Investment Board  
(701) 328-4222  
[pmoser@nd.gov](mailto:pmoser@nd.gov)



**STATE INVESTMENT BOARD SEARCH COMMITTEE  
MINUTES OF THE  
MARCH 4, 2013, TELECONFERENCE MEETING**

**BOARD MEMBERS PRESENT:** Drew Wrigley, Lt. Governor, Chair  
Lance Gaebe, Land Commissioner  
Mike Sandal, PERS Board  
Kelly Schmidt, State Treasurer  
Bob Toso, TFFR Board

**STAFF PRESENT:** Darren Schulz, Interim CIO

**CALL TO ORDER:**

Lt. Governor Wrigley called the State Investment Board (SIB) Search Committee meeting to order at 1:30 p.m. on Monday, March 4, 2013.

The SIB Search Committee meeting was held for the purposes of discussing the status of the evaluation process for the applications received for the ED/CIO position of RIO. HRMS completed their review of the applications received based on the evaluation criteria established for minimum qualifications. Mr. Sandal, Treasurer Schmidt, Mr. Schulz, and Ms. Flanagan met with HRMS personnel and it was decided the top 30 candidates would be evaluated for attributes above and beyond the minimums. Mr. Sandal, Treasurer Schmidt, Mr. Schulz, and Ms. Flanagan reviewed the applications for attributes above and beyond the minimums and results indicated the applicants did not meet their criteria needed for the position.

After discussion, the Search Committee concurred to expand the search for the position by enlisting the services of an executive recruitment service. The Search Committee directed staff to work with State Procurement personnel and issue a Request for Proposal for executive recruitment services and release it the week of March 4, 2013.

**ADJOURNMENT:**

With no further issues to come before the Search Committee, Lt. Governor Wrigley adjourned the meeting at 1:55 p.m.

---

Lt. Governor Wrigley, Chair  
State Investment Board

---

Bonnie Heit  
Assistant to the Board

**STATE INVESTMENT BOARD SEARCH COMMITTEE  
MINUTES OF THE  
MARCH 12, 2013, TELECONFERENCE MEETING**

**BOARD MEMBERS PRESENT:** Drew Wrigley, Lt. Governor, Chair  
Lance Gaebe, Land Commissioner  
Mike Sandal, PERS Board  
Kelly Schmidt, State Treasurer  
Bob Toso, TFFR Board

**STAFF PRESENT:** Bonnie Heit, Office Manager  
Darren Schulz, Interim CIO

**OTHERS:** Tricia Opp, State Procurement

**CALL TO ORDER:**

Lt. Governor Wrigley called the State Investment Board (SIB) Search Committee meeting to order at 11:00 a.m. on Tuesday, March 12, 2013.

The SIB Search Committee meeting was held for the purposes of discussing the evaluation process thus far for the applications received for the ED/CIO position of RIO. HRMS, the Search Committee, and staff evaluated the applications. The Search Committee discussed their evaluation process to date and concurred that changing the course of the search is justifiable in order to move forward and find the best possible candidate based on the attributes that are needed for the position.

The Request for Proposal for Executive Recruitment Services was issued on March 6, 2013. The deadline for submitting proposals is March 27, 2013. Mr. Sandal, Commissioner Gaebe, and Treasurer Schmidt will work with State Procurement to evaluate the proposals received. The Search Committee is hoping to have an Executive Recruitment consultant in place by the first part of May 2013.

The Search Committee directed staff to draft a letter notifying the existing applicants that if they wished to continue to be considered for the position that they could do so by applying directly to the executive recruitment service selected by State Procurement and the Search Committee once the firm is in place. The applicants are also to be informed that updates and information will be made available on the SIB's web site.

The Search Committee also directed staff to draft a letter notifying the SIB clients on the status of the recruitment process.

**ADJOURNMENT:**

With no further issues to come before the Search Committee, Lt. Governor Wrigley adjourned the meeting at 11:45 a.m.

---

Lt. Governor Wrigley, Chair  
State Investment Board

---

Bonnie Heit  
Assistant to the Board

# MEMORANDUM

**TO:** TFFR Board  
**FROM:** Fay Kopp  
**DATE:** March 14, 2013  
**SUBJ:** TFFR Centennial Celebration

TFFR turns 100 years old on July 1, 2013. According to Pensions for Pedagogues: A History of the North Dakota Teachers' Fund For Retirement, 1913-1988, 75<sup>th</sup> Anniversary edition, by Frank E. Vyzralek:

***“Looking back on it, the whole thing went through with amazing smoothness. On January 20, 1913, State Senator Harrison A. Bronson introduced Senate Bill No. 85 into the state legislature, “a bill for an act creating a Teachers’ Insurance and Retirement Fund and providing for its maintenance and disbursement.” Six weeks later, with only minimal changes and a combined vote of 144 to 10 in its favor, the bill had cleared both houses and on March 11, 1913, was signed into law by Governor Louis B. Hanna. Rarely has a new entity of state government had such a singularly auspicious beginning!”***

The original ND Teachers’ Insurance and Retirement Fund (TIRF) looked something like this:

- Membership was optional until January 1, 1914; thereafter it was compulsory for all new teachers hired in the public schools. Membership was to include all public school teachers, superintendents, principals, supervisors of instruction, special teachers, etc.
- Members were assessed at the rate of 1% of their annual salary for the first ten years of service, thereafter 2% for the next 15 years. Under no circumstances, however, was the annual dollar amount to exceed \$20 in the first case or \$40 in the second.
- Any teacher leaving the profession could obtain a refund of half of their contribution, without interest, if they applied within 6 months of their resignation. But if the teacher returned to work, they were required, within a year, to pay back the money received with simple interest.

- Public contributions were provided by a 10 cent per pupil assessment for each child of school age in a county, the money to be set aside from the county tuition fund.
- Teacher contributions were collected by the local school district or school board and paid to their county treasurer who, in turn, forwarded the money along with the county tuition fund assessment to the state treasurer.
- Assessments ceased after 25 years of teaching service but no teacher could begin drawing an annuity until they ceased teaching entirely.
- Annuities were determined by calculating one-fiftieth of the average annual salary for the last five years of teaching and multiplying that amount by the number of years of service. Upper and lower limits were placed at \$750 and \$350 per year.
- To administer the fund, the law created a Board of Trustees consisting of the Superintendent of Public Instruction, State Treasurer and three persons appointed from the membership by the Governor, each for a three year term. At least one of the appointees must be a woman; one could be a retired member.

In September 1913, the TIRF received its first assessment from a Bismarck teacher of \$20. By January 1, 1914, there were 112 active members in the Fund. By 1917, there were 156 elective members, and over 3,600 compulsory members.

In December 1915, the first four annuitants began drawing annual payments of \$380, \$350, \$405, and \$693 respectively. By mid 1917, the pension list had grown to 17 persons with an annual liability of \$7,716.

This was the beginning of the TFFR story. Suggestions for commemorating TFFR's 100 year anniversary are welcome.

# DRAFT TFFR AND SIB MEETING SCHEDULE 2013-14

## July 2013

25 TFFR - 1:00 pm  
26 SIB - 8:30 am

## August 2013

-- TFFR - No meeting  
23 SIB - 8:30 am

## September 2013

26 TFFR - 1:00 pm  
27 SIB - 8:30 am

## October 2013

24 TFFR - 1:00 pm  
25 SIB - 8:30 am

## November 2013

-- TFFR - No meeting  
22 SIB - 8:30 am

## December 2013

-- No meetings

## January 2014

23 TFFR - 1:00 pm  
24 SIB - 8:30 am

## February 2014

-- TFFR - No meeting  
28 SIB - 8:30 am

## March 2014

27 TFFR - 1:00 pm  
28 SIB - 8:30 am

## April 2014 ??

24 TFFR - 1:00 pm or No  
25 SIB - 8:30 am

## \*May 2014 ??

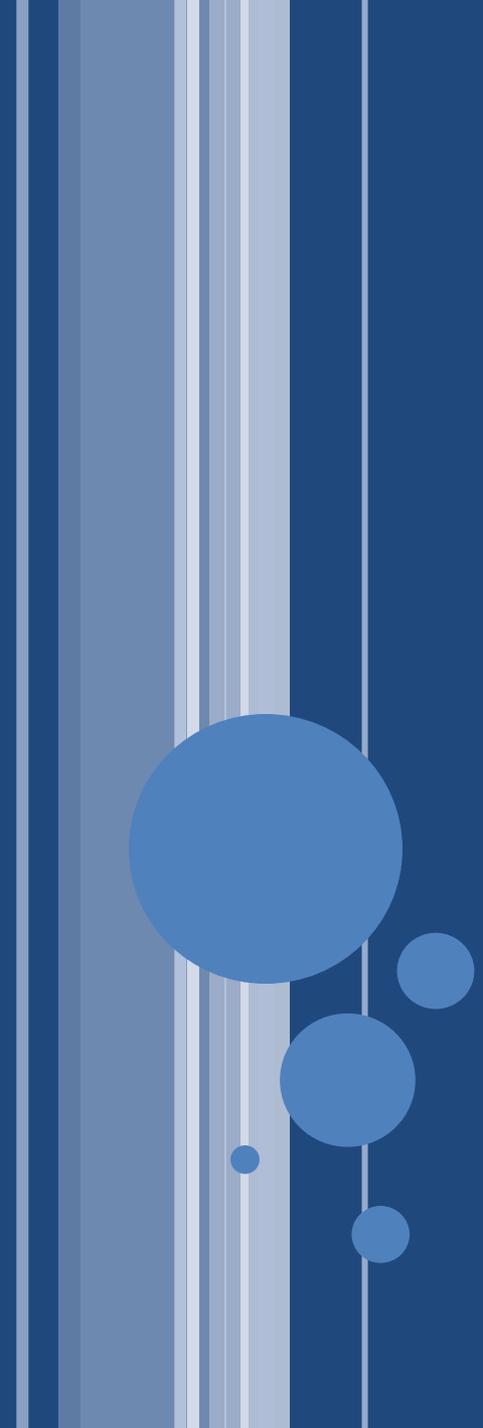
15,22 TFFR - 1:00 pm  
16,23 SIB - 8:30 am

## June 2014

-- TFFR - No meeting  
27 SIB - 8:30 am

## Notes:

- 1) SIB meetings scheduled for 4<sup>th</sup> Friday of each month.
- 2) TFFR meetings scheduled for day preceding SIB meetings.
- 3) \*Schedule TFFR and SIB meetings for 3<sup>rd</sup> or 4<sup>th</sup> week in May?



# **TFFR AND SCHOOL DISTRICT CONTRACT NEGOTIATIONS**

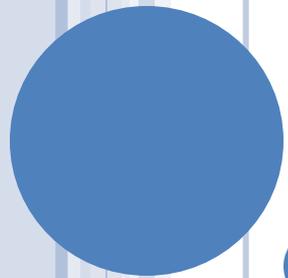
**ND SBA Negotiations Seminar  
February 8, 2013**

**Fay Kopp and Shelly Schumacher  
Teachers' Fund for Retirement (TFFR)**

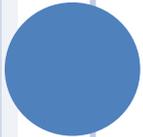
# TFFR – TOPICS TO COVER

- Background
- Plan Summary
- Employer Models
- Top 10 List for Negotiators
- Resources
- Questions





# **TFFR BACKGROUND**



# WHAT IS TFFR?

- TFFR is a qualified defined benefit public pension plan covered under Section 401(a) of the Internal Revenue Code (IRC). In simpler terms TFFR is a tax-exempt pension plan where retirement benefits are defined by state law.
- ND Century Code Chapter 15-39.1 contains the actual language governing the Fund, along with Title 82 of the ND Administrative Code.
- TFFR plan is prefunded on an actuarial reserve basis. That is, money is invested for future retirement benefits while members are actively teaching.
- Benefit funding comes from three sources:
  - Member contributions (teachers and administrators)
  - Employer contributions (school districts)
  - Investment earnings (pooled and invested with other state pension assets by State Investment Board)

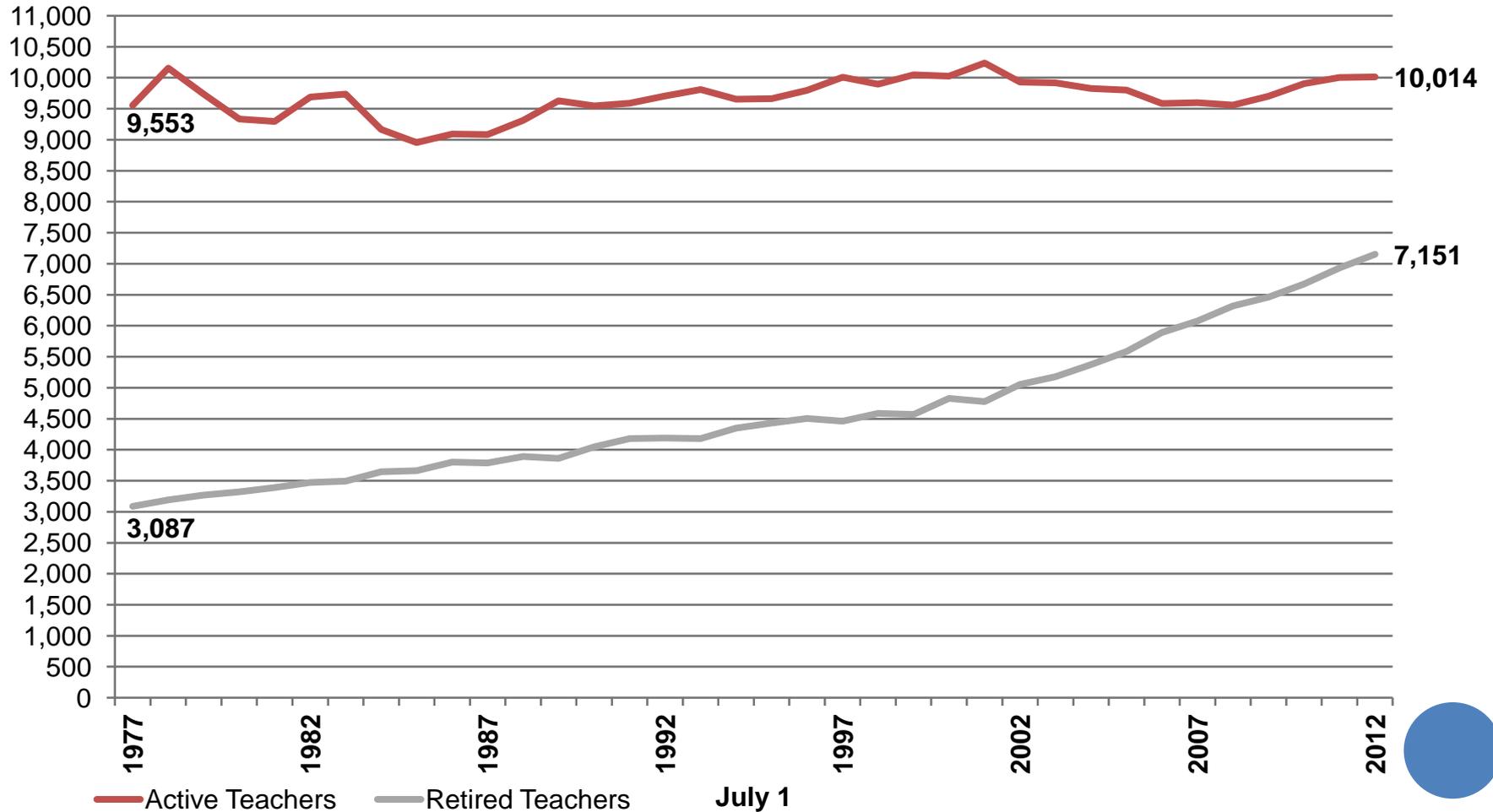


# TFFR PARTICIPATING EMPLOYERS

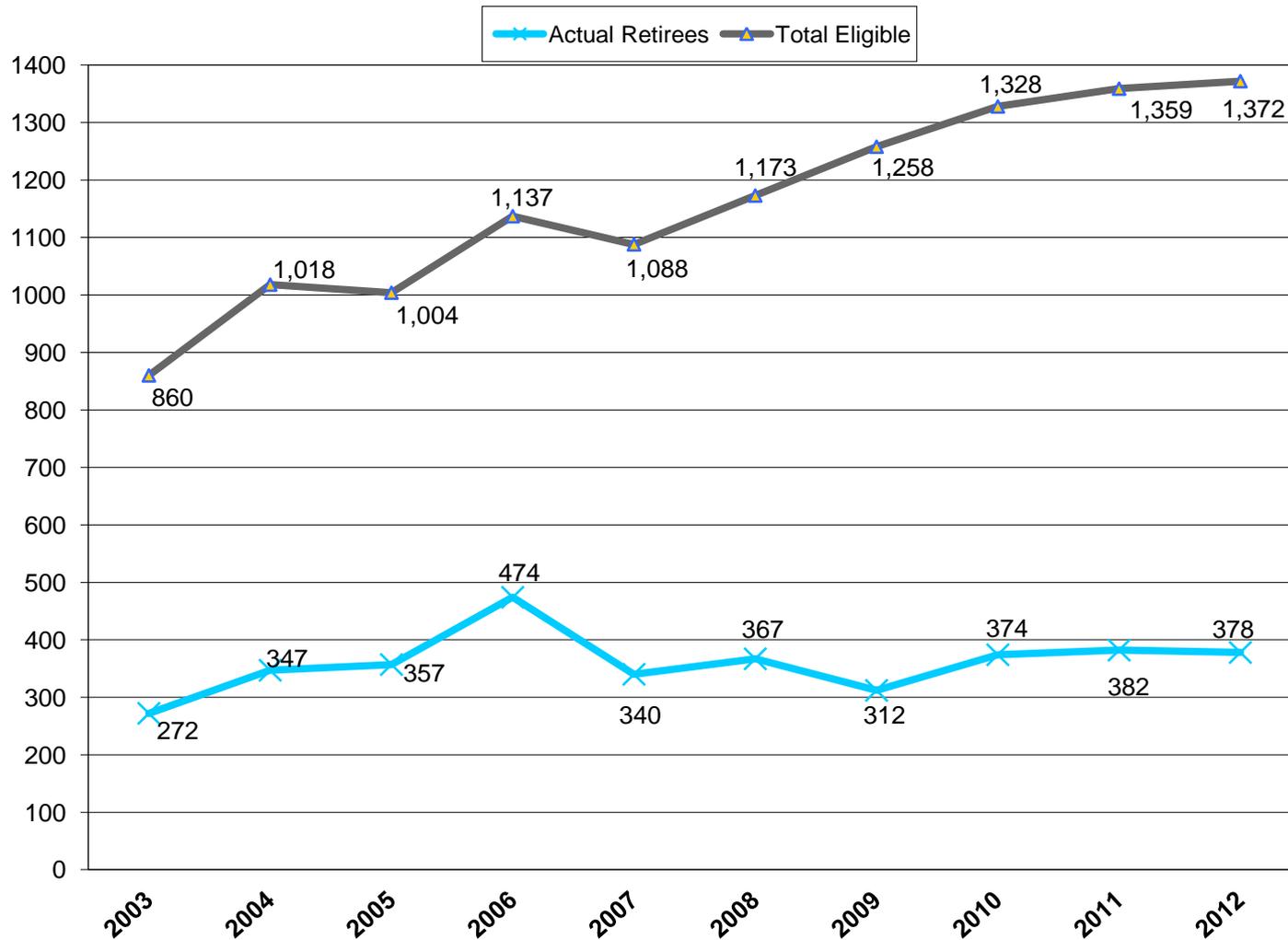
• School Districts	181	
• Special Ed Units	19	
• Vocational Centers	5	
• Counties	7	
• State Agencies/Institutions	4	
• Other – Closed groups	<u>3</u>	
<b>2012-13 Total Employers</b>		<b>219</b>

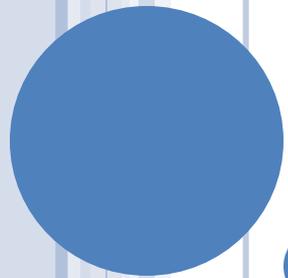


# ACTIVE AND RETIRED TFFR MEMBERS 1977 – PRESENT

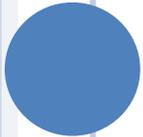


# ACTUAL RETIREES AND TOTAL ELIGIBLE





# **TFFR PLAN BENEFITS**



# SUMMARY OF TFFR PENSION BENEFITS FOR MEMBERSHIP TIERS

	Tier 1 Grandfathered	Tier 1 Non- Grandfathered	Tier 2 All
Vesting Period	3 years	3 years	5 years
Unreduced Retirement Eligibility			
Minimum Age	No	60	60
<b>AND</b> Rule	Rule of 85	Rule of 90	Rule of 90
<b>OR</b> Normal Retirement Age	65	65	65
Reduced Retirement Eligibility			
Minimum Age	55	55	55
Reduction Factor	6%	8%	8%
Retirement Formula Multiplier	2%	2%	2%
x FAS	3 year FAS	3 year FAS	5 year FAS
x Service Credit	Total Years	Total Years	Total Years
Disability Retirement	Yes	Yes	Yes
Retirement formula multiplier (2%) X FAS X total years			
Death/Survivor Benefits	Yes	Yes	Yes
Refund of account value or Life Annuity to survivor based on member's vesting status.			



# CONTRIBUTION RATES

RATES %	Employer	Member	Total	Increase
7/1/10	8.75%	7.75%	16.5%	---
7/1/12	10.75%	9.75%	20.5%	+4%
7/1/14	12.75%	11.75%	24.5%	+4%

**Note: 2011 legislation** increased rates effective 7/1/12 and 7/1/14 to improve TFFR funding level. Increased rates will be in effect until TFFR reaches 90% funded ratio; then rates will be reduced to 7.75% each.



# ELIGIBLE SALARY

- **Eligible salary (reportable)** includes a member's earnings in eligible employment for performance of duties:
  - Teaching
  - Supervisory
  - Administrative
  - Extracurricular services



# “PERFORMANCE OR MERIT PAY”

- An amount paid to a member pursuant to a written compensation plan or policy which links a member’s compensation to attainment of specific performance goals and duties.
- The specific goals, duties, and performance measures under which performance pay is expected to be made must be determined in advance of the performance period and documented in writing.
- Performance or merit pay may be in addition to regular salary or may replace regular salary increases.
- Performance or merit pay **IS** considered eligible retirement salary and subject to payment of member and employer contributions, unless the TFFR board determines the payments are ineligible salary.



# INELIGIBLE SALARY

- **Ineligible salary (non-reportable)** includes benefits or certain payments made to a member:
  - Fringe benefits – insurance programs, annuities, transportation, housing or expense allowances, etc.
  - Insurance programs – medical, dental, vision, disability, life, ltc, etc.
  - Payments for unused sick, personal, vacation, or other unused leave
  - Early retirement incentive pay, severance pay, or other payments conditioned on or made in anticipation of retirement or termination
  - Teacher’s aide, ticket taking, referee, bus driver, janitorial pay
  - Amounts received by a member in lieu of previously employer provided benefits or payments
  - Other benefits or payments the TFFR Board determines to be ineligible TFFR salary.



# “BONUS”

- An amount paid to a member in addition to regular contract salary which **DOES NOT** increase the member's base rate of pay, is not expected to recur or continue in future fiscal years or is not expected to be a permanent salary increase.
- A bonus is **NOT** considered eligible retirement salary and is **NOT** subject to payment of member and employer contributions.



# BONUSES INCLUDE:

- Recruitment or contract signing payments
- Retention, experience, or service related payments
- Early retirement incentive payments, severance payments, or other payments conditioned on or made in anticipation of a member's retirement or termination
- Payments made to recognize or reward a member's accomplishments or service
- Other special or irregular payments which the TFFR board determines to be bonuses



# SALARY DETERMINATION CRITERIA

## 1) Written authorization made in advance of payment:

- Master contract or negotiated agreement
- Individual employment contract
- Written agreement between employee and employer
- Minutes of school board or participating employer
- Policy of school board or participating employer

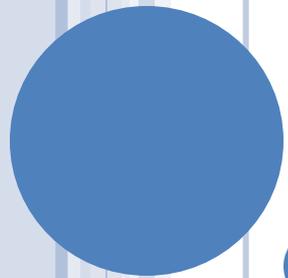


# SALARY DETERMINATION CRITERIA

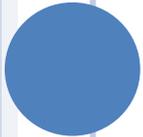
## 2) Written documentation describing payment details:

- Duration of payment - is payment recurring?
- Frequency and date of payment
- Relation of payment to base or contract salary
- Reason or intent of payment
- Description of duties or services to be performed
- Description of employees who are eligible for payment
- Amount of payment
- Funding source for payment





# **TFFR EMPLOYER MODELS**



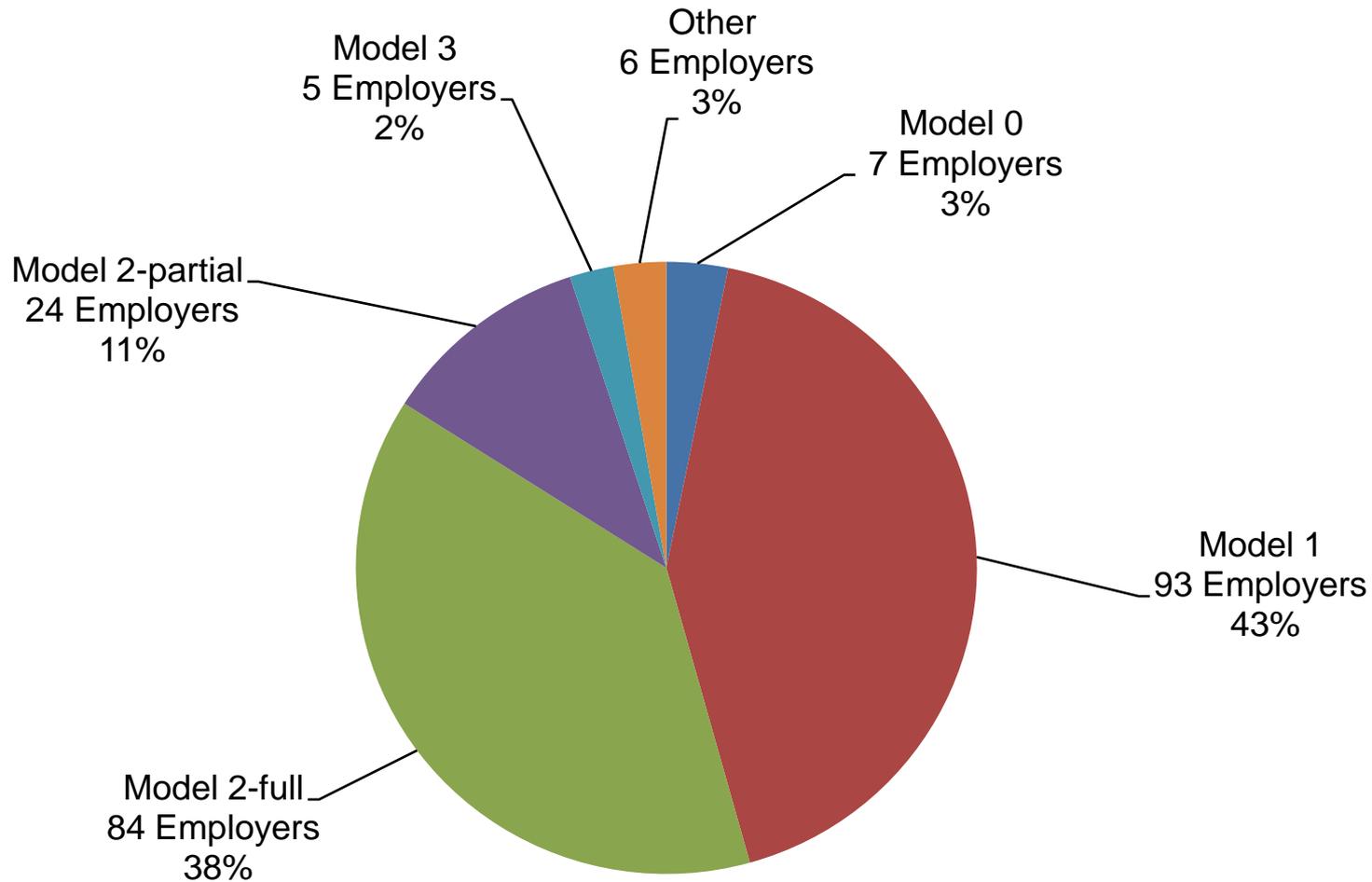
# TFFR EMPLOYER MODELS

Payment of member contributions on a tax deferred basis can be made through a: (1) salary reduction or (2) salary supplement.

- **No Model:** Member/employee contribution is paid by employee and remitted by employer as taxed dollars.
- **Model 1:** Member/employee contribution is paid by employee through a salary reduction and remitted by employer as tax deferred dollars.
- **Model 2 All:** Member/employee contribution is paid by employer as a salary supplement and remitted to TFFR as tax deferred dollars.
- **Model 2 Partial % and Model 3 Partial \$:** A portion of the member/employee contribution is paid by employer as a salary supplement and remitted to TFFR as tax deferred dollars. The remaining employee contribution is paid by employee and remitted by employer as tax deferred dollars. Model 3 \$ option is no longer available.
- **Other:** Includes state agencies and closed groups with special provisions.



# TFFR EMPLOYER MODELS 2012-13



# MODEL 1

## Employer Remittance of ALL the Member Contributions as a Salary Reduction

Contract/Additional TFFR Salary Earned by the Member	\$20,000.00	
<b><u>Retirement Salary</u></b>	<b><u>\$20,000.00</u></b>	
Employer Contributions	\$ 2,150.00	(Retirement Salary of \$20,000 x 10.75%)
Tax-Deferred Member Contributions Withheld from Member's Pay and Remitted by the Employer as a Salary Reduction	\$ 1,950.00	(Retirement Salary of \$20,000 x 9.75%)
Taxable Salary Reported for Federal and ND State Income Tax Purposes	\$18,050.00	(Contract Salary of \$20,000 less \$1,950 Tax-Deferred Member Contributions)
Taxable Salary Reported to Social Security	\$20,000.00	



# MODEL 2 (Partial)

## Employer Payment of A PERCENTAGE OF Member Contributions as a Salary Supplement

**Example:** Employer agrees to pay member contributions of 7.75%, as a salary supplement. The remaining 2.00% will be deducted from the member's pay. All member contributions will be tax-deferred.

Contract/Additional TFFR Salary Earned by the Member	\$20,000.00
<b><u>Retirement Salary</u></b>	<b><u>\$21,680.22</u></b> (Contract Salary of \$20,000/ 1.0 - .0775)
Employer Contributions	\$ 2,330.62 (Retirement Salary of \$21,680.22 x 10.75%)
Tax-Deferred Member Contributions Paid by the Employer as a Salary Supplement	\$ 1,680.22 (Retirement Salary of \$21,680.22 x 7.75%)
Tax-deferred Member Contributions Withheld from Member's Pay and Remitted by the Employer as a Salary Reduction	\$ 433.60 (Retirement Salary of \$21,680.22 x 2%)
Taxable Salary Reported for Federal and North Dakota State Income Tax Purposes	\$19,566.40 (Contract Salary of \$20,000 less \$433.60 Tax-deferred Member Contributions paid by member)
Taxable Salary Reported to Social Security	\$20,000.00

# MODEL 2 (ALL)

## Employer Payment of ALL the Member Contributions as a Salary Supplement

Contract/Additional TFFR Salary Earned by the Member	\$20,000.00	
<b><u>Retirement Salary</u></b>	<b><u>\$22,160.66</u></b>	(Contract Salary of \$20,000/1.0 - .0975)
Employer Contributions	\$ 2,382.27	(Retirement Salary of \$22,160.66 x 10.75)
Tax-Deferred Member Contributions Paid by the Employer as a Salary Supplement	\$ 2,160.66	(Retirement Salary of \$22,160.66 x 9.75%)
Taxable Salary Reported for Federal and North Dakota State Income Tax Purposes	\$20,000.00	
Taxable Salary Reported to Social Security	\$20,000.00	



# MODEL 1

## Employer Remittance of ALL the Member Contributions as a Salary Reduction

Contract/Additional TFFR Salary Earned by the Member	\$22,160.66
<b><u>Retirement Salary</u></b>	<b><u>\$22,160.66</u></b>
Employer Contributions	\$ 2,382.27 (Retirement Salary of \$22,160.66 x 10.75%)
Tax-Deferred Member Contributions Withheld from Member's Pay and Remitted by the Employer as a Salary Reduction	\$ 2,160.66 (Retirement Salary of \$22,160.66 x 9.75%)
Taxable Salary Reported for Federal and ND State Income Tax Purposes	\$20,000.00 (Contract Salary of \$22,160.66 less \$2,160.66 Tax-Deferred Member Contributions)
Taxable Salary Reported to Social Security	\$22,160.66



# FICA SAVINGS EXAMPLE

- Change from Model 1 to Model 2 or give salary increase of an equal amount.
- Assume 100 employees are making \$20,000 annually.

## Employee Impact:

Model 1 FICA Salary  $\$22,160.66 \times 7.65\% = \$1,695$

Model 2 FICA Salary  $\$20,000.00 \times 7.65\% = \$1,530$

**\$165 less employee FICA taxes under Model 2**

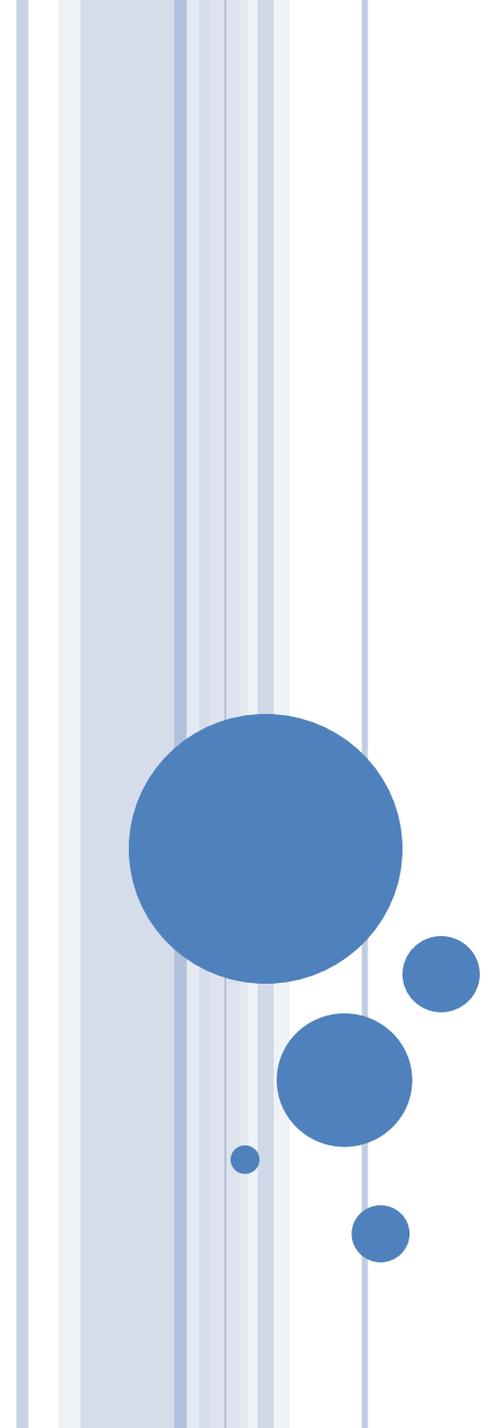
## Employer Impact:

Model 1 FICA Salary  $\$22,160.66 \times 100 \times 7.65\% = \$169,529$

Model 2 FICA Salary  $\$20,000.00 \times 100 \times 7.65\% = \$153,000$

**\$16,529 less employer FICA taxes under Model 2**





# **TFFR TOP 10 LIST FOR NEGOTIATORS**

# TFFR TOP 10 LIST FOR NEGOTIATORS

1. School districts can make or negotiate any salary related payments they deem appropriate for their employees.
  - However, TFFR statutes may not allow all such payments to be reported as eligible retirement salary.
2. Check with TFFR to discuss whether any special payments or unusual salary arrangements are eligible retirement salary before finalizing the negotiated agreement.
3. Document details about all payments to employees in writing in advance of making the payments.
4. Bonuses or other special one-time salary payments are not eligible TFFR salary.
5. Fringe benefits, or benefits that have been converted to salary, are not eligible TFFR salary.



# TFFR TOP 10 LIST FOR NEGOTIATORS

6. All TFFR members reported by a school district must be covered by the same TFFR employer model.
  - Administrators, teachers, and re-employed retirees must follow the same model.
  
7. Changing TFFR payment model from Model 1 salary reduction to Model 2 salary supplement is approximately equal to a base salary increase of the same amount.
  - This change should cost the school district less and create a higher take home salary for the teacher since less FICA taxes are paid (under current IRS provisions).
  - The school district salary schedule for teachers is likely to be lower since additional funds are being paid for benefits instead of salary.
  
8. Changing TFFR payment model from Model 2 salary supplement to Model 1 salary reduction can be a challenge.
  - This change will cost the school district more since more FICA taxes are paid because the amounts are paid in salary, not benefits.
  - To make sure employees retirement salary and take home pay is not negatively impacted by the change, each salary item (base, extracurricular, stipends, etc.) needs to be considered and increased appropriately.



# TFFR TOP 10 LIST FOR NEGOTIATORS

9. If a TFFR model change is being considered, contact TFFR to request a model analysis before finalizing contract negotiations.
  - The analysis will compare the model change to a similar salary increase and estimate the impact on the employer and the teachers.
  
10. Changing TFFR employer model can be done annually effective July 1. Changing models takes time to implement so start negotiations early.
  - School districts will need to modify payroll systems to comply with model changes.
  - If negotiations are delayed and the change is agreed to after the fiscal year begins, employer and member accounts will need to be adjusted retroactively.
  - Tax reports may need to be amended if the change is implemented after W-2s have been sent.



# SUMMARY

- Your job as a negotiator is not an easy one.
    - Determining an acceptable salary and benefits package can be very challenging.
    - TFFR is just one part of the total compensation package.
  - Developing new or special payment structures, or changing the method of how member contributions are paid can be difficult for school districts, teachers, and administrators to understand, negotiate, and implement.
  - Making such a change without thorough analysis can lead to problems in both TFFR and tax reporting.
  - TFFR conducts school district compliance audits to ensure salaries are being properly reported and contributions are being accurately paid to TFFR.
  - Call TFFR staff sooner--rather than later--for assistance.
- 

# TFFR RESOURCES

## ○ Staff

- Shelly Schumacher [sschumacher@nd.gov](mailto:sschumacher@nd.gov)
- Tami Volkert [tdvolkert@nd.gov](mailto:tdvolkert@nd.gov)
- Fay Kopp [fkopp@nd.gov](mailto:fkopp@nd.gov)

Phone: 701-328-9885 or 1-800-952-2970

## ○ TFFR Website [www.nd.gov/rio](http://www.nd.gov/rio)

- Employer Guide
- Employer Newsletters
- Member information
- Legislation
- Presentations



# NASRA Issue Brief

## Employee Contributions to Public Pension Funds



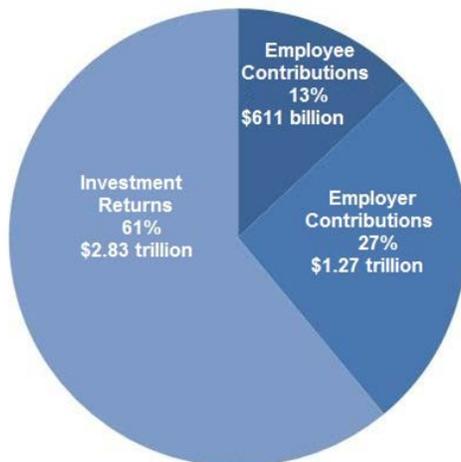
January 2013

Unlike in the private sector, nearly all employees of state and local government are required to share in the cost of their defined benefit pension. Employee contributions typically are based on a percentage of salary as specified in statute. Although investment earnings and employer contributions account for a larger portion of total public pension fund revenues (see Figure 1), contributions from employees fill a vital role in financing pension benefits by providing a reliable and predictable stream of revenue to public pension funds.<sup>i</sup> In the wake of the 2008-09 market decline, employee contribution rates in many states have increased. This issue brief examines employee contribution plan designs, policies and recent trends.

### Mandatory Participation & Shared Financing

For the vast majority of employees of state and local government, participation in a public pension plan and contributing toward the cost of the pension are mandatory terms of employment. Requiring employees to contribute shares some of the risk of the plan between employers and employees. The primary types of risk in a pension plan pertain to investment, longevity, and inflation. Employees who are required to contribute toward the cost of their pension assume a portion of one or more of these risks, depending on plan design.<sup>ii</sup>

Figure 1: Public pension sources of revenue, 1982-2010



Source: U.S. Census Bureau

Employees of state and local government contribute toward their pensions in different ways; the prevailing model is for state and local governments to collect employee contributions as a periodic deduction from employee pay. This amount usually is established as a percentage of an employee's salary and is collected each pay period. As shown in Appendix A, employee contributions typically are between four and eight percent of pay. In some cases, employee contributions are subject to change depending on the condition of the plan and other factors. In other plans, the employee portion of the contribution is paid by the employer in lieu of a negotiated salary increase or other fiscal offset.

Notably, some 25 to 30 percent of employees of state and local government do not participate in Social Security. In most cases, the pension benefit—and required contribution—for those outside of Social Security is greater than the typical benefit and required contribution for those who do participate.

### Trends in Employee Contributions

Many states in recent years have made changes requiring employees to contribute more toward their retirement benefits: since 2009, 28 states have increased required employee contribution rates<sup>iii</sup> (see Figure 2). Appendix A lists employee contribution requirements for state plans in the Public Fund Survey.

#### *New Contributions*

Some states, such as **Missouri, Florida, and Virginia**, which previously did not require some employees to make pension contributions, have now added required contributions for newly hired employees, existing workers, or both.

### **Variable Contributions**

**Pennsylvania** and **California** recently joined other states, such as **Arizona, Iowa, Kansas,** and **Nevada** in maintaining an employee contribution rate that varies depending on the pension plan's actuarial condition. Because of the effect investment returns have on a pension plan's actuarial condition, employee contributions generally will rise following periods of sub-par investment returns and fall when investment returns exceed expectations.

### **Increased Contributions for Current Plan Participants**

States such as **Alabama** and **Wyoming** have increased employee contributions for all workers-current and future. In some cases, such as **Virginia** and **Wisconsin**, new and existing employees are now required to pay the contributions that previously were made by employers in lieu of a salary increase.

### **Transferred Risk**

Another way employees are paying more is through the establishment of hybrid plans, which transfer risk from the employer to the employee. For example, in 2012, **Kansas** and **Louisiana** created new cash balance plans for newly-hired workers. Groups of employees in other states, including **Nebraska** and **Texas**, already participate in cash balance plans, which distribute a greater share of pension risk to the employee.

### **Collective Bargaining**

Employee contributions in some cases are set by collective bargaining, and can be changed when labor agreements are negotiated. For example, required employee contribution rates for many employee groups in **California** have increased in recent years as a result of labor agreements in that state.

### **Legal Landscape**

The legality of increasing contributions for current plan participants varies. Some states prohibit an increase in contributions for existing plan participants. Judges in **Arizona, Florida,** and **New Hampshire** have ruled recently that legislative efforts to increase contributions on existing workers is a violation of the state constitution or contractual rights. In other states, however, higher employee contributions either have not produced a legal challenge (such as in **Minnesota** and **Mississippi**), or have withstood legal challenges (such as **New Mexico**). Legal challenges to higher employee contributions remain unsettled in several states.

### **Conclusion**

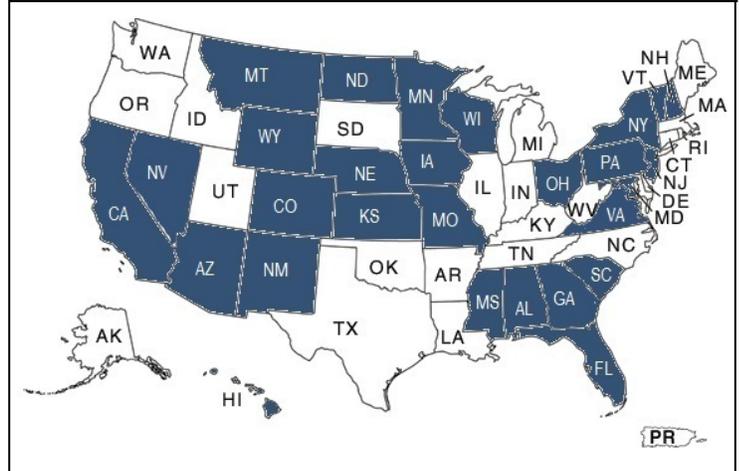
The vast majority of employees of state and local government are required to contribute to the cost of their pension benefit. This number has grown in recent years, as most states that previously administered non-contributory plans now require worker contributions.

Employees also are being required to contribute more. In some cases, this requirement applies to both current and new workers; in other cases, only to new hires.

A growing number of states are exposing employee contributions to risk – either by tying the rate directly to the plan's investment return, or by requiring hybrid or 401k-type plans as a larger component of the employee's benefit.

Some of these changes to contribution requirements affecting existing plan participants are under legal review. The outcome of these legal challenges is likely to affect additional future reforms in this area.

Figure 2: States that have increased employee contributions in at least one public pension plan since 2009



## See Also

Information is available on the [financing](#) of public pensions and the different [contributions](#) that are collected by pension systems, Wikipension

[Contribution Rates and Funding Issue Enactments in State Legislatures, 1999-2012](#), National Conference of State Legislatures

[Employee and Employer Contribution Rates by State](#), Wikipension

[Public Fund Survey Summary of Findings for FY 2010](#), NASRA

## Contact:

Keith Brainard, Research Director  
[keithb@nasra.org](mailto:keithb@nasra.org)

Alex Brown, Research Associate  
[alexbrown@nasra.org](mailto:alexbrown@nasra.org)

National Association of State Retirement Administrators  
[www.nasra.org](http://www.nasra.org)

<sup>i</sup> NASRA Issue Brief: Public Pension Plan Investment Return Assumptions (August 2012)

<sup>ii</sup> NASRA Issue Brief: State Hybrid Retirement Plans, Part II: Shared-risk arrangements (August 2012)

<sup>iii</sup> In 2011, Arizona passed a law increasing employee contributions which was ruled unconstitutional. Decisions are expected in cases involving similar contribution increases in other states.

## Appendix A: Employee contribution rates for statewide plans

*Note:* Information shown here is intended to reflect the contribution rates in effect for employees who are currently joining the plan (i.e., new hires). In some cases, employees who joined the plan in previous years may pay different contribution rates than what are listed below.

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
AK	Alaska PERS	6.75% for general employees; 7.5% for police and fire	No
AK	Alaska Teachers	8.65%	No
AL	Alabama ERS	7.5%; state police contribute 10.0%; other law enforcement officers, correctional officers, and firefighters contribute 8.5%	Yes
AL	Alabama Teachers	7.5%	Yes
AR	Arkansas PERS	5.0% for those hired since 7/1/05	Yes
AR	Arkansas Teachers	6.0%.	Yes
AZ	Arizona Public Safety Personnel	8.65%, rising gradually to 11.65% by 2014	Yes
AZ	Arizona SRS	10.82%	Yes
CA	California PERF	Beginning on and after January 1, 2013, new members will contribute between 6.0% up to a maximum of 12.0% depending on the employee classification and benefits offered	Both

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
CA	California Teachers	8.0%	No
CO	Colorado Affiliated Local	Varies by plan; most employees contribute between 5% and 10% of pay	No
CO	Colorado Fire & Police Statewide	8.0%	No
CO	Colorado Municipal	8.0%	No
CO	Colorado School	8.0%	No
CO	Colorado State	8.0%; state troopers contribute 10.0%	No
CT	Connecticut SERS	2.0% for those hired since July 1997; 5.0% for public safety personnel	Yes
CT	Connecticut Teachers	6.0%	No
DC	DC Police & Fire	8.0%	No
DC	DC Teachers	8.0%	No
DE	Delaware State Employees	Employees hired on or after 1/1/12, pay 5% of their earnings above \$6,000	Yes
FL	Florida RS	Per legislation approved in 2011, participants are required to contribute 3% of pay; a subsequent judicial ruling invalidated the requirement that existing plan participants contribute (the ruling is under appeal)	Yes
GA	Georgia ERS	1.25%	Yes
GA	Georgia Teachers	6.0%	Yes
IA	Iowa PERS	5.78% for regular employees; 6.84% for protection occupations; 9.90% for sheriffs	Yes
ID	Idaho PERS	6.23%; 7.69% for public safety personnel	Yes
IL	Illinois Municipal	4.50% for general employees; 7.50% for law enforcement personnel	Yes
IL	Illinois SERS	4.0% for those covered by Social Security, 8.0% for those not covered; public safety members contribute 10.5%	Yes
IL	Illinois Teachers	9.4%	No
IL	Illinois Universities	8.0%; public safety personnel contribute 9.5%	No
IN	Indiana PERF	3.0%	Yes
IN	Indiana Teachers	3.0%	Yes
KS	Kansas PERS	4.0% or 6.0%, depending on employee election	Yes

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
KY	Kentucky County	Those hired after 8/31/08, rates are 6.0%, and 9.0%, for hazardous duty, with all but 1% going to individual participant accounts	Yes
KY	Kentucky ERS	Those hired after 8/31/08, rates are 6.0%, 9.0% for hazardous duty, with all but 1% going to individual participant accounts	Yes
KY	Kentucky Teachers	Non-university members contribute 10.855%; University members contribute 6.84%	No
LA	Louisiana SERS	8% for regular employees; hazardous duty members contribute 9.5%	No
LA	Louisiana Teachers	8.0%	No
MA	Massachusetts SERS	5% to 9% depending on member's date of entry; State Police appointed on or after 7/1/96 contribute 12%	No
MA	Massachusetts Teachers	5% to 11%, depending on member's date of entry; those hired after 2000 pay 11%	No
MD	Maryland PERS	7.0% for most general employee participants	Yes
MD	Maryland Teachers	7.0% for most public school teachers	Yes
ME	Maine Local	Ranges from 3.0% to 8.0%	Yes for approximately half of the members
ME	Maine State and Teacher	7.65%; 8.65% for law enforcement officers	No
MI	Michigan Municipal	0% to 10%, depending on employer election	Yes
MI	Michigan Public Schools	Employees choose between a hybrid plan with a 6.4% contribution for the DB component or a DC plan with an automatic 6% contribution	Yes
MI	Michigan SERS	Employees hired since 1997 are enrolled in a DC plan (active DB plan members contribute 4%)	Yes
MN	Minnesota PERF	6.25%; 9.6% for police and fire	Yes (except for police and fire)
MN	Minnesota State Employees	5.0%; 8.6% for correctional officers	Yes
MN	Minnesota Teachers	6.50%	Yes
MO	Missouri DOT and Highway Patrol	4.0% for those hired after 12/31/10	Yes
MO	Missouri Local	Non-contributory or 4%, depending on employer election; most plans are non-contributory	Yes
MO	Missouri PEERS	6.86%	Yes
MO	Missouri State Employees	4.0% for those hired after 12/31/10	Yes
MO	Missouri Teachers	14.50%	No

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
MS	Mississippi PERS	9.0%; Highway Patrol Officers contribute 7.25%	Yes
MT	Montana PERS	7.9% for employees hired after 6/30/2011	Yes
MT	Montana Teachers	7.15%	Yes
NC	North Carolina Local Government	6.0%	Yes
NC	North Carolina Teachers and State Employees	6.0%	Yes
ND	North Dakota PERS	6.0%; law enforcement officers pay 10.31%	Yes
ND	North Dakota Teachers	7.75%	Yes
NE	Nebraska Schools	9.78%	Yes
NH	New Hampshire Retirement System	7.0% for general employees and teachers; 11.8% for firefighters; 11.55% for police officers.	Yes for general employees and teachers; No for public safety
NJ	New Jersey PERS	6.50%	Yes
NJ	New Jersey Police & Fire	0%	Yes
NJ	New Jersey Teachers	6.50%	Yes
NM	New Mexico PERF	7.42%	Yes
NM	New Mexico Teachers	7.9% for those with a salary below \$20,000; 9.4% for those with a salary above \$20,000	Yes
NV	Nevada Police Officer and Firefighter	20.27%	No
NV	Nevada Regular Employees	12.26%	No
NY	New York State Teachers	For those hired since April 2012, graduated based on salary, beginning at 3.5% and rising to 6.0% for those earning above \$100,000 annually.	Yes
NY	NY State & Local ERS	For those hired since 4/1/12, 3%-6% variable rate based on annual salary	Yes
NY	NY State & Local Police & Fire	For those hired since 4/1/12, 3%-6% variable rate based on annual salary for most participants	Yes
OH	Ohio PERS	10.0%; law enforcement personnel contribute 12.6%; public safety employees contribute 12.0%	No
OH	Ohio Police & Fire	10.0%	No
OH	Ohio School Employees	10.0%	No

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
OH	Ohio Teachers	10.0%	No
OK	Oklahoma PERS	3.5% for state employees; 3.5% to 8.5% for employees of county and local agencies; hazardous duty members pay 8.0%	Yes
OK	Oklahoma Teachers	7.0%	Yes
OR	Oregon PERS	Non-contributory for the DB plan; 6.0% for the individual accounts	Yes
PA	Pennsylvania School Employees	For those hired after 6/30/11, may fluctuate between 7.5% and 9.5% or 10.3% and 12.3% depending on the plan and investment return	Yes
PA	Pennsylvania State ERS	For those hired after 6/30/11, 6.25% plus a shared-risk contribution of up to an additional 2% based on the plan's investment return	Yes
PR	Puerto Rico Government Employees	8.275% (except members selecting the Coordination Plan contribute 5.775% up to \$6,600 plus 8.275% of compensation in excess of \$6,600)	Yes (except police)
PR	Puerto Rico Teachers	8.0%	No
RI	Rhode Island ERS	3.75% for state employees, 3.75% for teachers; 5% for state employees to the DC plan; 5% for teachers (SS) to the DC plan; 7% for teachers (non-SS) to the DC plan	Yes
RI	Rhode Island Municipal	1.0% for general employees; 7.0% for public safety personnel; 5% for general employees to the DC plan; 7% for public safety personnel (non-SS) to the DC plan	Yes
SC	South Carolina Police	6.50%	Yes
SC	South Carolina RS	6.50%	Yes
SD	South Dakota PERS	6.0%; public safety personnel contribute 8.0%	Yes
TN	TN Political Subdivisions	Employers may elect the non-contributory option; otherwise, 5%	Yes
TN	TN State and Teachers	Non-contributory for most state and higher education employees; 5% for teachers	Yes
TX	Texas County & District	Employers set the employee contribution rate in a range from 4.0% to 7.0%; 6.9% is the weighted average	Yes
TX	Texas ERS	6.5%	Yes
TX	Texas LECOS	0.5%; LECOS is a supplementary plan to the ERS of Texas, to which LECOS members also contribute 6.5%	Yes
TX	Texas Municipal	5%, 6%, or 7%, depending on ER election	Yes

<b>State</b>	<b>Plan</b>	<b>Employee Contribution Rate (Percent of Pay)</b>	<b>Social Security Coverage</b>
TX	Texas Teachers	6.4%	No
UT	Utah Noncontributory	Non-contributory	Yes
VA	Virginia Retirement System	5.0% for participants other than judges and elected officials	Yes
VT	Vermont State Employees	6.4%	Yes
VT	Vermont Teachers	6.4%	Yes
WA	Washington LEOFF Plan 1	0%	Yes
WA	Washington LEOFF Plan 2	8.46%	Yes
WA	Washington PERS 1	6.0%	Yes
WA	Washington PERS 2/3	4.64%; Plan 3 members contribute only to their defined contribution plan at between 5% and 15%	Yes
WA	Washington School Employees Plan 2/3	4.09% for Plan 2 members; Plan 3 members contribute only to their defined contribution plan at between 5% and 15%	Yes
WA	Washington Teachers Plan 1	6.0%	Yes
WA	Washington Teachers Plan 2/3	4.69% for Plan 2 members; Plan 3 members may contribute 5% to 15% to the defined contribution plan component	Yes
WI	Wisconsin Retirement System	6.65% for general employees and protective occupations	Yes
WV	West Virginia PERS	4.5%	Yes
WV	West Virginia Teachers	6.0%	Yes
WY	Wyoming Public Employees	7.0%; law enforcement personnel contribute 8.6%	Yes

# Issue Brief

## How Do Public Pensions Invest? A Primer

By Ronnie G. Jung, CPA and Nari Rhee, PhD

January 2013



NATIONAL INSTITUTE ON  
**Retirement Security**

Reliable Research. Sensible Solutions.

---

## ABOUT THE AUTHORS

---

**Ronnie G. Jung, CPA**, served as the Executive Director of the Teacher Retirement System of Texas (TRS) from September 2003 until August 2011. Prior to TRS, he worked for twenty years at the Texas State Auditor's Office and for two years at the Texas Legislative Budget Board. Mr. Jung also served as a member of the Governmental Accounting Standards Board's task force for higher education financial reporting which led to the development of GASB #35 and was recognized as "2002 Administrator of the Year" by the Texas State Agency Business Administrators' Association. He has also served as President of the National Council on Teacher Retirement and as a board member of the National Institute for Retirement Security. Currently, he serves as Chair of Texans for a Secure Retirement and as a board member of the Texas Retired Teachers Foundation. He earned a BBA in accounting from the University of Texas at Austin in 1974 and an MPA from the LBJ School of Public Affairs in 1991. He is a Certified Public Accountant with a Personal Financial Specialist Designation, a Chartered Global Management Accountant (CGMA), and a member of the American Institute of CPAs and the Texas Society of CPAs.

**Nari Rhee, PhD**, is Manager of Research for the National Institute on Retirement Security. She joined NIRS in September 2012 and conducts research and analysis on pensions and retirement issues. Previously, she served as Associate Academic Specialist at the University of California Berkeley Institute for Research on Labor and Employment/Center for Labor Research and Education. There, she conducted policy research on public sector pension reform and the private sector retirement gap with a focus on low- and middle-wage workers. She holds a PhD from the University of California at Berkeley, an MA from the University of California at Los Angeles, and a BA from the University of California at Santa Cruz.

---

## ACKNOWLEDGEMENTS

---

We are grateful for the comments, advice, and assistance provided by a number of individuals. Keith Bozarth, Ron Mensink, Leigh Snell, and David Veal provided extensive comments on an earlier draft of this paper. Keith Brainard, William B. "Flick" Forna, and Paul Zorn shared insights, data, and research resources. Michael Kennedy obliged our request for Wilshire TUCS data. However, the views in this report and any errors and omissions are those of the authors alone.

---

## ABOUT NIRS

The National Institute on Retirement Security is a non-profit research institute established to contribute to informed policy making by fostering a deep understanding of the value of retirement security to employees, employers, and the economy as a whole. NIRS works to fulfill this mission through research, education, and outreach programs that are national in scope.

Public defined benefit (DB) pensions leverage the advantages of pooled funds, pooled risk, a long investment horizon, and professional money management to reduce the cost of providing retirement benefits to employees over the long term. Given recent economic shocks and their impact on the status of pension funds, there is increased attention on public sector pension investment management practices. Debate about these practices can be better informed with insights into how the public pension investment process works, a process that is not widely understood.

The purpose of this primer is to provide policymakers, journalists, and stakeholders with a tool to understand how the public pension fund investment process is structured and managed. In particular, this brief focuses on how public pensions allocate assets and set expected rates of return, that is:

- How they distribute investments across stocks, bonds, and other asset classes in order to maximize returns and minimize risk.
- The principles that guide how public pension funds invest and the institutionalized practices through which plan trustees set investment policies.
- How public pensions evaluate and manage investment-related risk.
- How investment return assumptions among public pension funds compare to historical performance, and their future outlook.

The following are key highlights.

**1. Public pension funds have a clear division of labor for making investment-related decisions. Fiduciary standards apply to each key role in the investment process.**

- Nearly all public pension plans are overseen by **trustees** who bear primary fiduciary responsibility and are also subject to strict ethical standards. Trustees set investment policies with the advice and support of a number of different professionals.
- The governance structure of public pension funds makes trustees, staff, and consultants involved in the management of pension fund financial resources fiduciaries. Fiduciaries must perform their functions solely in the interest of the trust beneficiaries and must meet the highest standard of care (prudence) in executing those functions.
- Trustees are responsible for building and overseeing a professional investment staff, typically with a **Chief Investment Officer (CIO)** who leads the investment unit within the pension fund. The staff investment team advises and assists trustees in hiring investment consultants and supervising investment managers.
- **Investment consultants**, who have a deep background in finance, work with staff and the board to help develop and review investment policies.
- **Investment managers** conduct the day-to-day business of managing each asset class portfolio (e.g., domestic stocks or corporate bonds)—buying and selling securities and reporting on investment performance. This role may be filled by staff or by an outside firm, depending on the capacity of the fund and the specialized expertise required.
- **Actuaries** also play an important role in pension fund investment policy by predicting the cost of future pension benefits and working with consultants and staff to determine that the asset allocation adopted by the Board of Trustees over the long run, combined with adequate contributions, will generate sufficient income to meet pension obligations.

**2. Public pension funds have rational and systematic processes for setting asset allocation in a diversified portfolio, estimating expected investment returns, and evaluating investment performance.**

- Investment policy begins with an analysis of pension liabilities—how much money will be needed to pay for promised benefits over the long term. Each pension fund has a unique set of liabilities, liquidity needs, and expected cash flow based on benefit structure and membership demographics.
- Typically, pension trustees adopt an investment policy statement (IPS) that establishes how much investment risk will be tolerated by the fund and sets asset allocation targets, i.e., the percentage shares of the fund total investments assigned to different asset classes, also called the target asset mix. The list of investable asset classes is defined by trustees in accordance with state and local laws and regulations.
- The IPS also sets expectations for investment performance in each asset-type portfolio and the fund as a whole. Investment performance targets are tied to benchmarks—usually market indexes, such as the S&P 500 for large company stocks—against which portfolio and fund returns are evaluated.
- The fund’s expected rate of return on its investments is determined from the target asset mix based on expert consensus on the long-term returns that can be expected in each asset class in light of historical data and current capital market assumptions.
- All pension funds periodically conduct asset allocation studies and/or asset liability modeling to determine if their investment strategy as outlined in their IPS remains appropriate, or needs modification.
- Portfolio performance in each asset class is regularly evaluated against internal benchmarks on a quarterly, annual, and multi-year basis

**3. The board of trustees of each public DB pension fund determines the acceptable level of risk that is prudent for their plan given its particular circumstances. They then adopt an asset allocation that is designed to maximize returns within the established level of risk.**

- During the asset allocation process, pension trustees—with the assistance and advice of staff and consultants—carefully select asset allocations designed to minimize risk and maximize return.
- Research based on asset allocation over time shows that public pensions are patient investors, much more so than individual investors. That is, they are not unduly swayed by the ups and downs of financial markets and do not take on more risk in order to compensate for market downturns.
- Public pensions have reviewed asset allocations in light of adverse market conditions in the last decade and implemented measures intended to mitigate risk. For example, in response to the recent financial crisis, subsequent low interest environment, and future inflation concerns, pension funds reduced investment in public equities (stocks) and fixed income while they increased their positions in alternative assets and real estate. This more diversified portfolio is aimed at smoothing out the effects of market volatility. Public pension fund exposure to alternative assets, while increasing for larger plans, remains relatively low compared to endowment funds.

**4. The level of risk assumed by public pension funds, as indicated by the percentage of assets invested in equities, is consistent with other institutional investors and with many prudent individual investors.**

- The risk profile of public pension funds—currently about 60 percent in corporate equities on average—has remained fairly stable and is consistent with other institutional investors.
- Public pensions generally position themselves on the risk spectrum between corporate pensions and endowment funds. Public and private pension funds closely resembled each other in asset allocation in recent decades. However, in 2006, private pensions began “derisking” investment strategies to offset increased pension expense volatility resulting from new regulations. Endowment funds, meanwhile, tend to be invested more heavily in private equity and alternative assets.

- The average equity position among pooled public pension funds entails no more risk than is considered prudent for an individual investing over a finite career using a commonly recommended lifecycle investment strategy. In a typical lifecycle fund, the individual starts almost exclusively with equities and gradually transitions to fixed income. A mid-career worker would have 60-70 percent investment in equities. In light of this, the 60 percent average investment in equities is appropriate for pension funds that invest over a long time horizon and cover a mix of young, mid-career, and older workers.

**5. Actual investment returns for the overall fund and for the individual portfolios are evaluated over multiple periods including the short term and long term, and evidence indicates that current rate of return assumptions are realistic.**

- Returns have met or exceeded expectations over the long term, i.e., 20-30 years. Public funds have the advantage of being able to smooth the effects of bubbles and downturns, though the sheer magnitude of the 2007-2008 financial crisis and its aftermath has challenged all funds.
- In response to the current economic climate, public pension funds are incrementally adjusting their rate of return assumptions downwards. Nonetheless, independent studies indicate that the average rate of return assumption of 7.8-7.9 percent is not unrealistic, both in nominal terms, and in real (constant purchasing power) terms after controlling for inflation.
- It is important to distinguish nominal and real return assumptions because inflation impacts pension liabilities. Shortfalls in investment income due to slow economic growth, for instance, can be accompanied by reductions in liabilities resulting from slow wage growth. Nominal return assumptions among public pensions cluster tightly around a median of 7.9 percent, and real return assumptions are spread more broadly around a median of 4.5 percent.

## INTRODUCTION

Public defined benefit (DB) pensions leverage the advantages of pooled funds, pooled risk, a long investment horizon, and professional money management to reduce the cost of providing retirement benefits to employees. Traditional DB pensions provide secure lifelong monthly income to employees when they retire, in contrast to defined contribution (DC) plans like 401(k)s in which individual retirement wealth is subject to the vagaries of the financial market. Moreover, traditional DB pensions deliver a given level of retirement income for 46 percent less cost—in terms of employer and employee contributions—than would be required through defined contribution (DC) plans. This difference is largely due to a better diversified asset mix in DB pensions facilitated by a longer investment horizon, as well as lower expenses.<sup>1</sup> On average, about 61 percent of public pension benefit payments are funded through investment returns, compared to 26 percent from employer contributions and 13 percent from employee contributions (**Figure 1**).<sup>2</sup> The large share of investment returns relative to contributions helps lower public service delivery costs to taxpayers over the long term.

However, following historic declines in stock values in 2008-2009, declining interest rates, and their negative impact on the funded status of pension funds in the context of continuing financial uncertainty, there is increased attention on public pension funds' investment strategies and how they manage risk. That debate can be better informed with insights into how the public pension investment process works, a process that is not widely understood.

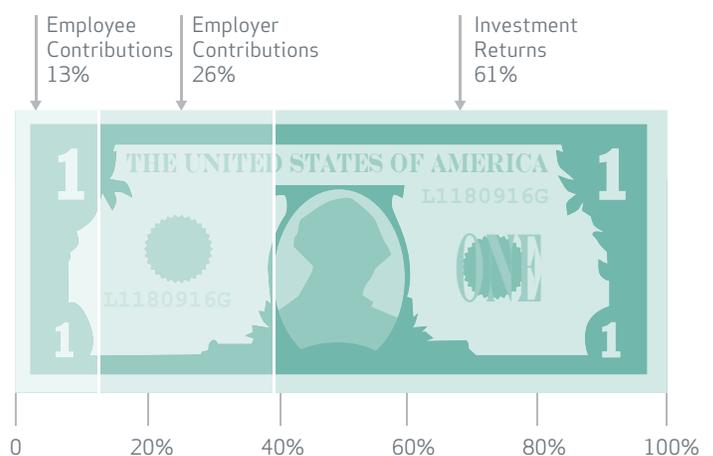
The purpose of this primer is to provide policymakers, journalists, and members of the public a tool that provides a basic understanding of how public pension funds manage investments. In particular, this brief focuses on how public pensions allocate assets (that is, distribute investments across different asset classes such as stocks, corporate bonds, and U.S. Treasury debt), set expected rates of return, and approach risk, focusing on the following questions.

- What are the principles and regulations that guide how public pension funds invest?
- What specific institutional practices do they use to set investment policies?

- How do public pensions evaluate and manage investment related risk?
- How do investment return assumptions among public pension funds compare to historical performance, and are they realistic going forward?

This primer is organized as follows. The remainder of the Introduction outlines the governance structure of public pension funds, describing the distinct roles and responsibilities of trustees, staff, and consultants in the pension investment process. Section 1 provides an overview of the formal processes by which pension trustees evaluate risk; decide how to allocate funds across different asset classes in a diversified portfolio; adopt investment return assumptions; and evaluate investment performance. Section 2 highlights research on public pension investment style and examines public pension asset allocation and investment risk exposure compared to other institutional investors. Section 3 discusses the evaluation of pension fund investment performance looking at the past, and highlights key factors to consider when evaluating rate of return assumptions in light of current capital market conditions and the distinction between nominal and real rates of return.

**Figure 1. Sources of Revenue for Public Pensions, 1982-2010**



Source: Data from U.S. Census Bureau, in NASRA 2012.

## Key Roles in Public Pension Investing

Nearly all public pension plans are overseen by **boards of trustees**. A few states designate sole trustees, rather than boards. Some states have a separate State Investment Board (SIB) that manages an array of state funds, including state pension funds. For the purposes of this paper, “board” and “trustees” refer to the entity that is responsible for investment decisions, whether it is a pension board, sole trustee, or SIB.

Trustees bear primary fiduciary responsibility on behalf of pension participants; that is, they have the legal and ethical responsibility to manage the fund for the exclusive benefit of the workers and retirees who participate in the fund. The pension governance structure extends the fiduciary role to staff, external contractors and all others involved in the management of pension fund financial resources. In performing these fiduciary functions, they must meet the highest standard of care (prudence) in executing those functions. Importantly, fiduciaries must put the interests of plan members before their own, avoiding decisions that even appear to benefit themselves or their family and friends. This applies not just to investment decisions, but other aspects of pension fund management including hiring staff and consultants.

The board sets policies for investment management and asset allocation—i.e., how much of the portfolio is allocated to stocks, bonds, real estate, and other investment classes. Trustees are advised and supported by a number of different professionals. Trustees are responsible for building and overseeing a professional investment staff, typically with a **Chief Investment Officer (CIO)**, who leads the investment unit within the pension fund. The staff investment team advises and assists the board in hiring investment consultants and supervising investment managers. For most public pension funds, the hiring of staff is generally governed by state and local agency regulations, while the process of soliciting and executing contracts with external professionals is subject to procurement procedures and public review. **Investment consultants**, who have a deep background in finance, work with staff and the board to help develop and review investment policies.

**Investment managers**, not the trustees, conduct the day-to-day business of managing each investment portfolio—buying and selling securities and reporting on investment

performance. This role may be filled by **internal investment managers** who are on the pension fund staff, or **external investment managers** from an outside firm, depending in large part on scale and specialization. External investment managers are generally paid based on portfolio size as well as performance based on exceeding a benchmark return and adherence to the risk parameters set by the board.

Large pension funds have generally found that it is cost-effective to have most of their assets managed by internal staff, and research tends to support this conclusion.<sup>3</sup> At the same time, they also rely on external money managers to handle investment classes that entail highly specialized or emergent expertise, or in which the fund is not investing at a large enough scale to warrant building internal capacity. In addition, restrictions on public sector hiring and compensation are sometimes obstacles to expanding internal capacity. (In contrast, Canadian public funds have aggressively internalized specialty investment expertise.<sup>4</sup>) Smaller funds, meanwhile, rely more heavily—sometimes exclusively—on external investment managers because these funds lack the scale and resources to do this work internally. Larger funds tend to generate higher returns than do smaller funds, in large part due to the cost savings from internal management and the ability to better diversify their holdings.<sup>5</sup>

**Actuaries** also play an important role in pension fund investment policy. An actuary is a professional whose job is to analyze the financial consequences of risk with a focus on the liability side. In the pension world, actuaries predict the cost of future pension benefits by accounting for a variety of factors such as benefit formulas, demographic factors (turnover, retirement, disability, and mortality rates), and economic factors (salary growth, investment return, and inflation). They determine the level of contributions that, combined with investment income, will be sufficient to meet the fund’s retirement benefits over the long term. Most large pension funds have in-house actuaries, although a number of large, established actuarial firms fulfill this function for many pension funds. Actuaries also play a key role during the asset allocation process and asset liability modeling work. The actuary works with the consultants and staff to make a professional determination that the asset allocation adopted by the Board of Trustees over the long run will generate sufficient income to meet the investment return assumption.

# I. OVERVIEW OF PENSION INVESTMENT PRACTICES

Before pension fiduciaries make decisions about how to invest, they must first understand their liabilities—specifically, the projected outflow of promised pension payments over time. Actuaries construct this data based on assumptions about wage growth, turnover, inflation, life expectancy, and other demographic factors. The goal of pension funds is to have sufficient contributions and investment returns to match these liabilities over a long time frame.

Public pension funds have rational and systematic processes for measuring and establishing the acceptable level of risk, setting asset allocation, estimating expected investment returns, managing investment portfolios, and evaluating portfolio performance. They prudently diversify pension assets in order to minimize risk and maximize returns (see sidebar, *Diversification and Modern Portfolio Theory*). The following is an outline of this process.

## DIVERSIFICATION AND MODERN PORTFOLIO THEORY

The principle of diversification calls for investing in a variety of assets with the goal of reducing risk. Modern Portfolio Theory holds that for a given level of expected return, the more diversified the portfolio is, the less overall risk there is to the investor.<sup>6</sup> The basis for this theory is the idea that returns on different assets do not typically move in tandem with each other, and can even move in opposite directions. Take, for instance, two large companies that have the same overall potential for stock price appreciation or depreciation. One company’s stock might increase in value at the same time that the other’s stock decreases in value. Thus a portfolio split between the two firms carries less overall risk than a portfolio that is 100 percent invested in either one of these firms. The same dynamic applies across asset classes with differing risk-return characteristics. For example, returns on bond generally move differently from returns on stocks, and therefore bonds have low correlation with stocks (**Table 1**).

Generally, the greater the range of assets that a portfolio is split across, the less overall risk there is, although a portfolio may not necessarily have to include all possible asset classes to achieve optimal risk/return potential. The objective of diversification is to allocate assets in such a way that yields maximum return for a given level of risk; or conversely, achieves a given return with the lowest possible risk. Such a portfolio is considered “efficient.”

Table 1. **Historical Correlations between Asset Classes, 1971-2011**

	Bonds	Large cap stocks	Small cap stocks	Foreign stocks	Real Estate	Commodities
Bonds	100%					
Large cap stocks	28%	100%				
Small cap stocks	13%	78%	100%			
Foreign stocks	8%	67%	54%	100%		
Real Estate	16%	57%	42%	42%	100%	
Commodities	-16%	-7%	-14%	0%	-4%	100%

Source: The H Group 2011, based on Ibbotson Associates and Morningstar data.

## Asset Allocation Process

Among pension fund investment policies, asset allocation policy is perhaps the most critical because differences in asset mix accounts for 40 percent of the variation in returns among diversified portfolios.<sup>7</sup> Under a given set of market conditions, asset mix accounts for nearly all of the return level.<sup>8</sup> Pension funds document their principal investment policies in an **investment policy statement (IPS)**. The IPS states how much risk the fund is willing to tolerate. It also provides guidelines for how fund investments are to be distributed across different asset classes, e.g., public equities, corporate bonds, Treasuries and other government agency debt instruments, real estate, and other types of investments. These guidelines are called **asset allocations**, described further later on in this section.

Each pension fund's IPS is updated periodically to reflect changes in market conditions and revisions in investment practices. While some components of the IPS are modified on an on-going basis, long-term target asset allocations are updated less frequently. Pension funds normally conduct **asset allocation studies** every three to five years as part of a process to determine whether the current target allocations are still appropriate, and to make changes as necessary. The process includes the following components:

**Review of Risk Tolerance.** The trustees periodically review the risk tolerance of the pension: How much volatility are they willing to tolerate? What is the maximum acceptable downside risk—that is, how much loss are they willing to risk under adverse market conditions? Trustees, with the assistance of staff and investment consultants, evaluate these dimensions of risk for the overall pension fund and for each component portfolio using a variety of statistical measures. (See sidebar, *Measuring Risk*, for an explanation of two common methods for quantifying and evaluating risk.)

**Update of Capital Market Assumptions.** These include assumptions about the risks and probable range of returns associated with each asset class; the measures of correlation/lack of correlation (correlation coefficients) between asset classes (see Table 1 above); and broader economic factors like overall economic growth, volatility, and inflation. Assumptions are based on historical data as well as financial market forecasts over a 7-15

year horizon. Pension funds obtain the capital market assumptions for each asset class from a number of different sources including their consultants, investment advisors, and other financial institutions. The trustees, the investment staff and the investment consultant will review all of the different assumptions and generally select those that reflect consensus, rather than extremes or outliers.

**Asset Allocation Modeling.** The trustees work with the staff, consultants and independent actuaries to model a number of different asset allocation and investment outcome scenarios. The asset allocation modeling process incorporates updated capital market assumptions, i.e., expected returns and volatility for each asset class as well as the correlation of returns between different asset classes. These factors are combined to estimate the risk level and probable returns of many different asset mixes.

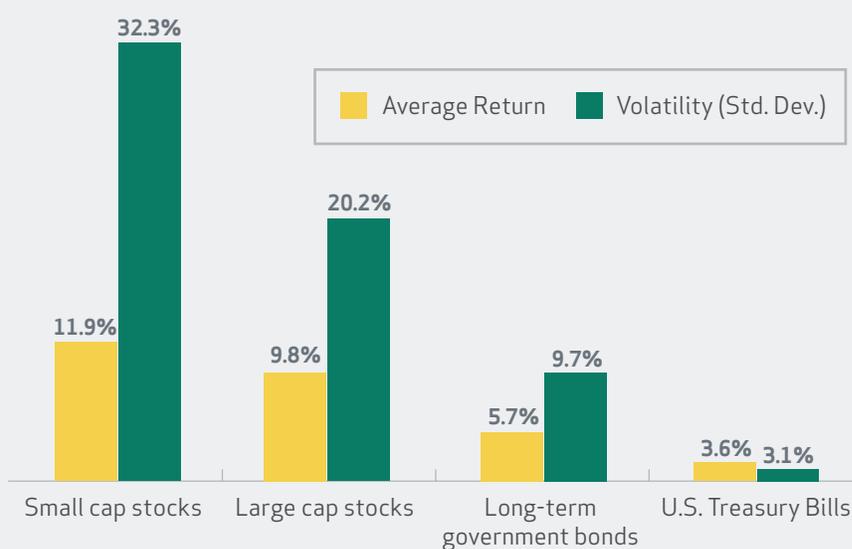
**Adopting an Optimal Asset Mix.** Based on the risk level established by the trustees and the results of the asset allocation model from above, the trustees select the optimal asset mix for the pension fund. The graphical representation of the asset mixes, or portfolios, that deliver the most reward at each level of risk forms a curved line, called the “efficient frontier.” (See sidebar, *Diversification and Modern Portfolio Theory*, for a basic explanation of efficiency.) The line is curved because the financial reward for each additional increment of risk increases at first and then becomes smaller. This graphical depiction allows the trustees to determine on an incremental basis the impact of increasing or decreasing the pension fund's exposure to risk. Normally, slight modifications to the level of risk assumed by the fund are made at this time. In some cases the trustees may decide to reduce the level of risk because the incremental reduction in return is very small. In other cases the Board may decide that the projected increase in return potential is worth a small increase in risk.

The trustees then adopt a new set of long-term asset allocation targets that specify the percentage of fund investments for each asset class. Generally, the investment staff is given an acceptable target range for each assets class so that tactical decisions can be made to address short term market conditions. Public pension funds have varying degrees of delegated authority regarding

## MEASURING RISK

A commonly used measure of volatility is the **standard deviation** of returns, derived from historical data on asset prices and investment returns.<sup>9</sup> The standard deviation is a statistical measure of variation from the average (mean). The higher the standard deviation, the more volatility there is; the lower the standard deviation, the less volatility. More risky investments such as stocks tend to generate higher average returns over the long term, but also have greater volatility as measured by standard deviation; safer investments such as Treasury bonds or bills have relatively low returns as well as low volatility (**Figure 2**). This kind of volatility measure can be generated for investment portfolios as well as particular assets.

Figure 2. Average Nominal Return and Volatility in Key Asset Classes, 1926-2011



Source: Adapted from The H Group 2011, based on data from Ibbotson Associates and Morningstar.

Another widely used measure, **Value-at-Risk (VaR)**, focuses on downside risk. VaR is an estimate of the largest potential loss in portfolio value in a given period of time, usually 12 months, within a given level of statistical probability (known as the confidence level).<sup>10</sup> The commonly used confidence level of 90 percent includes all but the bottom 5 percent and top 5 percent of probable outcomes, calculated from historical data.<sup>11</sup> The VaR is accordingly calculated as the percentage loss in value that a given investment portfolio would have incurred in the 5th percentile 12-month period on historical record. To illustrate, a VaR estimate of 7 percent at 90 percent confidence level means that we are 90 percent certain that the worst possible outcome within 12 months will be a loss in asset value of 7 percent. The VaR in public pension funds fluctuates with economic conditions and varies with portfolio composition, and the acceptable VaR varies with the risk tolerance of each pension fund.

The VaR does not account for the possibility of losses from even rarer economic events that fall outside a given confidence level, sometimes called “tail risk.” However, historical experience indicates that investors have a substantially greater probability of achieving target returns over a period of 30 years compared to 1 year (for an illustration see Table 4 in Section 3). This is because in a longer time frame, the effects of even catastrophic declines such as the 1929 stock market crash and the stagflation of the 1970s tend to be offset by periods of recovery and growth. This long horizon is central to pension investing practices.

staff discretion in setting asset allocation and risk management parameters within established guidelines. **Table 2** provides a sample set of target asset allocations that roughly illustrates how a large pension fund might be invested. In reality, the specific asset mix of each pension will be unique based on its own liabilities, cash flow, and risk tolerance. The average asset allocation and risk profile of public pension funds will be discussed in Section 2.

In addition, the IPS frequently outlines whether particular assets will be managed passively or actively. In **passive management**, the makeup of a portfolio mirrors the benchmark index as much as possible. In doing so, the portfolio will track market returns, and can be expected to earn net returns slightly less than benchmark returns due to trading costs and management fees, which the index does not include. In **active management**, the investment manager tries to outperform the market through strategic buying and selling of securities. Portfolios that exercise active management strategies are expected to generate returns, after trading fees and management expenses, approximately equal to or potentially better than the benchmark.

## Deriving the Expected Rate of Return

Based on the target asset mix chosen through the above asset modeling process, actuaries calculate the expected long-term rate of return on the overall pension fund portfolio. One commonly used method is the building block method.<sup>12</sup> Under this method, actuaries estimate the total return for the pension fund on the basis of expected returns for each component asset class, taking into account the target asset allocations, expenses, and any excess returns from active management. Underlying these investment return projections are assumptions about inflation and “real” returns on investment above inflation.

## Monitoring and Evaluation

In the IPS, each asset class or portfolio is assigned 1) an investment target range, i.e., a range of the share of pension fund assets, 2) an acceptable level of risk or volatility, often quantified in terms of standard deviation and/or Value at Risk, and 3) a benchmark index against which both the returns and the risk will be evaluated. The benchmark is usually a

**Table 2. Hypothetical Large Pension Fund Target Asset Allocation**

	Policy Target	Range
Public equities	47%	+/- 5%
U.S. stocks	28%	+/- 4%
Non-U.S. stocks	19%	+/- 4%
Private equity	8%	+/- 3%
Fixed income	24%	+/- 4%
Alternative investments	8%	+/- 2%
Real estate	8%	+/- 2%
Cash	2%	+/- 1%
Other	3%	+/- 1%
Total	100%	

commonly used securities index such as the S&P 500 for U.S. large company stocks, also called large cap stocks. Such indices provide broad measures of asset class performance by tracking the investment performance of a specific group of securities.

Investment managers are evaluated not only on how their portfolio returns compare to the benchmark, but whether their investment strategy conformed to the risk parameters prescribed in the IPS and whether they took on unnecessary risk for the returns they realized. For example, sometimes the IPS limits the extent to which investment managers deviate from benchmark indexes in their investment strategies. Tracking error is a forward looking measure of how closely a portfolio tracks the index to which it is benchmarked, specifically by quantifying the level of risk incurred in deviating from the benchmark.<sup>13</sup> Comparing excess returns to tracking error reveals whether a portfolio manager took on too much risk for the amount of reward. Another measure called the Sharpe Ratio indicates how well or poorly an investment strategy was rewarded for the level of risk taken.<sup>14</sup> If an investment manager meets or exceeds their investment return targets, but engaged in more risk than was allowed for their assigned portfolio, or more than had been actually necessary to achieve the desired return, they may be replaced or put on a watch list to be monitored to ensure that the overall risk-return profile of the fund stays within acceptable limits.

## II. UNDERSTANDING PENSION FUND INVESTMENT STRATEGIES IN CONTEXT

This section outlines the general risk profile of public pension investments compared to other institutional investors, highlights key findings from research on public pension managers' investment behavior in response to economic shocks, and presents data on the changing asset allocation and risk profile of public pension fund investments. The evidence shows that public pension funds' asset allocation and risk profile are comparable to other institutional investors, including corporate pensions and endowments, and to many prudent individual investors. Finally, research has found that public pensions are patient investors and that between 2006 and 2011 they reduced their overall investment in equities and increased their investment in alternative assets in an effort to smooth out volatility and improve overall returns through a better diversified portfolio.

### How Do Public Pensions Compare with Other Investors in Terms of Risk?

Until the 1960s, public pension funds were invested almost exclusively in bonds and Treasuries. Statutory changes in the 1970s and 1980s allowed public pension funds to adjust toward their corporate counterparts in terms of equity exposure and diversification. Public pensions and private pensions closely resembled each other in their asset allocation strategies until the mid 2000s, when they diverged.<sup>15</sup>

**Figures 3a and 3b** illustrate aggregate asset allocation in state and local retirement systems (comprised primarily of DB assets) on the one hand and private DB pensions on the other, from 1985 to 2011.<sup>16</sup> Figure 3a shows that state and local retirement systems' position in corporate equities (including both stocks and private equity) increased steadily from the 1980s to the late 1990s and peaked in 2005-2007 at 62-63 percent before declining to 59 percent by 2011. (Changes since the 2007-2008 financial crisis based on other data will be discussed in the next section.) Figure 3b shows that corporate DB pensions started out with a higher share of equities than public retirement systems, and increased their position in this asset class through 2005.

Since 2006, corporate pension funds generally have adopted "derisking" investment strategies, in part because new accounting regulations dramatically increased the volatility of private sector pension reported liabilities. Also, as many corporate plans stopped accepting new participants and limited benefit accrual to existing participants, sponsors shifted to a more bond-focused asset allocation. The combined result sharply reduced the equity share between 2006 and 2011, from 60 percent to 38 percent.

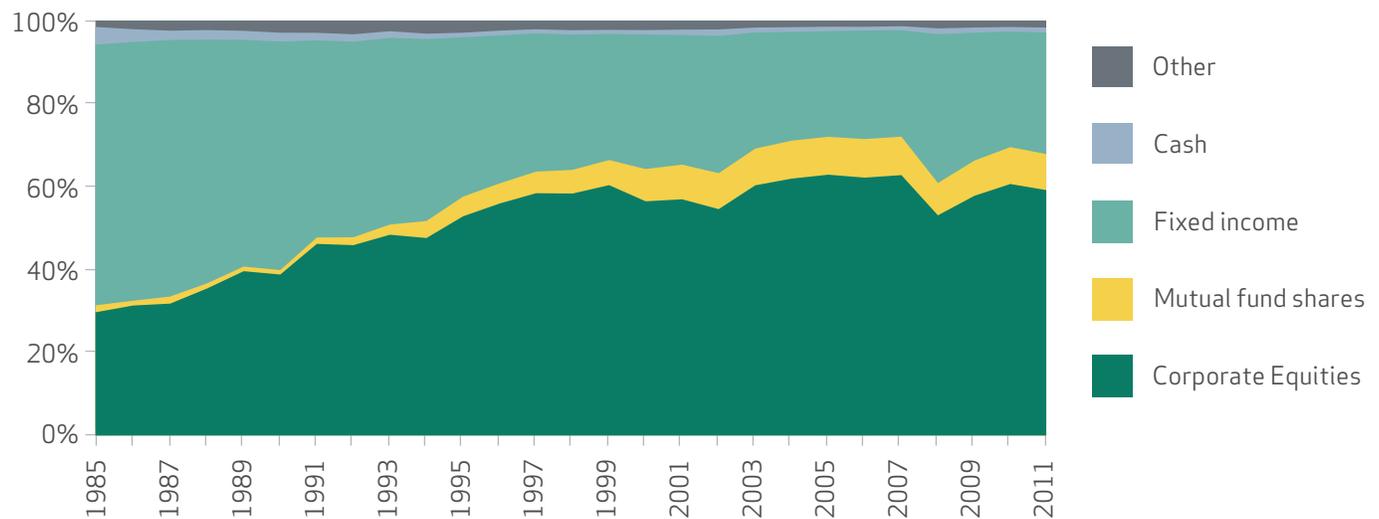
Investment in mutual funds increased during the 1990s for both groups, and also during the 2000s for corporate plans. The Federal Reserve data does not break out component asset classes for mutual funds, but it is worth noting that corporate pensions currently have 14 percent of assets in mutual funds, compared to only 9 percent for state and local retirement systems.

At the other end of the spectrum, endowment funds generally take on higher risk because they can exercise control over how much money they disburse every year, which corporate and public pensions cannot do. According to data from the 2011 NACUBO-Commonfund Study of Endowments, university and college endowment assets were invested in 31 percent equities evenly split between U.S. and non-U.S., 12 percent fixed income, 51 percent alternative strategies, and 4 percent "Other". Alternative asset class strategies consisted of 24 percent private equity, 12 percent real estate, 15 percent natural resources, 7 percent venture capital, and 38 percent "marketable alternatives" including hedge funds, absolute return strategies, and derivatives.<sup>17</sup>

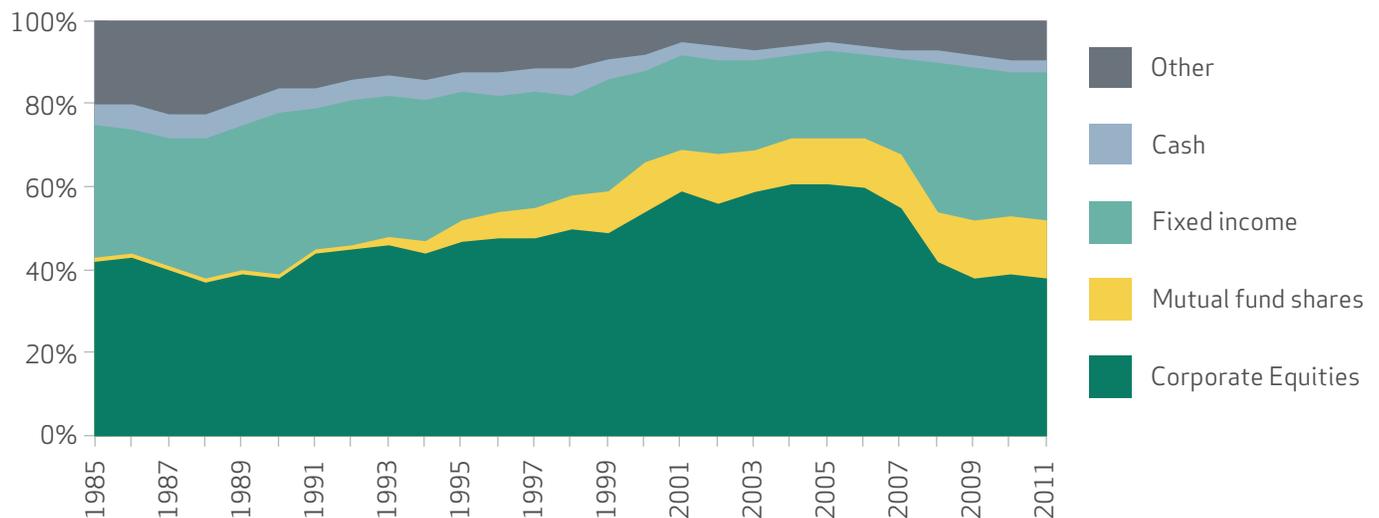
It is also useful to compare public pension asset allocation to optimal asset allocation for individual retirement savings accounts such as 401(k)s. An increasingly recommended strategy is the lifecycle model, which balances risk and reward.<sup>18</sup> In this model, stocks comprise 80-100 percent of the retirement portfolio at the beginning of a working career, depending on the risk tolerance of the individual. The share invested in stocks gradually decreases to about 40 percent of

## Figures 3a-b. Historical Asset Allocation Trends, 1985-2011

### Figure 3a. State and Local Retirement Systems



### Figure 3b. Private Sector DB Plans



Source: Federal Reserve Flow of Funds, 1985-2011

Note: "Other" is a residual category that includes security repurchase agreements and miscellaneous assets in state and local retirement systems; and security repurchase agreements, unallocated insurance contracts, contributions receivable, and other nonspecified assets in private sector DB plans.

the portfolio (with the remainder in fixed income investments including corporate bonds and Treasuries) by retirement age when the individual will cease contributing and begin drawing down their accounts.

In this model, a mid-career worker who is about 20 years away from retirement will have 60-70 percent of their portfolio invested in equities—or even more, depending on how the model is applied. Considering that pension funds have a mix of younger, mid-career, and older workers and pay out a small percentage of assets annually in benefit payments, the average 60 percent position in equities among public pension funds can be considered consistent with the risk-return balancing strategy of the lifecycle investing model. Put another way, if public pension assets were divided among members and invested in lifecycle funds, the resulting aggregate allocation to equities would probably be similar to the current average equity allocation of public pension funds.

In other words, pension plans are taking on no more risk on average than is considered prudent for individuals, who have inherently less capacity to mitigate risk due to shorter investment horizons and who do not have the capacity to diversify their portfolios to the same extent as institutional investors.

## Public Pension Investment Behavior in Response to Market Decline

While pension funds have rational and thorough processes for systematically evaluating risk, making investment decisions, and evaluating the results, concerns nonetheless have been raised in the media that public pensions, as a group, are "chasing" risk in response to market losses or otherwise investing imprudently. However, research on the issue demonstrates that, in general, public pensions are both patient and prudent in their investment style.

Public pensions, unlike many individual investors, are patient investors. Research indicates that they are not unduly swayed by the ups and downs of equity markets and do not "chase returns" by taking on more risk in order to compensate for market downturns. A study by Boivie and Almeida found

that DB pension funds, including public and private pensions, are more patient investors than DC account holders, tending to hold assets for longer periods and making asset allocation changes more gradually.<sup>19</sup>

Weller and Wenger analyzed the relationship between pension plan asset allocation and business cycle swings from 1953 to 2007. They found no evidence that public pension plans responded to underfunding by taking on more risk, i.e., by increasing the share of assets invested in stocks. Rather, plans tended to decrease the share invested in stocks when required contributions increased.<sup>20</sup> This was especially the case after the dot-com bubble burst in 2001. In fact, "larger demands on employers for additional contributions translated into flights from risk rather than a rush toward more risk."<sup>21</sup>

Recent data are consistent with the finding that public pensions do not rush toward risk in response to decreased portfolio values. In the wake of the 2007-2008 financial crisis and in light of inflation risk concerns in the current low interest environment, larger pension funds have recently adjusted their exposure to public equities to 51 percent, reduced fixed income to 25 percent, and increased their exposures to alternative assets including real estate. **Table 3** shows the change in average asset allocation among state pension plans in 2001, 2006, and 2011, calculated by Wilshire Consulting.<sup>22</sup> State retirement funds reduced overall public equity (stock market) exposure by 8.4 percentage points between 2006 and 2011. This included an 11.2 percentage point reduction in the share of assets invested in domestic public equities and an increase of 2.8 percentage points in foreign public equities. The funds also reduced the share of U.S. fixed income assets. The share of assets in the "Other" category, mostly composed of alternative investments, increased from 3.4 percent to 9.3 percent between 2006 and 2011. The use of alternative investments such as real estate, private equity, and hedge funds is aimed at smoothing out the ups and downs caused by market swings, and increasing overall returns through a more diversified portfolio. Furthermore, public pension fund exposure to these alternative assets, while increasing among larger plans, remains relatively low and is offset by lower exposure to the public equity market.

Table 3. Change in Average Asset Allocation among State Pension Plans

Values are percentages	2001	2006	2011	Percentage Point Change	
				2001-2011	2006-2011
<b>Public Equity</b>	<b>56.3</b>	<b>59.4</b>	<b>51.0</b>	<b>-5.3</b>	<b>-8.4</b>
U.S. public equity	43.8	42.3	31.1	-12.7	-11.2
Non-U.S. public equity	12.5	17.1	19.9	7.4	2.8
<b>Private Equity</b>	<b>3.9</b>	<b>4.4</b>	<b>8.2</b>	<b>4.3</b>	<b>3.8</b>
<b>Fixed Income</b>	<b>36.2</b>	<b>28.1</b>	<b>25.0</b>	<b>-11.2</b>	<b>-3.1</b>
U.S. Fixed	34.6	27.2	23.3	-11.3	-3.9
Non-U.S. Fixed	1.6	0.9	1.7	0.1	0.8
<b>Real Estate</b>	<b>3.4</b>	<b>4.8</b>	<b>6.4</b>	<b>3.0</b>	<b>1.6</b>
<b>Other</b>	<b>0.2</b>	<b>3.3</b>	<b>9.5</b>	<b>9.3</b>	<b>6.2</b>
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		

Source: Adapted from Wilshire Consulting 2012, Exhibit 13.

Note: "Other" includes cash and alternative assets. Public equity and fixed income asset class totals are authors' calculations. Totals may not add up due to rounding.

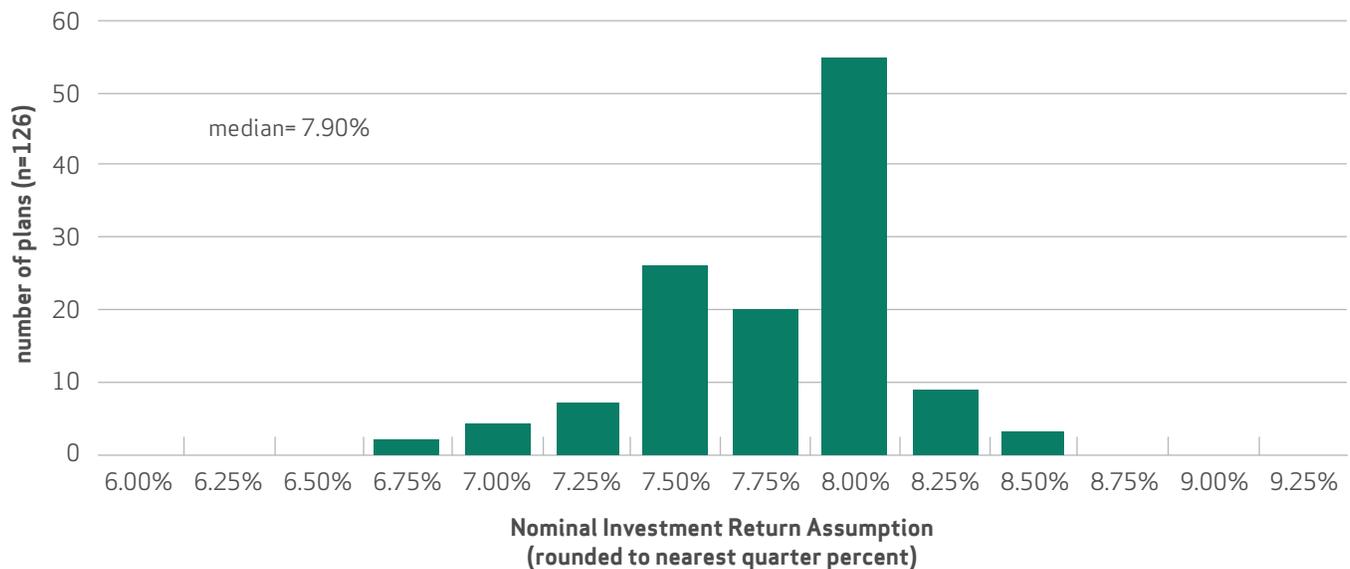
### III. EVALUATING PUBLIC PENSION INVESTMENT PERFORMANCE AND RATE OF RETURN ASSUMPTIONS

How have public pension investments performed in relation to their investment return assumptions? Are these assumptions realistic going forward? This section analyzes short- and longer-term historical data on public pension investment returns and offers a few perspectives from which to evaluate the viability of current assumptions about future long-term pension investment performance. On average, public pension funds have met or exceeded the long-term investment return assumptions over the past 20 to 25 years. Current assumptions are also in line with long-run historical experience dating back to the 1920s. Independent studies also indicate that current rate of return assumptions are not unrealistic in light of current capital market conditions. Finally, in evaluating historical performance and the likelihood of meeting investment goals in the future, it is important to understand not just nominal return assumptions before accounting for inflation, but real returns after inflation.

While the following discusses average return statistics, readers should remember two important things about evaluating investment returns in the case of individual pension funds. First, both overall and component portfolio returns for any individual pension fund should be evaluated against internal benchmarks only. This is because the asset allocation and investment goals for each pension plan are calibrated to meet each plan’s needs based on its unique membership demographics and benefit structure. Second, investment returns need to be considered over the long term because—as even the average statistics that follow demonstrate—short- and medium-term returns are very sensitive to short-term market swings, and pension plan investments are structured to meet liabilities over a very long time horizon.

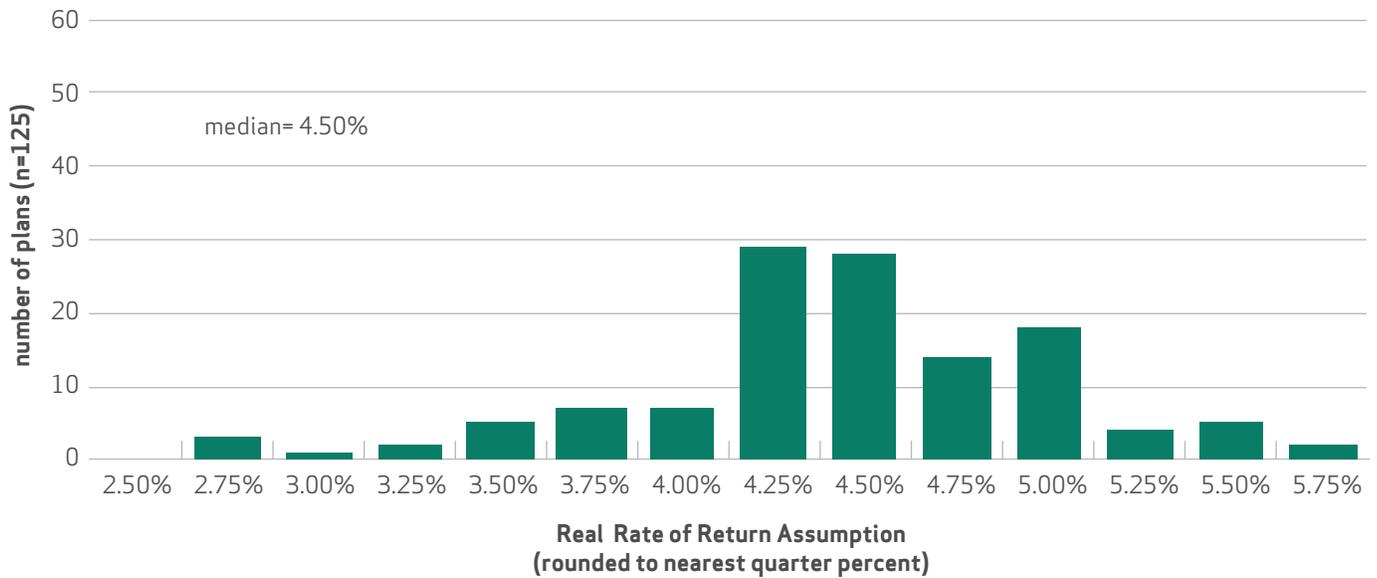
As a preface to discussion that follows, **Figure 4** and **Figure 5** illustrate the distribution of nominal and real (inflation

Figure 4. **Distribution of Nominal Investment Return Assumptions among Public Pensions**



Source: Authors' analysis based on data from NASRA/NCTR Public Fund Survey and authors' research.

Figure 5. **Distribution of Real Investment Return Assumptions among Public Pensions**



Source: Authors' analysis based on data from NASRA/NCTR Public Fund Survey and authors' research.

adjusted) return assumptions, respectively, among public pension funds drawing on the National Association of State Retirement Administrators/National Council on Teacher Retirement Public Fund Survey, augmented by authors' research.<sup>23</sup> In calculating expected investment returns, pension funds incorporate a set of assumptions about inflation and "real" returns (after subtracting the effects of inflation), which together add up to the nominal return assumptions. In Figure 5, the median nominal investment return assumption is 7.9 percent. In Figure 6, which shows the distribution of real investment return assumptions after subtracting the assumed rate of inflation from the nominal return assumption, the median real rate of return assumption is 4.5 percent, and there is a greater degree of variation among funds.

The reason that assumptions about inflation and real returns matter is that if a pension fund earns a 1 percentage point lower return than expected over a long period, and also sees a similar shortfall in wage and price growth—for instance, due to a stagnant economy—the shortfall in assets will be mitigated by lower than expected liabilities. Under most circumstances, it is the real return that matters most. In addition, when comparing investment returns over very long historical time frames, real

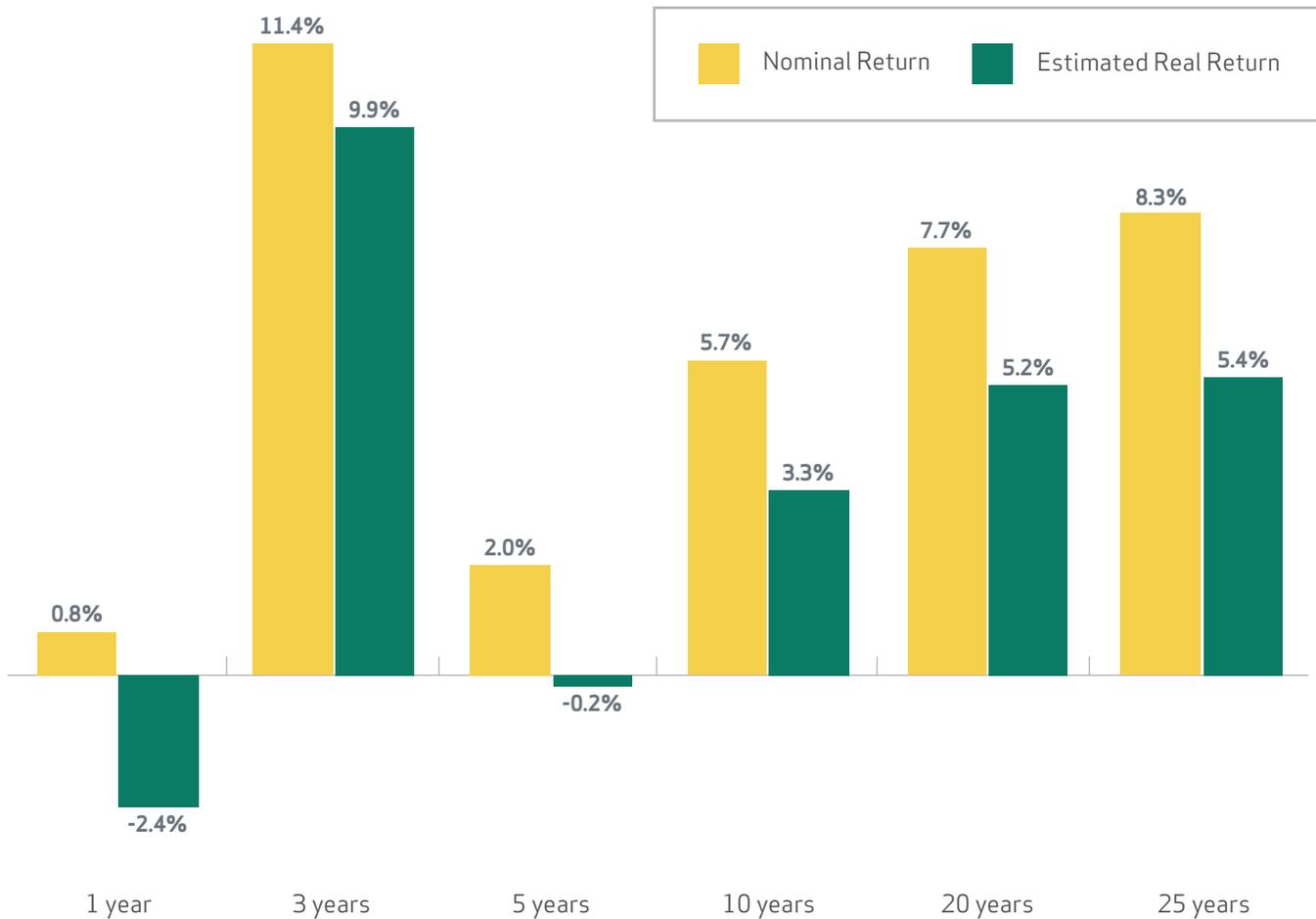
returns are more useful because large differences in inflation can render nominal return comparisons meaningless.

### Returns Have Met or Exceeded Expectations over the Long Term

In response to the current economic climate, public pension funds are incrementally adjusting their rate of return assumptions downwards. Nearly half the plans in the Public Fund Survey reduced their investment return assumption after fiscal year 2008, by an average of four-tenths of a percentage point. The median nominal rate of return assumption among plans in the survey decreased from 8.0 percent in fiscal year 2008 to 7.9 percent as of December 2012, while the mean decreased from 8.0 percent to 7.8 percent.

Nonetheless, public pension fund investment returns have met or exceeded expectations over the long horizon, i.e., 20-30 years. **Figure 6** shows median annualized nominal investment return data for 1-, 3-, 5-, 10-, 20-, and 25-year periods ending December 31, 2011 for public pension funds from Callan Associates.<sup>24</sup> It also includes authors' estimates of real returns for these periods after accounting for inflation.

Figure 6.  
**Public Pension Median Annualized Investment Returns for Period Ended 12/31/2011**



Source: Nominal return data from Callan Associates in NASRA 2012, Fig.1. Estimated real returns calculated by authors using CPI-U.

The figure shows the short-term effects of the precipitous stock market decline in 2008-9 on investment returns (only 2.0 percent nominal in the 5-year time frame), the post-crash recovery (11.4 percent nominal in the 3-year time frame), and the effects of the European debt crisis on financial markets (0.8 percent nominal in the 1-year time frame).

Importantly, the median public pension fund investment return over the 25-year time frame is 8.3 percent in nominal terms, in excess of the historic median investment return assumption of 8 percent. The median real returns over the 20- and 25-

year time frames are over 5 percent, above today's 4.5 percent median real return assumption. This is significant because public pension funds have a long investment horizon—with a flow of contributions and benefit payments that extend several decades into the future—and thus have the advantage of being able to smooth the effects of bubbles and downturns.

More recent data from Callan Associates for periods ending September 30, 2012 show significantly higher returns for public pension funds over the short and medium term: 16.7 percent for 1-year, 9.5 percent for 3-year, 2.3

percent for 5-year, and more than 7.7 percent for the 10-year time frame.<sup>25</sup> This data did not include longer time frames. However, data from the Wilshire Trust Universe Comparison Service (TUCS)—also for periods ending September 30, 2012—shows a 30-year gross return of 9.99 percent for public pensions, before expenses.<sup>26</sup> The TUCS data also show that public pension funds are on par with private pension funds (comprised by corporate, union, and nonprofit pension funds) and endowments in terms of short, medium, and long term performance.<sup>27</sup>

The contrast between performance data dated only nine months apart reflects the sensitivity of short- and medium-term averages to short-term market fluctuations and should serve as a caution to observers against reading too closely into short-term investment returns among public pension funds that invest for the long haul.

## Are Current Investment Return Assumptions Realistic?

Studies indicate that the performance of public pension investments in real terms over the past 20-30 years has not been particularly exceptional compared to historical market returns dating back to the 1920s. Accordingly, current assumptions are in line with historical experience. Furthermore, current assumptions are not out of line with forecast market conditions,

either in comparison to the projected rate of return on riskless government bonds, or in light of independently determined capital market assumptions.

## Looking Backward: Is Past Public Pension Investment Performance Exceptional?

The 25-year average real return of over 5 percent that pension funds have experienced is not just an artifact of the exceptionally rapid growth in equity prices during the 1990s, but is consistent with the average return for 30-year periods over a long historical time frame that includes the 1929 stock market crash and the Great Depression. For instance, Stubbs calculated compound annual real returns (above inflation) of a hypothetical pension portfolio for rolling periods between 1926 and 2010 based on data from Ibbotson Associates (Table 4).<sup>28</sup> The portfolio was composed of 50 percent large cap stocks, 8 percent small cap stocks, 2 percent corporate bonds, and 40 percent Treasuries evenly split between short, medium, and long term maturity buckets. While the overall equity position is similar to the average public pension fund, the hypothetical portfolio is less diversified overall; at the same time, results reflect gross returns and do not account for expenses.

Two important findings follow from Table 4. First, for rolling 30-year periods, the mean compound real return was 5.71 percent real while the worst 30-year period yielded a real

Table 4. Real Returns on a Hypothetical Pension Portfolio—58% Equity/42% Fixed Income—Rolling Periods, 1926-2010

Time Frame (Years)	Number of Periods	Compound Annual Real Returns	
		Average (Mean)	Worst Observed Outcome
1	85	6.28%	-24.60%
5	80	7.30%	-4.56%
10	75	6.59%	-1.47%
20	65	6.14%	1.24%
<b>30</b>	<b>55</b>	<b>5.71%</b>	<b>3.76%</b>
40	45	5.42%	3.91%
50	35	5.47%	4.02%

Source: Adapted from Stubbs 2012, p. 19, Table 3.

return of 3.76 percent.<sup>29</sup> While not directly comparable due to differences in asset allocation, it is nonetheless noteworthy that the historical mean real return of 5.71 percent real is significantly higher than the 4.5 percent assumed by the average pension fund. Second, outcomes are much less volatile over longer time frames than over shorter time frames, as indicated by the spread between mean and worst case returns.

Consistent with the first finding above, a study by the Callan Investment Institute emphasized the need to fully consider actuarial assumptions, including assumptions about wage and price inflation and nominal and real returns, in evaluating investment return assumptions.<sup>30</sup> After fully considering these factors and assessing historical real returns on key asset classes between 1926 and 2010, the study found that “real return assumptions for public plans are in line with historical experience.”<sup>31</sup>

### **Looking Forward: Are Current Assumptions Reasonable?**

Some contend that the 20-30 years preceding the Great Recession saw exceptional equity price growth, and that the “new normal” is an extended period of low stock market returns, low interest rates, and slow economic growth. However, economist Dean Baker notes that public pension investment assumptions are realistic under current market conditions, though they were probably too optimistic during the 1990s. He argues that return projections of 8 percent may not have been realistic at the time of the tech industry fueled stock bubble in the 1990s, when the ratio of stock prices to

earnings (dividends) were at a historic high and thus indicated that stock prices were grossly inflated. In contrast, in the current context when the price-earnings ratio has adjusted to its historical average level, long-term returns on stocks can be expected to be close to their historical norm.<sup>32</sup>

Comparing the above to projected returns on risk-free assets also offers some perspective. The Congressional Budget Office projects long-term real interest rates on risk-free Treasury bonds to be 2.7 percent.<sup>33</sup> The 4.5 percent median real return assumption among public pension funds, invested in diversified portfolios, is less than 2 percentage points higher.

Finally, Milliman, a respected actuarial consulting firm, conducted an analysis of the funded status of public pension funds that included an evaluation of the funds’ investment return assumptions. Milliman reported its own actuarially determined discount rate, which can also be understood as the expected rate of return net of expenses, drawing on their own capital market assumptions. The result was 7.55 percent nominal, close to the mean of 7.80 percent among public pension funds in their study sample (both rates are liability-weighted).<sup>34</sup> The study noted that pension funds are not being overly optimistic in their long-term investment return assumptions.

The Milliman study also reported that 33 percent of plans in the sample had a reported discount rate that was lower than the actuarially determined interest rate for the plan, noting, “this suggests that those plans have included a margin of conservatism in their interest rate assumptions.”<sup>35</sup>

## CONCLUSION

By leveraging the ability to pool risks and invest over a long time horizon, public pensions serve the public interest by delivering retirement benefits efficiently at the same time that they provide a secure and modest retirement income to public employees. The financial goal of pension funds is to have sufficient contributions and investment returns to match these liabilities over a long time frame. Each pension fund has unique needs based on plan demographics and benefit structure, and plans its investment strategy accordingly.

Trustees of public pension plans set investment policies with the advice and support of a number of different professionals. Trustees bear primary fiduciary responsibility on behalf of pension participants to manage the fund for the exclusive benefit of the workers and retirees who participate in the fund. This standard also applies to staff and consultants involved in investments.

Public pension fund investing is managed through rigorous processes that bring trustees, staff, and outside experts together to evaluate and monitor investment risks and optimize returns given the best knowledge available. Pension funds document their principal investment policies in an investment policy statement (IPS), which states how much risk the fund is willing to tolerate and provides guidelines for how fund investments are to be distributed across different asset classes, and sets benchmarks to help evaluate the

performance of each asset class portfolio and the fund as a whole. Trustees periodically review the IPS to determine if changes are necessary in investment strategy in light of current circumstances. Investment managers are evaluated not only on how their portfolio returns compare to the benchmark, but whether their investment strategy conformed to IPS and whether they took on unnecessary risk for the returns they realized.

The overall risk-return profile of public pension funds is consistent with other institutional investors—corporate pensions and endowments—that invest over the long term. Studies indicate that public pensions are patient investors, adjusting asset allocation gradually and tending to decrease rather than increase risk in response to increasing contribution requirements following major asset value declines. Large public pension funds have responded to the challenging financial environment since 2008 by decreasing their overall position in stocks and fixed income assets and increasing their investment in alternative assets in an effort to improve portfolio diversification and reduce volatility.

Finally, public pension fund investment returns have met or exceeded expectations over the long horizon, i.e., 20–30 years. Current investment return assumptions are in line with long-run historical market performance from the 1920s to the present, and are not out of line with forecast market conditions.

## ENDNOTES

- 1 Almeida, B. and W.B. Forna, 2008 (Aug.), "A Better Bang for the Buck: The Economic Efficiencies of Defined Benefit Pension Plans," Washington, DC: National Institute on Retirement Security; Munnell, A.H., J. Libby, J. Prinzivalli, and M. Soto, 2006, "Investment Returns: Defined Benefit vs. 401(k)," *CRR Issue Brief* No. 52, Chestnut Hill, MA: Center for Retirement Research at Boston College; Heale, M., 2012 (Mar.), Presentation for the 2012 National Institute on Retirement Security Annual Policy Conference, Washington, DC.
- 2 National Association of State Retirement Administrators (NASRA), 2012 (Aug.), "Issue Brief: Public Pension Plan Investment Return Assumptions - Updated August 2012."
- 3 Lum, H., 2007 (Dec.), "Internal Management Performed Better," *CEM Insights*, CEM Benchmarking; Dyck, A. and L. Pomorski, 2011, "Is Bigger Better? Size and Performance in Pension Plan Management," Rotman School of Management Working Paper No. 1690724. See also Andonov, A., R.M.M.J. Bauer, and K.J. Martijn, 2012, "Can Large Pension Funds Beat the Market? Asset Allocation, Market Timing, Security Selection, and the Limits of Liquidity," Presented at the 39th Annual Meeting of the European Finance Association, Copenhagen, Denmark.
- 4 P. Jordan, A. Hopkins and S. Kim, 2012 (Jan. 12), "Insight: The Surprising Strength of Canada's Pension Funds," Reuters; *The Economist*, 2012 (Mar. 3), "Maple Revolutionaries: Canada's Public Pension Funds Are Changing the Deal-Making Landscape," Economist.com.
- 5 Dyck and Pomorski 2011, op cit.
- 6 For a more detailed summation of portfolio theory, see Cahill, K.E. and S. Campbell, 2004, "Basic Investment Theory Explained," *Just the Facts on Retirement Issues* No. 9, Chestnut Hill, MA: Center for Retirement Research at Boston College. Asset correlation data in Figure 2 are from The H Group, 2011, "Principles of Asset Allocation," Presentation for Business Administration 406 at the University of Oregon.
- 7 Research on the relationship between asset allocation and portfolio returns shows that market movement accounts for the largest share of variation in returns over time, while asset allocation accounts for 40 percent of variation in returns across diversified funds and all or nearly all of the level of returns in a given time frame: Ibbotson, R.G. and Paul D. Kaplan, 2000, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?," *Financial Analysts Journal*, v56n1(Jan./Feb.):26-33. For a summary of the debate and research on the role of asset allocation in portfolio performance, see Ibbotson, R.G., 2010, "The Importance of Asset Allocation," *Financial Analysts Journal* v66n2: 18-20.
- 8 Ibbotson and Kaplan 2000, op cit.
- 9 For a more detailed examination of risk measures in the context of asset allocation, see Morningstar, 2011 (Dec. 12), "Asset Allocation Optimization Methodology," Morningstar Methodology Paper.
- 10 For an overview of VaR and its role in institutional investing, see Simons, K., 2000, "The Use of Value at Risk by Institutional Investors," *New England Economic Review*, November/December: 21-30; Berry, R., no date, "Value-at-Risk: An Overview of Analytical VaR," J.P. Morgan.
- 11 Generally, data for these estimates begin in 1926 or earlier.
- 12 Actuarial Standards Board, 2007, "Actuarial Standard of Practice No. 27. Selection of Economic Assumptions for Measuring Pension Obligations," Revised Edition Adopted by the Actuarial Standards Board September 2007, Updated for Deviation Language Effective May 1, 2011, Doc. No. 145.
- 13 Tracking error indicates how differently the portfolio is invested from the benchmark index assigned to it, by measuring the volatility of the excess/shortfall in portfolio returns compared to benchmark returns. Passively managed portfolios will have a tracking error target close to zero, given practical limits on funds' ability to exactly replicate the composition of the benchmark index, while actively managed portfolios will be permitted a slightly higher tracking error. A very large tracking error relative to the excess return, or "alpha", that the portfolio has earned is an indication that too much risk relative to the benchmark has been taken on for the amount of reward. For example, if a portfolio for a given asset class in the pension fund exceeded its benchmark return by 0.5 percent, but its tracking error was 5.0 percent, it did not succeed in adding much value relative to the additional risk taken on. Tracking error limits, if specified, ensure that the actual investments made do not deviate too far from the established benchmarks or indexes.
- 14 For a more detailed description of the Sharpe ratio, see Simons 2000, op cit., p. 27.
- 15 Boivie, I. and B. Almeida, 2008 ( Jul.), "Patience Is a Virtue: Asset Allocation Patterns in DB and DC Plans," Issue Brief, Washington, DC: National Institute on Retirement Security.
- 16 Federal Reserve, various years, *Flow of Funds Accounts of the United States: Annual Flows and Outstandings*, Washington, DC: Board of Governors of the Federal Reserve System. The Federal Reserve Flow of Funds Accounts does not break out DB and DC assets for state and local retirement systems. However, the share of DC assets is relatively small.

17 National Association of College and University Business Officers (NACUBO), 2012 (Dec.), "Educational Endowments Returned An Average of 19.2% in FY2011," Washington, DC: NACUBO.

18 Lifecycle fund target asset allocations are not well standardized. For examples of allocation strategies see Dolvin, S.D., W.K. Templeton, and W.J. Rieber, 2010, "Asset Allocation for Retirement: Simple Heuristics and Target-Date Funds," *Journal of Financial Planning* 23(3): 60-71; Financial Security Project at Boston College, 2011, "Why Target Date Funds?," Chestnut Hill, MA: Center for Retirement Research at Boston College; and Towers Watson, 2010, "Lifecycle Strategies: What Next?"

19 Boivie and Almeida 2008, op cit.

20 Weller, C.E. and J.B. Wenger, 2008 (Nov.), "In It for the Long Haul: The Investment Behavior of Public Pensions," Research Report, Washington, DC: National Institute on Retirement Security.

21 Weller and Wenger 2008, op cit., p. 4.

22 Wilshire Consulting, 2012 (Mar. 2), "Report on State Retirement Systems: Funding Levels and Asset Allocation," Santa Monica, CA: Wilshire Associates.

23 The Public Fund Survey, jointly sponsored by the National Association of State Retirement Administrators (NASRA) and the National Council on Teacher Retirement (NCTR), accounts for 85 percent of the state and local pension universe in the U.S. in terms of assets and members. Keith Brainard at NASRA provided the latest available data on rate of return assumption changes and fund actuarial assumptions. The authors updated inflation assumption changes for funds that have recently changed their rate of return assumptions, drawing on pension fund media releases and Comprehensive Annual Financial Reports (CAFRs).

24 Nominal return data from NASRA 2012, op cit.

25 Callan Associates, 2012, "Plan Sponsor Universe: Median Returns For Periods Ended September 30, 2012," [www.callan.com](http://www.callan.com).

26 Wilshire Trust Universe Comparison Services (TUCS), 2012 (Dec. 6), return data for institutional investors generated at authors' request.

27 TUCS 2012, op cit. Gross returns for periods ended September 30, 2012, are as follows:

	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr	30-Yr
Public Pension Funds	17.06	9.37	2.44	7.61	8.02	9.99
Non-Public Pension Funds	17.25	9.33	2.53	7.74	8.61	10.85
Endowments	15.11	8.18	1.83	7.85	8.22	N/A

28 Stubbs, D., 2012, "Guaranteed Retirement Accounts: A Detailed Proposal," Working Paper, p.18, Figure 3. An earlier version of this paper was published as Stubbs, D., 2010 (Jun.), "What Real Rate of Return Could a Guaranteed Retirement Account Credibly and Safely Offer?," SCEPA Working Paper 2010-3, New York, NY: Schwartz Center for Economic and Policy Analysis at the New School for Social Research. The asset allocation of this portfolio reflects the market capitalization of domestic securities in the 2000s.

29 Stubbs 2012, op cit.

30 Callan Associates, 2010 (Jun.), "Investment Return Assumptions for Public Funds: The Historical Record," San Francisco, CA: Callan Investment Institute Research.

31 Callan 2010, op cit., p. 1.

32 Baker, D., 2011 (Feb.), "The Origins and Severity of the Pension Crisis," Washington, DC: Center for Economic and Policy Research.

33 Congressional Budget Office (CBO), 2012 (Aug), *An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022*, Washington, DC: Congressional Budget Office, p. 46-47, Table 2-5.

34 Sielman, R.A., 2012 (Oct.), "2012 Pension Funding Study," Milliman.com.

35 Sielman 2012, op cit., p. 3



NATIONAL INSTITUTE ON  
**Retirement Security**

Reliable Research. Sensible Solutions.

1612 K Street, NW  
Suite 500  
Washington, DC 20006  
[www.nirsonline.org](http://www.nirsonline.org)  
[info@nirsonline.org](mailto:info@nirsonline.org)  
tel: 202.457.8190  
fax: 202.457.8191



# STATE AND LOCAL PENSION COSTS: PRE-CRISIS, POST-CRISIS, AND POST-REFORM

By Alicia H. Munnell, Jean-Pierre Aubry, Anek Belbase, and Joshua Hurwitz\*

## INTRODUCTION

States have begun to respond to their pension challenge by enacting a mix of revenue increases and benefit cuts. These changes will, over time, improve the financial outlook for plans and help ease their impact on other budget priorities. But, to date, the specific nature and magnitude of these effects on plan finances and overall state budgets has received little attention. This *brief* reports on a study designed to fill the void with an analysis of pension costs before the financial crisis, after the financial crisis, and after reforms for a sample of 32 plans in 15 states. The study also introduces a companion series of [fact sheets](#) on each of the sample plans and states.

The discussion is organized as follows. The first section describes the data and methodology used in the analysis. The second section reports the activity

at the plan level with the presentation of the annual required contribution (ARC) as a percent of payroll before the 2008 financial crisis, after the financial crisis, and after reforms. The third section quantifies the budgetary impact of pensions for the state as a whole by looking at the ARCs as a percent of state-local own-source revenues. It also assesses the additional cost burden of retiree health plans and describes a sensitivity analysis that tests the effects of higher or lower asset returns on the pension projections. The final section concludes that most of the sample plans responded with significant pension reforms, generally increasing employee contributions and lowering benefits for new employees. The changes were largest for plans with serious underfunding and those with generous benefits. In most cases, reforms fully offset

\* All of the authors are with the Center for Retirement Research at Boston College (CRR). Alicia H. Munnell is the director of the CRR and the Peter F. Drucker Professor of Management Sciences at Boston College's Carroll School of Management. Jean-Pierre Aubry is assistant director of state and local research. Anek Belbase and Joshua Hurwitz are research associates. Andrew Eschtruth prepared the first draft of this brief. The authors wish to thank Susanto Basu for input on our long-term assumptions. The Center gratefully acknowledges the Russell Sage Foundation for support of this project.

LEARN MORE →

Search for other publications on this topic at:  
[crr.bc.edu](http://crr.bc.edu)

or more than offset the impact of the financial crisis on the sponsors' ARC, and employer contributions to accruing benefits for new employees were cut in half. In short, states have made more changes than commonly thought. Whether these changes stick or not is an open question.

## DATA AND METHODOLOGY

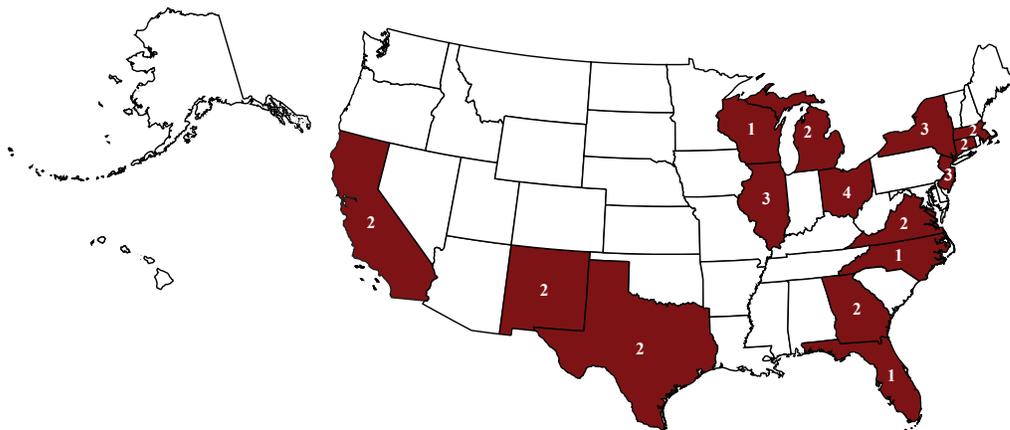
The sample consists of all of the major state-administered pension plans in 15 states, for a total of 32 plans (see Figure 1). These plans constitute 70 percent of aggregate liabilities and 65 percent of members in the *Public Plans Database* (PPD). The sample states were chosen to represent a mix of troubled states (Illinois and New Jersey), model states (Florida and North Carolina), states with expensive plans (California and New York), states that have made dramatic pension changes (Georgia and Michigan), and states that have made only minor changes (Texas and Wisconsin). See Appendix A for a list of the pension plans included in the sample. The main data sources used in the analysis – in addition to the PPD – were the actuarial valuation reports for each plan.

The exercise involves projecting each plan's ARC under three scenarios: pre-crisis, post-crisis, and post-reform. (See Appendix B for a detailed methodology.) The projections are made separately for the two components of the ARC: the employer's contribution to cover its share of normal cost (the cost of accru-

ing benefits) and the payment required to amortize the unfunded liability.<sup>1</sup> In all three scenarios, plans are assumed to pay their full ARC each year and thus gradually pay off past unfunded liabilities. As a result, the amortization payment component of the ARC declines modestly over time relative to total payroll. The precise pattern of the decline varies depending on each plan's amortization schedule.

In terms of normal cost, the pre-crisis level is taken from each plan's 2007 or 2008 actuarial valuation and is assumed to remain constant through 2046. The post-crisis normal cost is taken from the latest valuation before any reforms were undertaken, either 2010 or 2011, and again is assumed to remain constant. The projections of post-reform normal cost depend on the specific actions taken by each plan. Since most reforms apply to new hires only, the impact is very small in the short term and then grows over time. To capture this pattern requires knowing the normal cost for new hires under the reformed benefit schemes. For half the plans, the new hire normal cost was available in the plan's actuarial valuation; for the other half, the figure was either acquired by calling the plan's actuary, calculated using the Center's Pension Model, or adopted from a third-party analysis. To project the trajectory of normal cost post-reform, we simply assume that the current normal cost for the whole population declines linearly from its current level to the normal cost for new hires by 2046, the point at which the system consists only of new hires.

FIGURE 1. STATES AND NUMBER OF STATE-ADMINISTERED PLANS IN SAMPLE



Source: Authors' illustration.

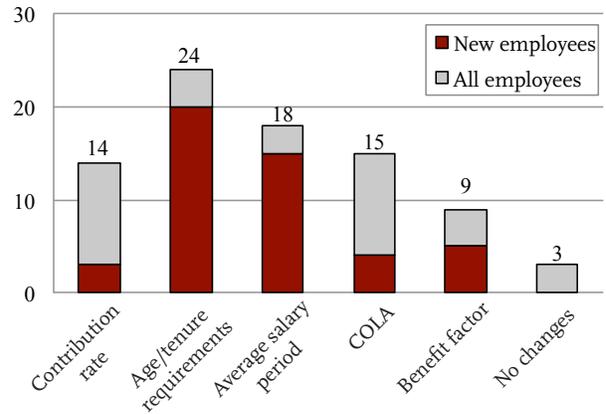
### PLAN LEVEL RESULTS

Figure 2 shows an example of the projections using the Texas Employees Retirement System (ERS) plan. The economic crisis drove up the employer’s annual required contribution; in particular, the amortization payment to cover unfunded liabilities jumped from 1 percent of payroll to 4 percent of payroll. In the wake of the crisis, the Texas ERS plan responded by increasing the employee contribution rate from 6 to 7 percent of payroll. The sponsor also tightened eligibility requirements and lengthened the averaging period used for calculating benefits for new hires, which gradually reduce the projected employer’s contribution to normal cost from 8 percent of payroll today to 6 percent in 2046. Assuming the sponsor pays the full ARC, the employer’s amortization payment will drop from 4 percent to 2 percent. In total, the employer’s cost moves from 7 percent pre-crisis, to 12 percent post-crisis, and eventually to 8 percent post-reform.<sup>2</sup>

An analysis similar to that in Figure 2 was done for each of the 32 plans in the sample, which allows for some generalizations.

First, nearly all of the sample plans (29 out of 32) have enacted some reforms since the crisis in order to reduce future costs. On the contribution side, 14 plans increased employee contribution rates (see Figure 3). On the benefit side, the most common type

FIGURE 3. SAMPLE PLANS MAKING PENSION CHANGES, BY TYPE OF CHANGE

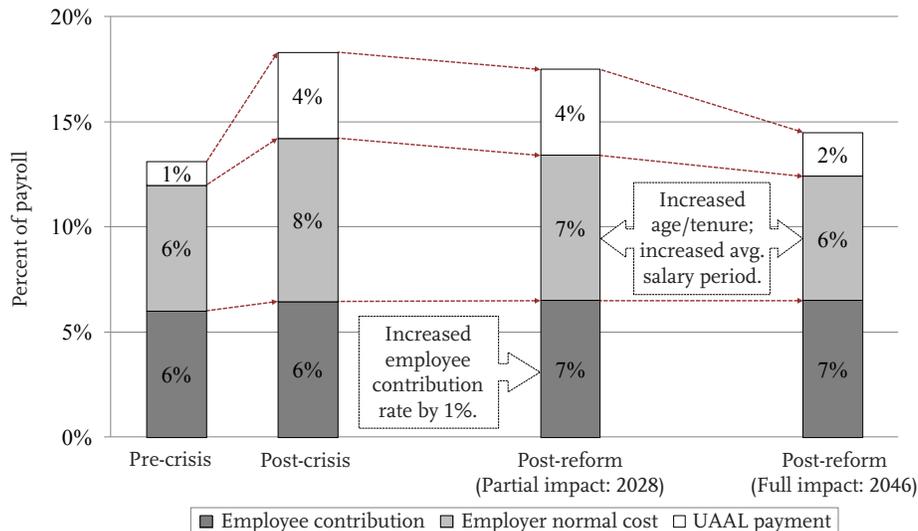


Sources: Actuarial valuation reports and National Conference of State Legislatures (2008-2012, 2011).

of change, adopted by 24 plans, was tightening age and tenure requirements for benefits. Other changes included increases in the salary averaging period used in determining benefits, reductions in the benefit accrual factor, and cuts in cost-of-living adjustments (sometimes for current retirees as well as new hires).

Second, about 40 percent of the plans took actions that roughly offset the impact of the financial crisis on the employer’s ARC, about 20 percent did not make enough changes to fully offset the impact of the

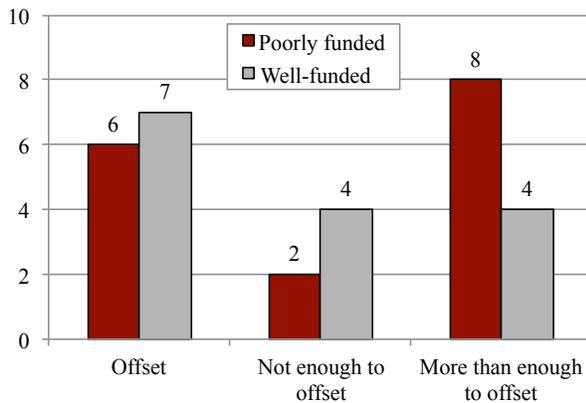
FIGURE 2. PLAN-LEVEL PROJECTIONS FOR TEXAS EMPLOYEES RETIREMENT SYSTEM, ARC AS PERCENT OF PAYROLL, PRE-CRISIS THROUGH POST-REFORM



Sources: Authors’ projections based on actuarial valuations and *Public Plans Database*.

financial crisis, and the remaining 40 percent of the sample appeared to take the crisis as an opportunity to reduce costs below pre-crisis levels (see Figure 4).<sup>3</sup> Poorly funded plans were more likely to “overshoot” than well-funded plans, suggesting an inclination to take more sweeping actions given a more severe problem.<sup>4</sup>

FIGURE 4. EXTENT OF REFORMS COMPARED TO IMPACT OF CRISIS BASED ON ARC AS PERCENT OF PAYROLL, BY PLAN FUNDED STATUS



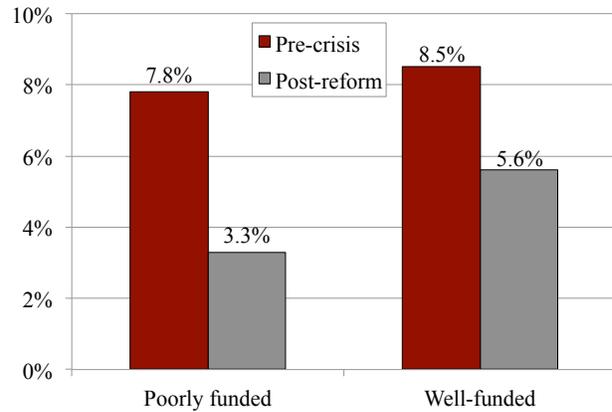
Source: Authors' calculations and actuarial valuations.

Third, the reduction in employer contributions to the ARC was large. As discussed, the ARC consists of two components: contributions to normal cost and payments to amortize the unfunded liability. The only way to reduce the unfunded liability is to cut COLAS for current employees, and some plans did choose this option.<sup>5</sup> The main levers available to employers to reduce their contribution to normal cost are to make employees pay more and/or reduce benefits (generally for new employees). Overall, the employer's normal cost payment, a measure of the generosity of the plan, drops by nearly half – from 8.2 percent to 4.4 percent once the reforms are fully phased in.

Fourth, changes in the employer normal cost contributions were systematically related to plan characteristics. The plans with the largest projected reductions are those that were poorly funded and those with generous benefits. The poorly funded plans reduced their normal cost as a share of payroll from 7.8 percent to 3.3 percent, on average, compared

to 8.5 percent to 5.6 percent for well-funded plans (see Figure 5). The story is similar when comparing generous plans – those in the top half of the sample

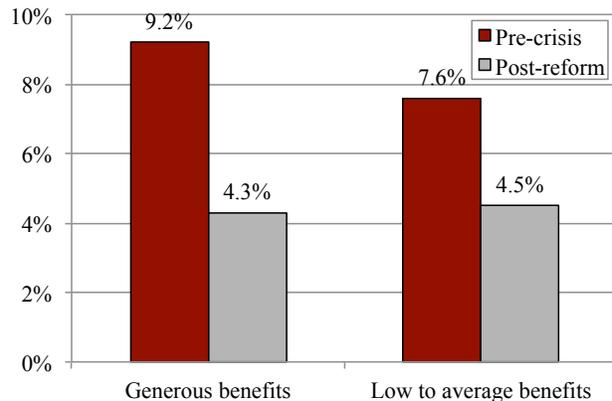
FIGURE 5. EMPLOYER NORMAL COST AS PERCENT OF PAYROLL, PRE-CRISIS AND POST-REFORM, BY FUNDED STATUS



Source: Authors' calculations and actuarial valuations.

in terms of total normal cost – to plans with low to average benefits (see Figure 6). This behavior suggests that plans were generally reacting in ways that were calibrated to the size of the challenge they faced.

FIGURE 6. EMPLOYER NORMAL COST AS PERCENT OF PAYROLL, PRE-CRISIS AND POST-REFORM, BY PLAN GENEROSITY



Source: Authors' calculations and actuarial valuations.

Finally, in addition to revisions in benefits and contributions, many plans also changed their amortization period and/or their assumed rate of return used to discount future benefits. Thirteen plans changed their amortization periods, with six plans lengthening the period and seven plans shortening the period. Lengthening the amortization period stretches out the schedule for paying off unfunded liabilities; a longer amortization period lowers the required amortization payments and provides some immediate relief in the form of lower ARC payments. Shortening the period has the opposite effect; it raises a plan’s ARC. With respect to the assumed rate of return, all of the changes went in the same direction with 10 plans lowering their rates, typically by about 0.5 percentage points.<sup>6</sup> Lower discount rates raise the ARC by increasing plan liabilities; these changes are clearly a reaction to the post-financial crisis environment in which many observers consider the traditional assumed asset return of 8 percent too optimistic.

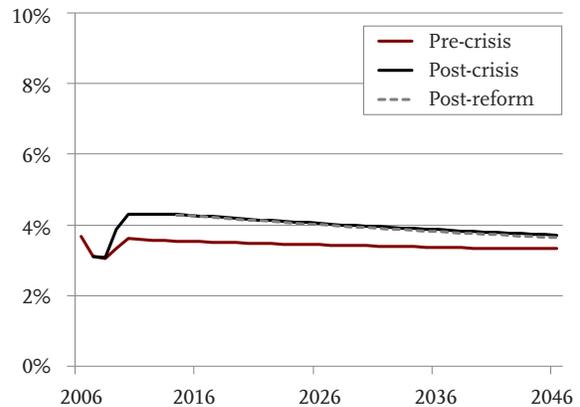
### IMPACT ON STATE-LOCAL BUDGETS

From a policy perspective, the key issue is the total budgetary commitment represented by all pension plans in the state. To assess the impact of employer pension costs on overall state budgets, the ARCs for all of the state-administered pension plans in each state are combined with those for local plans. The projected costs for state-administered plans in our sample are based on the detailed calculations described above; the costs for the locally-administered plans in each state are assumed to stay at current levels as a percent of budgets.<sup>7</sup> For those plans that contain a defined contribution (DC) component, the costs also include the minimum contribution allowed by the DC plan. The budget measure is defined as general own-source state-local revenues.<sup>8</sup>

Figure 7 shows the projections for the state of Texas. In this case, the combined effect of all the state’s plans shows that the economic crisis increased the share of the state-local budget devoted to pensions from 3.1 percent to 4.3 percent. The reforms themselves, with all plans combined, were modest because Texas Teachers, which accounts for 80 percent of membership, made no changes. As a result, the post-crisis path is nearly the same as the post-reform path.

Again, an analysis similar to that portrayed above for Texas was undertaken for each of the 15 states, allowing an assessment of the overall impact of the changes. Before the economic crisis, the ARC for

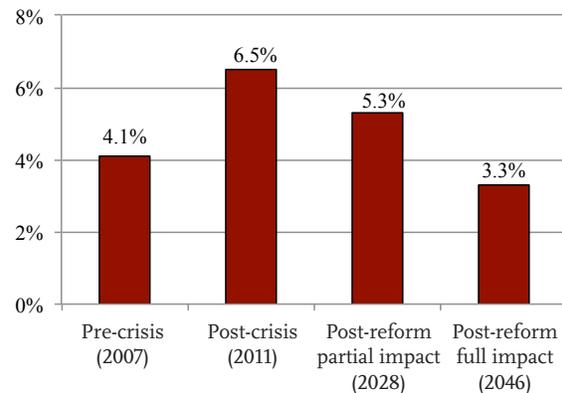
FIGURE 7. STATE-LEVEL PROJECTIONS FOR TEXAS PENSIONS, AS PERCENT OF STATE-LOCAL BUDGET, 2006-2046



Sources: Authors’ projections based on plan actuarial valuations; *Public Plans Database*; and U.S. Census Bureau (2006-2012).

the sample was 4.1 percent of own-source state and local revenues; this share jumped to 6.5 percent after the crisis (see Figure 8). The post-crisis ARCs varied considerably across states: Connecticut’s post-crisis pension cost was 7.0 percent of its budget, while Wisconsin’s was only 3.4 percent. Regardless of their circumstances, all of the sample states experienced a significant increase in pension costs as a result of the

FIGURE 8. PENSION COSTS AS PERCENT OF STATE-LOCAL BUDGETS, SAMPLE AVERAGE, PRE-CRISIS THROUGH POST-REFORM



Source: Authors’ calculations and actuarial valuations.

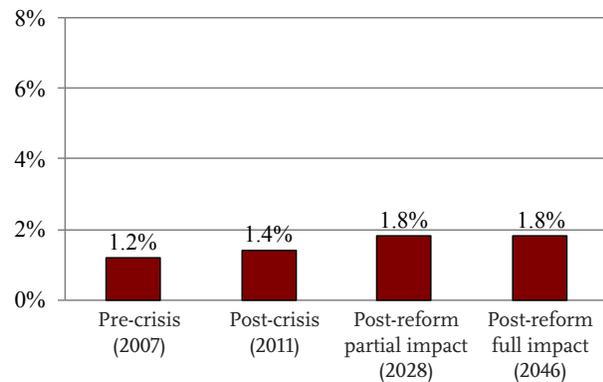
economic crisis. This increased budgetary pressure, of course, is one of the factors driving the pension reform activity described above. As shown, the reforms are projected to gradually reduce budget pressures for the sample states so that, when fully phased in by 2046, pension costs will drop to 3.3 percent of budgets, below the pre-crisis level. Pension expense, however, is not the only commitment that states and localities have to retirees; they are also responsible for retiree health insurance.

### IMPACT OF RETIREE HEALTH

Retiree health programs represent a smaller financial commitment than pensions – both in terms of annual cost and unfunded liabilities – but they still pose a significant potential concern for state budget policy. One reason is that, since they are generally funded on a pay-as-you-go basis, costs will naturally rise as baby boomers retire. Another reason is the high inflation associated with health care costs.

The baseline data for the retiree health cost projections come from each plan's latest actuarial valuation. The baseline cost level is then assumed to grow with health care cost inflation over time.<sup>9</sup> On average, for the sample states, retiree health plans currently account for 1.4 percent of budgets, a figure that will grow over time (see Figure 9). Given that these programs are a smaller portion of state budgets today and they are generally not subject to the same funding

FIGURE 9. RETIREE HEALTH COSTS AS PERCENT OF STATE-LOCAL BUDGETS, SAMPLE AVERAGE, PRE-CRISIS THROUGH POST-REFORM



Source: Authors' calculations and actuarial valuations.

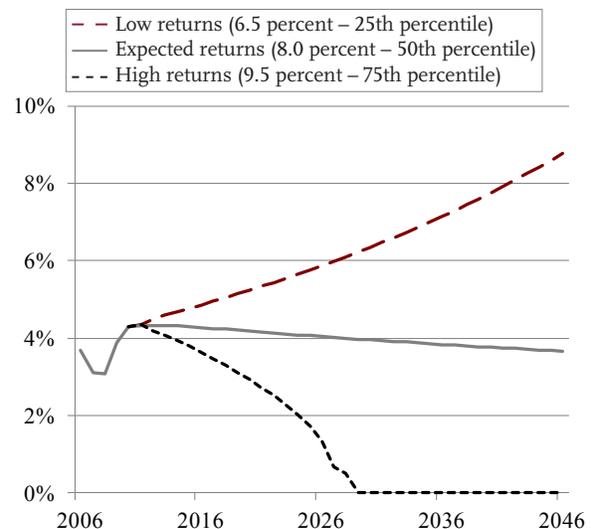
discipline, the political pressure to scale them back has not been as intense as for pensions. Nevertheless, some of the sample states have made cutbacks in these programs, mainly by tightening eligibility requirements and shifting more costs to participants. These changes are reflected in the 1.4 percent number for 2011.

### SENSITIVITY ANALYSIS OF PROJECTIONS TO ASSET RETURNS

One important determinant of the funded status of pension plans is the long-term rate of return earned on plan assets. The projections summarized above use each plan's assumed long-term rate, which is generally around 8 percent. To test the sensitivity of the results, a Monte Carlo analysis was performed for one state – Texas – that shows the impact of potential variations in the rate of return. This example illustrates the likely range of effects that other sample plans would experience.

The results of the exercise (see Figure 10) show that pension costs as a share of the budget in Texas could vary from almost 9 percent under a low return of 6.5 percent (representing the 25th percentile of possible outcomes) to zero percent under a high

FIGURE 10. STATE-LEVEL PROJECTIONS FOR TEXAS: ARC AS PERCENT OF PAYROLL, BY ASSUMED RATE OF RETURN, 2006-2046



Source: Authors' calculations and actuarial valuations.

return of 9.5 percent (representing the 75th percentile of possible outcomes). The high-return outcome assumes that the sponsor uses any overfunding to cover normal cost. The point, however, is that future outcomes depend crucially on what plan sponsors earn on their assets.

## CONCLUSION

State and local governments have been facing an extraordinarily difficult fiscal environment in recent years. One of the many challenges has been restoring public pension plans to a sound fiscal footing after the damage caused by the economic crisis of 2007-09. The results of this analysis suggest that, in many states, policymakers have made serious efforts to get their plans back on track. It also appears that states have tended to calibrate their responses to the size of the problems that they face.

Several caveats are important. First, whether plans stick with the reforms or instead expand benefits again when the economy improves is an open question. Second, the projections presented in this study assume that plans consistently make their annual required contribution, a degree of fiscal discipline that has been lacking in some jurisdictions. Third, retiree health plans represent an additional and growing claim on state-local budgets, given the rising number of retirees and health care cost inflation. Finally, plan finances are sensitive to the performance of the stock market, so lower-than-expected returns going forward could raise costs.

## ENDNOTES

1 For any given year, the contribution rate resulting from this analysis is the rate calculated in that year's actuarial valuation. These contribution rates are often prospective and, in most cases, are applied to payroll two years after the valuation is performed.

2 These figures are available for all of the sample plans in the fact sheets on the Center's website (<http://crr.bc.edu/special-projects/state-local-pension-plans>).

3 The Michigan State Employees' Retirement System defined benefit plan is excluded from Figures 4, 5, and 6 because it has been closed to new employees since 1997. For this reason, and not due to reforms, the costs for the plan are projected to decline rapidly as it winds down.

4 Poorly funded plans are defined as those plans with pre-crisis funded ratios below 80 percent that generally pay less than 80 percent of their ARC.

5 Since, in most cases, the cost of the COLAs for current workers and retirees is included in the liability calculations, suspending or reducing the COLA for current participants lowers the calculated liability.

6 The discount rate for Georgia TRS actually increased after the crisis due to their unique method for calculating the assumed investment return (discount rate). Georgia TRS's discount rate accounts for recent investment experience and increases or decreases the future expected return so that the long-term return equals 8 percent. This approach has the effect of lowering expected returns after periods of market gains, and increasing expected returns after market troughs.

7 In this analysis, "local" plans also include municipal plans that are administered by the state. The assumption of constant costs is realistic for states like New Mexico and Wisconsin, where all plans are state-administered, and for states like Florida, where the local plans have taken no action despite the reform at the state level. The assumption is less good for Massachusetts, where the local plans have followed changes adopted at the state level.

8 Own-source revenues exclude revenues received from other levels of government, such as federal contributions for Medicaid.

9 Ideally, the projections would be based on projections of both health care costs and the expected number of retirees each year. But retiree data are not available, so the retiree population is assumed to remain constant. As a result, the projections will understate costs in the early years during the baby boomer retirement, but will then overstate costs in the later years. On balance, these effects will likely offset one another over the 35-year period.

## REFERENCES

- Congressional Budget Office. 2012. "Supplemental Data to The 2012 Long-Term Budget Outlook." Washington, DC. Available at: <http://www.cbo.gov/publication/43288>.
- National Conference of State Legislatures. 2008-2012. "Pensions and Retirement Plan Enactments in 2010." Washington, DC.
- National Conference of State Legislatures. 2011. "State Pensions and Retirement Legislation: 2011." Washington, DC.
- Public Plans Database*. 2009-2012. Center for Retirement Research at Boston College and Center for State and Local Government Excellence.
- U.S. Census Bureau. 2006-2012. *State and Local Government Finances*. Washington, DC.

---

# APPENDICES

---

## APPENDIX A: SAMPLE PLANS

---

### Plan

---

California Public Employees' Retirement Fund  
California State Teachers' Retirement System  
Florida Retirement System  
Employees' Retirement System of Georgia - ERS  
Teachers Retirement System of Georgia - TRS  
Illinois State Universities Retirement System  
Illinois Teachers' Retirement System  
Illinois State Employees' Retirement System  
Massachusetts State Retirement System  
Massachusetts Teachers' Retirement System  
Michigan State Employees' Retirement System  
Michigan Public School Employees' Retirement System  
New Jersey Public Employees' Retirement System  
New Jersey Police and Firemen's Retirement System  
New Jersey Teachers' Pension and Annuity Fund  
New York State and Local Employees' Retirement System  
New York State and Local Police and Fire Retirement System  
New York State Teachers' Retirement System  
North Carolina Teachers' and State Employees' Retirement System  
Ohio Public Employees Retirement System  
Ohio Police & Fire Pension Fund  
Ohio School Employees' Retirement System  
Ohio State Teachers Retirement System  
Connecticut State Employees Retirement System (SERS)  
Connecticut State Teachers' Retirement System (TRS)  
Texas Employees Retirement System (ERS)  
Texas Teacher Retirement System (TRS)  
Virginia Teachers Retirement System (TRS)  
Virginia State Employees Retirement System (SERS)  
New Mexico Public Employees Retirement Association (PERA)  
New Mexico Educational Retirement Board (ERB)  
Wisconsin Employees Retirement System

---

## APPENDIX B: METHODOLOGY

The main purpose of our analysis is to project pension costs, defined as the annual required contribution, as a percent of state and local budgets for our sample of 32 state-administered pension systems spanning 15 states, under the three scenarios described below.

1. Pre-crisis: 2007 (or 2008) to 2046 – pension costs as if the 2008-2009 financial crisis had never occurred.
2. Post-crisis: 2010 (or 2011) to 2046 – pension costs after the crisis, but excluding any reforms made by the pension system in the wake of the crisis.
3. Post-reform: 2011 to 2046 – pension costs incorporating reforms made to the pension system in response to the crisis.

We begin by calculating pension costs as a percent of payroll in the three scenarios because much of the data provided in pension financial and actuarial reports are expressed in this form, and most actuarial calculations are also done as a percent of payroll. In order to convert the percent of payroll figures to percent of budget, we must multiply them by the payroll as a percent of budget in each year. As such, a central component to this analysis is the projection of state and local budgets and state and local payroll as a percent of those budgets.

### STATE AND LOCAL BUDGETS (GENERAL OWN-SOURCE REVENUES)

The analysis assumes the ratio of state and local revenues to national GDP remains constant at 2010/2011 levels. Data on state and local revenue are from the Census of Government Finances. Data on historical and projected GDP are from the Congressional Budget Office (CBO). Historically, the ratio of revenues to GDP has fluctuated very little for most states. However, there are some notable exceptions. Over a period of decades, the revenue-to-GDP ratio for Southern states has grown in relative terms, while the ratio for Midwestern states has shrunk. For states included in this analysis, Texas and Florida have steadily grown relative to GDP, while Michigan, Ohio, and Illinois have all shrunk. Thus, using the assumption of a steady relationship between revenue and GDP will somewhat understate the pension burden for Midwestern states and overstate it for Southern states.

### PAYROLL

This analysis assumes that the payroll-to-revenue ratio remains constant at 2010/2011 levels. However, based on data from the Census of Government Finances, the ratio of state and local payroll to general own-source revenues has been declining over the past 20 years. This historical decline was the result of strong growth in government revenue rather than a decline (or weak growth) in payrolls. After the 2008-2009 financial crisis, however, governments actively cut their payrolls through workforce reductions, wage freezes, or furloughs. If these payroll cuts are short-term, rapid rehiring may raise the payroll-to-revenue ratio. If recent payroll reductions are part of a more permanent policy, then the payroll-to-revenue ratio may continue to fall as revenues rebound. Given the uncertainty, assuming that the 2010/2011 ratio remains constant is a reasonable approach. Also, using the same ratio of payroll to budget for all scenarios provides a clearer measure of the impact that the crisis, and subsequent reforms, have on pension costs as a percent of budget.

## ABOUT THE CENTER

The Center for Retirement Research at Boston College was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and educational tools and forge a strong link between the academic community and decision-makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources. Since its inception, the Center has established a reputation as an authoritative source of information on all major aspects of the retirement income debate.

## AFFILIATED INSTITUTIONS

The Brookings Institution  
 Massachusetts Institute of Technology  
 Syracuse University  
 Urban Institute

## CONTACT INFORMATION

Center for Retirement Research  
 Boston College  
 Hovey House  
 140 Commonwealth Avenue  
 Chestnut Hill, MA 02467-3808  
 Phone: (617) 552-1762  
 Fax: (617) 552-0191  
 E-mail: [crr@bc.edu](mailto:crr@bc.edu)  
 Website: <http://crr.bc.edu>



*Visit our:*

**PUBLIC PLANS DATABASE**

→ *[pubplans.bc.edu](http://pubplans.bc.edu)*

© 2013, by Trustees of Boston College, Center for Retirement Research. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that the authors are identified and full credit, including copyright notice, is given to Trustees of Boston College, Center for Retirement Research.

The research reported herein was performed pursuant to a grant from the Russell Sage Foundation. The opinions and conclusions expressed are solely those of the authors and do not represent the opinions or policy of the Russell Sage Foundation or the Center for Retirement Research at Boston College.

Reproduced with permission from Pension & Benefits Daily, 33 PBD, 02/19/2013. Copyright © 2013 by The Bureau of National Affairs, Inc. (800-372-1033) <http://www.bna.com>

## Plight of Public Pensions Not So Ominous, as Funding of Most Plans Expected to Improve



BY KEITH BRAINARD

**B**ob Williams painted an ominous picture of the current state and future of public pension plans in his BNA Insights article titled “It’s Overwhelming: Fundamental Flaws Doom Governmental Defined Benefit Plans” (225 PBD, 11/26/12;39 BPR 2273, 11/27/12), in which he relies on a litany of hand-wringing and doomsday predictions about the current and future condition of public pension plans.

Fortunately, the actual condition of the pension plans covering the vast majority of employees of state and local government is far better. Williams’s pessimism relies on a careful selection of sources and disregards the views of credible experts. He also errs in treating public pensions as a single, uniform entity and by overlooking the effects of the substantive pension reforms approved in recent years by nearly every state.

Williams begins by contending that states and local governments failed to fund public pension promises. In fact, most states and cities in recent years have paid all or most of their required pension contributions; some

*Keith Brainard ([keithb@nasra.org](mailto:keithb@nasra.org)) is the director of research for the National Association of State Retirement Administrators in Georgetown, Texas, for which he collects, prepares, and distributes studies and reports pertinent to public retirement system administration and policy. He has discussed public pension issues before Congress, state legislative committees, and public pension boards of trustees, and on broadcast television and radio, as well as for print media.*

have not. As with most public pension issues, the answer is not black and white, but rather, varies widely from state to state and plan to plan.

### A Few in Trouble, Most Not

In her book, *State and Local Pensions, What Now?*, Alicia Munnell, the director of the Center for Retirement Research at Boston College, states:

[A] relatively small group of states—Illinois, Kentucky, Louisiana, New Jersey, and Pennsylvania—could be considered bad actors in terms of pension funding. . . . These states have led many observers to conclude that public pension plans generally have been mismanaged. But an equally large number of states—Delaware, Florida, Georgia, Tennessee, and New York—have done a good job in terms of providing reasonable benefits, paying the ARC [annual required contribution], and funding. They, like all entities, have been battered by the financial collapse and ensuing recession, but their funding status should improve as the economy recovers.<sup>1</sup>

According to the Public Fund Survey, the average ARC received by public pension plans since FY 2001 has been nearly 90 percent. This includes many plans that have consistently received 100 percent or more of their ARC, and some that have consistently received far less.

An overarching image of public pensions depicted by Williams is that all public pension plans are unsustainable and in poor condition. In fact, a wide range exists in public pension funding levels and conditions, even within some states. In its 10th Annual Public Pension Funding Review, Loop Capital states:

Despite the continued clamor, our view remains fundamentally the same as last year: The public pension plan problem is state specific, and not systemic in nature; the pace of improvement across the states is uneven, with some states making little or no progress while others advance; each state has its own unique path to recovery.<sup>2</sup>

The treatment of public pensions as a single, uniform entity is similarly addressed by Nuveen Asset Management:

<sup>1</sup> Alicia H. Munnell, *State and Local Pensions: What Now?* (2012)

<sup>2</sup> Chris Mier and Ann Kibler, *Tenth Annual Public Pension Funding Review Loop Capital Markets* (Sept. 2012), <http://www.wikipension.com/images/2/20/Loop12.pdf>.

Though headlines and various reports may discuss municipal issuers and their pension obligations as a uniform problem, the reality is that the municipal market remains highly individualized and doesn't lend itself to sweeping generalizations.<sup>3</sup>

### Risk-Free Interest Rate Versus Reality

Williams also cites estimations of liabilities that are calculated through the use of a so-called risk-free interest rate. When calculating pension liabilities, the lower the interest rate, the higher the liabilities. Because the Federal Reserve Board's current monetary policy is artificially keeping interest-rate yields near record lows, this method for assessing liabilities produces a record and artificially high calculation.

The \$5 trillion estimate of aggregate liabilities cited by Williams is based on an interest rate of 3.36 percent. This rate is lower—substantially—than not only the rate used by public pension plans, but it is also far lower than the rate used even by corporate pension plans. Moreover, this calculation has little practical value: It is not helpful for determining a pension plan's required contributions or how a pension fund should invest its assets. In reality, this approach reveals more about the nation's bond market than anything else.

### Long-Term Investment Returns

Williams's charge of "lax accounting practices" used by public pensions presumably refers to the manner in which they calculate their liabilities. Rather than using current interest rates, public pensions calculate their liabilities using their expected long-term investment return, typically 7.5 percent to 8 percent. This method is intended to promote stability and predictability in the cost of the plan and to ensure each generation of taxpayers pays for the cost of public services it receives. During the past 10-, 20-, and 25-year periods, public pension funds have met or exceeded their expected long-term investment returns.<sup>4</sup>

The use of the long-term expected investment return has also been endorsed by the Governmental Accounting Standards Board (GASB). After several years of consideration and debate, GASB recently issued new standards for how public pensions determine and report their liabilities (122 PBD, 6/26/12; 39 BPR 1270, 7/3/12). GASB heard from a wide variety of industry observers and participants and considered all perspectives. Ultimately, GASB rejected the economists' preferred method for valuing pension liabilities, instead preserving the use of the plan's long-term expected investment return as long as the plan is projected to have assets.

Charles Millard, former executive director of the Pension Benefit Guaranty Corporation, said recently "the discount rate should not be based on the interest rates we see right now. It should be based on what we think

<sup>3</sup> Shawn P. O'Leary, *Municipal Pension Funding: A Tale of Four Cities* Nuveen Asset Management (Oct. 2012), <http://www.nuveen.com/Home/Documents/Viewer.aspx?fileId=57279>.

<sup>4</sup> National Association of State Retirement Administrators Issue Brief: Public Pension Plan Investment Return Assumptions (updated Jan. 2013), <http://www.nasra.org/resources/issuebrief120626.pdf>.

those liabilities are likely to cost over decades. An average, or a smoothed, interest rate makes much more sense."<sup>5</sup>

The national benefits consulting firm Milliman, in its 2012 Public Pension Funding Study, said it believes a discount rate of 7.65 percent is appropriate for public pensions, stating:

[T]here are only a small number of plans whose interest rate assumptions are causing a sizeable underreporting of liability relative to what would be calculated based on current forecasts of future investment returns; in fact, there are a surprising number of plans whose interest rate assumptions and accrued liability reporting are conservative in light of current forecasts.<sup>6</sup>

Williams also minimizes the value of the many public pension reforms approved by nearly every state in recent years, contending that states and cities have "done very little, if anything, to address the unfunded liability." That charge would be news to policymakers and plan participants in a growing number of states, including Colorado, Florida, Maine, Minnesota, New Jersey, Oklahoma, Rhode Island, and South Dakota, where pension reforms have reduced unfunded liabilities by billions of dollars and reduced employers' future pension costs.

### Public Pension Reforms

In its 10th Annual Public Pension Funding Review, Loop Capital recognized the value of reforms around the country, saying: "There has been a record setting number of fiscally responsible pension reform measures enacted this year that focus on addressing the structural deficiencies in most public pension plan systems. . . . The solution to the pension crisis depends on the magnitude of the problem."<sup>7</sup>

Standard & Poor's, in a June 2012 report, also recognized the value of the reforms Williams scoffs at:

Pension systems are undergoing the most significant level of reform in decades, which we view as a credit positive. . . . Most states have sufficient assets in their pension trusts to fund benefits payments over the near to medium term and in many cases, long term. Contributions to fund the state share of pension benefits typically represent a relatively small portion of state budgets and we don't expect them to threaten debt-paying abilities in the near term.<sup>8</sup>

One type of reform that has been implemented in many states has been the imposition of higher pension contribution rates for employees. According to the National Conference of State Legislatures and the National Association of State Retirement Administrators, required contribution rates have been increased in re-

<sup>5</sup> Charles Millard, *Pension Reform Could Stem DB Plan Closures* FundFire (Jan. 7, 2013).

<sup>6</sup> Rebecca A. Sielman, *2012 Public Pension Funding Study* Milliman (Oct. 2012), <http://www.milliman.com/expertise/employee-benefits/products-tools/public-pension-funding-study/pdfs/2012-public-pension-funding-study.pdf>.

<sup>7</sup> Chris Mier & Ann Kibler, *Tenth Annual Public Pension Funding Review* Loop Capital Markets (Sept. 2012), <http://www.wikipension.com/images/2/20/Loop12.pdf>.

<sup>8</sup> John Sugden, Robin Prunty, and Gabriel Petek, *The Decline In U.S. States' Pension Funding Decelerates, but Reform and Reporting Issues Loom Large*, Standard & Poor's (June 21, 2012), [http://wikipension.com/images/d/d9/2012\\_Pension\\_Report.pdf](http://wikipension.com/images/d/d9/2012_Pension_Report.pdf).

cent years for employees in 28 states. In many cases, required contributions are applied not just to new hires but also to existing plan participants.

Standard & Poor's has acknowledged that states and cities have a long track record of making changes necessary to maintain the sustainability of their pension plans. Investment markets continue to recover, and public pension funding levels will improve as a combination of lower benefits, higher employee contributions, and rising investment markets reduce unfunded pension liabilities and pension costs.

### Taking Steps in the Right Direction

Unquestionably, there are examples of serious funding problems among public pensions. In particular, states and cities that have failed to make required contributions, and some that have increased benefits without ensuring a means to pay for those benefits, are in trouble. In most cases in which pension shortfalls are serious, plan sponsors have taken action or are working to do so.

The pessimism Williams displays is unjustified, as is the implication that every public pension plan is unsustainable. State and local governments should base policy decisions on facts, not anecdotes. Rather than pronouncing that the sky is falling, a more productive and informed discussion of public pensions would acknowledge their true nature: A few are in trouble; most are not. Attention needs to be focused not on the entire public pension community, but on those that who have approved benefits without knowing how they would be

funded, and those that have failed to fund their required contributions.

In its report, "States' Pensions: A Manageable Longer Term Challenge," Barclays Capital Municipal Credit Research says:

"Though the size of the pension shortfall is large, pension liabilities are longer term, and the plans have sufficient assets to pay annual benefits for at least the next 17 years, on average, before including future contributions and investment earnings. Moreover, state and local governments have begun to take action to reduce the pension liabilities and/or grow assets, including increasing employee contributions and reducing benefits for future employees. Though most of these actions affect only future employees and do little to address the unfunded liabilities currently reported by the states, they represent a step in the right direction."<sup>9</sup>

Wells Fargo Municipal Securities Research said in August 2012: "There is a good deal of confusion about pensions and other retiree benefits in the public sector. The unfunded obligations that are grabbing headlines come due over a long-term horizon of 30 years or more. Long-term solvency is achievable and many state and local governments have initiated meaningful change."<sup>10</sup>

<sup>9</sup> Austin Applegate, Jormen Vallecillo, and Katharine Cheng, *States' Pensions: A Manageable Longer-Term Challenge* Barclays Capital (May 18, 2011), <http://wikipension.com/images/9/98/Barclays1105.pdf>.

<sup>10</sup> Natalie Cohen and Roy Eappen, *Pension Tensions: A Primer* Wells Fargo Securities (Aug. 22, 2012), <http://www.wikipension.com/images/e/e0/WellsFargopensiontension1208.pdf>.

## The Pew Pension Report: A Snapshot Leads to a Flawed Rating System



Flipping through old photo album provides a view of where we have traveled. But, it certainly doesn't tell us where we are today. The same can be said of the recent Pew Center on the States "new" report on public pension plans.

It really is only a look at pension plans at the end of their 2010 fiscal year. For some plans, that could be up to three years ago. Today we are in a different place, as the financial markets have improved and state legislatures have adopted pension plan changes.

While the Pew report acknowledges these pension plan changes in its narrative, it fails to take into account the [actions taken in 41 states in response to the market losses](#) caused by the financial crisis. The vast majority of states have enacted changes in their retirement plans designed to ensure their long-term sustainability. These changes are unprecedented and significant: increasing employee contributions, raising retirement ages, lowering benefits, and cutting cost of living adjustments.

In fact, [Standard & Poor published a report](#) today which finds pension funding levels appear to be, in some cases, gradually improving with close to one-third of plans showing higher funded ratios, according to the S&P 2012 annual survey "The Decline In U.S. States' Pension Funding Decelerates, But Reform And Reporting Issues Loom Large."

If merely presenting Pew's snapshot of funding data was the goal of the report, then using old data and choosing to ignore significant plan changes might only obscure the hotly debated changes already made. However, when the Pew report extends its purpose to rating plans and recommending pension reforms, then failing to consider more timely data and the impact of the recent plan changes exposes a flawed model.

With regard to the Pew rating system, its grades are overly simplified and can be misleading. For example, the text of the report mentions that both Utah and Idaho slipped from the Solid Performer category into the Needs Improvement (NI) category. Yet, [Utah](#) has already made drastic changes to the pension plan's benefit structure that are cited elsewhere in the report as a positive reform. So, why downgrade the Utah plan in 2010 to NI. Does that make sense?

Even more puzzling is placing the [Public Employees Retirement System of Idaho](#) (PERSI) on the Needs Improvement list. Idaho PERS reported a funding level of 90.2 percent on July 1, 2011 based on its market value of assets. Idaho is one state that has not made plan changes because they have been doing the right things year in and year out.

More specifically, the NIRS' [Lessons from Well-Funded Public Pensions](#) report looked at ten years of funding data from PERSI and found its long term practices sound. Idaho's 2010 total plan contributions equaled 113 percent of its actuarially required contribution (ARC), putting the system at the top of Pew list for that criteria. For the ten years of PERSI funding history that NIRS studied, Idaho contributed 100 percent or more in 9 out of the 10 years, with that one outlying year still contributing 97%.

Additionally, Idaho lowered its interest rate below 8% in 2004 before the stock market fell in 2008, and today it assumes a 7.75% return.

Some folks like to look at old photos, but what might be more useful for policymakers and the public is to gain a more current picture of the direction on which pension funding is heading is contained in this [chart](#). Using the similar plan reported data, a [Boston College Center for Retirement Research report](#) points to the future and helps policy makers understand the pension funding is starting to turn the corner. Under moderate economic assumptions, aggregate pension funding is projected to cross over the 80 percent level in 2015, without taking into account the pension reforms passed by the 41 states. Fine tuning

may still be needed, but we are making progress. This is not reflected in the limited snapshot provided by the Pew study.

It's also important to look at last week's Federal Reserve Bank's wealth and income data from the Survey of Consumer Finances (SCF). This SCF report highlights the broad underfunding of retirement security in America that is not covered in the Pew report.

Specifically, the median 401(k) account balance was down to only \$44,000, and was less than the median annual income level of \$45,800. That account value is nowhere near what is needed to pay bills throughout retirement and remain self-sufficient. The Center for Retirement Research estimates that the average family in the age 35-64 range had a retirement income deficit of \$90,000 in 2010.

Using the Pew scale, our nation's crumbling retirement infrastructure for private sector workers is an issue of "serious concern." Americans are less than third of the way to what they need for retirement. That's not a pretty picture; we need a "savings photo shop" of our retirement system that is overly reliant on 401(k) individual accounts.

*Posted by Diane Oakley, NIRS Executive Director, June 22, 2012*

## PENSION DIALOGUE

### What Pension Funding Tells Us

*by Ady Dewey*

The percentage of a pension plan's funding is usually considered as the primary indicator of the plan's health.

That is predominantly how policymakers and the media refer to it. Consider the recent news stories about Kentucky and Iowa. In Kentucky, it was [reported](#):

Pension benefits for members in the state's non-hazardous retirement plan are only 27.3 percent funded this year, compared with 33.3 percent in 2011.

In Iowa, the story [said](#):

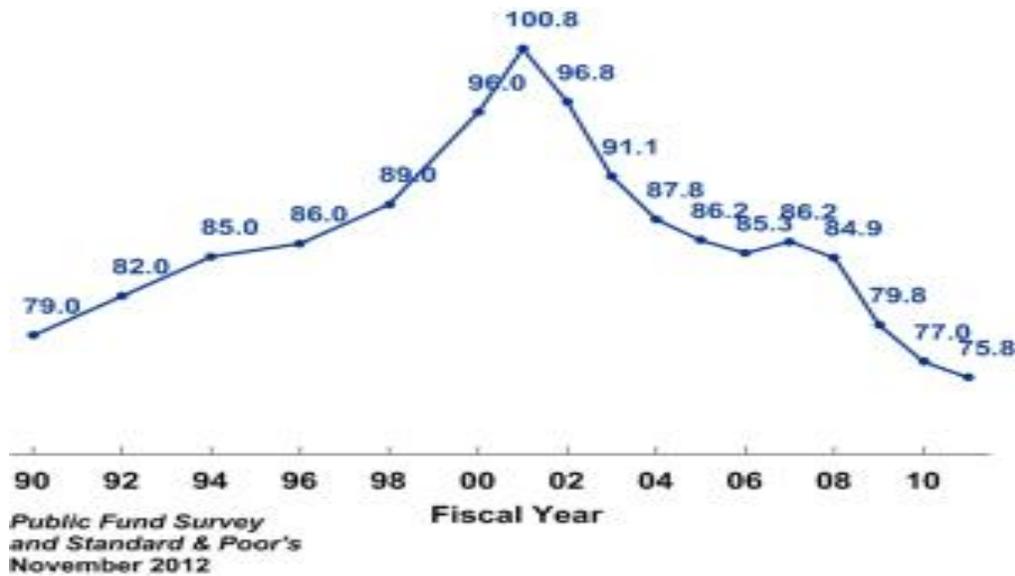
The long-term shortfall for Iowa's largest public employees' pension fund has grown to more than \$5.9 billion, although changes approved by lawmakers two years ago are having a positive impact, a consultant said Thursday.

... The Iowa pension system is 79.9 percent funded—the same as last year—but far worse than in 2000, when the system was 97.7 percent funded.

Looking at a plan strictly on the basis of funding, Kentucky looks bad and Iowa better but still far below being fully funded, which is 100 percent as [recommended](#) by the Government Finance Officers Association (GFOA).

But it's worth taking a step back to understand that a pension plan's funding ratio has its limits. A pension funding ratio is a single-point measure of the degree to which a plan is on course to meet a distant goal. An under-funded plan has assets that are less than its accrued liabilities at the particular moment it was measured.

The [Public Fund Survey](#) captures the aggregate public pension actuarial funding level in FY 2011 as 75.8 percent – which makes Iowa look better than average and the Kentucky plan still pretty bad.



Looking at all states, however, does this pronouncement of 75.8 percent funding tell us that all public plans, or the public pension community in general, are unhealthy and in bad shape?

The answer is no. Keith Brainard, director of research at the [National Association of State Retirement Administrators](#) and author of the [Public Fund Survey](#) explains it this way:

Underfunding is a matter of degree, not of kind: the status of a plan whose funding level declines from 101 percent in year one to 99 percent the following year, changes from overfunded to underfunded. Yet despite this diametric shift in terminology, the reality of the plan's funding condition has changed little.

Other factors indicative of a pension plan's health include the:

- length of the funding amortization period;
- required current and future contribution rates;
- plan's demographics;
- plan's actuarial assumptions;
- sustainability of the plan design;
- plan's governance structure;
- fiscal health of the plan sponsor;
- commitment of the plan sponsor to continue funding the plan.

Although "funded status" seems an easy term to communicate and from which to derive meaning, by itself, the number does not tell the whole story of a pension plan's health. That requires considering the factors listed above as well as the plan's funding policy and practice and its investment expectations and performance.

The latter relates to the investment return assumption, which is the single-most important actuarial assumption and that has an outsized effect on the cost of the plan. Over time, a plan's investment performance must be reasonably close to its expectation, or assumption. If this does not happen, either costs will rise or benefits will be reduced.

A funding policy describes how a plan is paid for, and a funding practice indicates whether or not the plan sponsor—the legislature, employer, etc.—is following the funding policy.

For example, in Kentucky, as in Illinois and a few other states, the legislature has not been following a funding policy, a fact painfully evident from their pension plans.

## Pension Law Being [Re]Written Before our Eyes

by *Ady Dewey*

It has been a three-year period of significant legislative changes to public pensions: from 2009 to 2012, some 45 states, and many cities, took actions to improve the financial condition of their retirement plans and/or to reduce costs.

While many legislatures may continue considering plan changes, in 2013, much attention will turn to the courthouse. You could say it already has.

Earlier this month, Noah Feldman, a law professor at Harvard, shared his [thoughts](#) in *Bloomberg*:

Europeans go to the streets when they are unhappy, and Americans go to the courts ... As a legal matter, many public-pension plans are in fact created by statute, and it is well established that what a legislature may do by law, it may also undo.

Mr. Feldman writes in reference to Rhode Island where five lawsuits are now awaiting [mediation](#). Even in the earliest stages, the suits are raising questions that will likely reverberate beyond the Ocean State's borders including the [efficacy of judges](#), who are themselves beneficiaries of public pension plans.

Michael Yelnosky, a professor at the Roger Williams University School of Law, [addresses](#) the most prominent issue which is contractual rights:

The "Contract Clause" of the Rhode Island Constitution (in the same language as the U.S. Constitution) prohibits the state from passing "any law impairing the obligation of contracts." The retirees assert that the pension law does just that by reducing the annual pension benefits they earned during a career of state employment — benefits set forth in Rhode Island law.

Court-watchers also have their eyes on the municipal bankruptcies in California and the determination of whether pensions are a "[priority administrative expense](#)" that must be paid in full while a city is in a Chapter 9-reorganization of debts.

As Mark Johnson, a pension expert on the Employee Retirement Income Security Act (ERISA), succinctly says in an interview in *Governing*: "We are plowing through uncharted ground."

We are likely to use that phrase even more in 2013. Just how no one could have imagined that 2012 would bring [Squeezy the Pension Python](#), it's nearly impossible to predict what will emerge this coming year.

It is much easier to say what we would like to see including greater leadership among lawmakers; more pension changes being negotiated versus being on ballots; and less scare-tactic rhetoric in general and especially on the completely fabricated such as the need for the federal government to bail out pensions (like the [headline](#) this week: How Do You Spell Pension Funding Relief? C-O-N-G-R-E-S-S).

In short, it's simply a greater understanding of public pensions – their long-term outlook and their strength in offering retirement security for hundreds of thousands of families across the country.

Some say that the best way to predict the future is to create it, so you can be sure that we will continue to deliver the facts, stats, and analysis needed on the public retirement community in the year ahead.

## Funding Policies: Changing Direction—or Not

by *Ady Dewey*

When the philosopher Lao Tzu said, "If you do not change direction, you may end up where you are heading," he could have easily been referring to public pensions.

State and local pension funding policies usually exist in statute and range in their degree of specificity and the elements they address. Many state funding policies require that pension plans be funded by paying the normal cost, i.e., the cost of the benefits accrued in the current year, plus the cost to amortize the plan's unfunded liability.

And this can become confusing, as [expressed](#) recently by Max Patterson of the Texas Association of Public Employee Retirement Systems:

“It's very complex, there's a huge learning curve understanding pensions and the funding of pensions, and to be frank about it I'd say the majority of elected officials don't understand. They go to the bottom line, what's it going to cost for the city to contribute each year, and that becomes their driver in terms of putting it in the budget.”

Appropriating sufficient pension contributions is critical: insufficient pension contributions will impair the long-term security of a retirement plan.

The National Association of State Retirement Administrators has a [standing resolution](#) on public pension funding that illustrates a policy's importance. Here are two of its statements:

- Predictability and stability of required costs are the foundation of public sector budgeting and enable policymakers, and ultimately taxpayers, to assess the underlying true cost of any long-term public program, and the imposition of elements that would cause wide swings in required pension costs would be unnecessarily financially disruptive, confusing and counterproductive; and
- Established funding policies can benefit retirement plans, participants, employers, and other stakeholders by clearly defining target funding goals, policies to stabilize contributions over time and a commitment to sound financing.

Although funding policies typically allocate money from an entity's general fund and other funding sources used to compensate workers, a few public pension plans receive some funding from [dedicated sources](#).

For example, the Oklahoma Teacher Retirement System receives five percent of the state's sales, use, and corporate and individual income taxes; one percent of cigarette taxes; and five percent of net lottery proceeds.

Beginning in fiscal year 2014, the Kansas Public Employees Retirement System will receive a share of gaming revenues from state-owned casinos and 80 percent of the proceeds from any sale of state-surplus real estate.

The Kentucky legislature is reportedly considering a possible 40-cent increase on cigarette packs for its pension system – an amount that is estimated to raise about [\\$110 million in the first year](#).

These plans—in Oklahoma, Kansas, and Kentucky—share two key common elements: they are poorly funded, and they got that way chiefly from their sponsoring employers' chronic failure to pay their required contributions. The dedicated funding sources are intended to help reduce the plans' unfunded liabilities. Had these plan sponsors paid their required contributions in the first place, the funding hole would be smaller, and the cost of the plan would be lower.

Periodically reviewing a funding policy, and making adjustments if necessary, is crucial to confirming that a plan is heading in the right direction. Even more important than reviewing a funding policy is actually following it.

*Find more resources on this topic on the [Wikipension Funding Policy page](#)*

# Montana pension plans 'unsustainable,' researcher tells legislators

FEBRUARY 12, 2013 7:30 PM • BY CHARLES S. JOHNSON MISSOULIAN STATE BUREAU

HELENA – Montana’s pension plans are on an “unsustainable course,” and current contribution policies will never pay off their combined \$4.3 billion in shortfalls, a researcher from the Pew Center on the States told legislators Tuesday.

David Draine, Pew’s lead researcher on public pensions and retiree health care plans, told three legislative committees that Montana has failed to set aside enough money to fund the pension promises it has made. As of 2012, its pension systems collectively were only 64 percent funded. He was speaking at the invitation of the Legislature.

“If not addressed, Montana’s growing pension debt of \$4.3 billion will threaten public workers’ salaries and benefits and will crowd out essential state services,” Draine said.

The \$4.3 billion in debt amounts to half of the state’s annual budget spending for all government services. To pay it off immediately would be the equivalent of every Montana household contributing \$10,600 to the systems, Draine said.

More than 90 percent of all public workers in Montana belong to the Public Employees’ Retirement System or the Teachers’ Retirement System, he said.

“Alarming, our actuarial analysis of PERS and TRS reveals that, under current plan assumptions, the state’s largest plans will run out of money without a change in either contribution policy or plan benefits — in 2041 for the teachers’ plan and by 2048 for the state employees’ plan,” he said.

Gary Buchanan, co-owner of a Billings investment firm and the former chairman and current member of the state Board of Investments, also addressed the committees.

“Pension shortfalls should be direct reductions against any surplus,” he said. “They’re obligations. Pension shortfalls should be dealt with as part of the executive budget.”

He said “smart states” such as New York and Wisconsin paid their annual required contribution every year before their funding shortfalls veered out of control.

“A real solution goes everyone’s ox,” Buchanan said.

Among Buchanan’s solutions were: higher contributions from employees, a more reasonable (and lower) cost of living allowance for retirees, increased “anti-spiking” measure to stop large pay hikes for employees in their final years of work to enhance their pension benefits.

Buchanan called “totally unrealistic” the state’s actuarial assumption that pension funds will realize investment returns averaging 7.75 percent annually.

“They don’t think it’s remotely possible,” Buchanan said of investment experts. “When you tell an investment board thou shall make 7.75 percent, you increase your risks.”

**Draine, meanwhile,** said for Montana to offer a traditional defined-benefit pension plan in a sustainable way “requires consistent, ongoing funding discipline, not a lucky roll of the dice.”

Montana’s defined benefit pension plans provide retired public workers with a guaranteed monthly pension, regardless of how the pension investments perform. The pension is based on a formula of how many years employee worked and the average of their highest three years of salary.

State pensions went from a total surplus of \$244 million in 2000 to a \$4.3 billion deficit in 2012 because Montana repeatedly increased pension benefits without paying for them and failed to require public employees make adequate contributions, Draine said.

He recommended that Montana the state develop a plan to responsibly pay down the unfunded liability over a reasonable time and adopt a reformed pension system that is “affordable, sustainable and secure.”

Its features should include an unwavering commitment to full funding, Draine said, and savings and benefit accrual rates that provide a reasonable benefit to all workers, regardless of tenure. The investments should be pooled and professionally managed with low fees, he said, and can be converted easily to annuities at reasonable rates.

“These features can and should be included in any retirement plan offered by the state whether it is a traditional defined benefit, a 401(k)-style defined contribution plan or another structure like a stacked hybrid or cash balance plan,” Draine said.

“There is no one-size-fits-all solution,” he said. “Every state has a unique set of policy preferences political dynamics and budgetary challenges.”

The Montana Public Pension Coalition, comprising unions and local governments, issued a statement criticizing the Pew’s work.

“As Pew continues to advocate for public pension overhaul in Montana, it is critical that all parties are aware of how disastrous Pew’s proposals would be for Montana’s taxpayers and public workers,” the statement said, citing a report by a group in Kentucky. “Hopefully, Montana’s legislators will pay attention to the serious costs and risks associated with Pew’s plan and will not be played the fools.”

## **First step taken toward closing Florida pension plan to new hires**

Palm Beach Post Capital Bureau

A Florida House panel raced ahead Thursday with one of House Speaker Will Weatherford's top priorities — closing the state's traditional pension plan to new hires — over opposition from union representatives who warn the move could undermine the Florida Retirement System.

The hurry-up action by the Republican-controlled House comes even as lawmakers acknowledge they are unsure of the change's financial impact on the \$126 billion pension fund for state, school and many local government workers.

A study isn't expected to be completed until next week on the legislation's effect.

The House Governmental Operations Subcommittee approved the measure on an 8-3 vote, divided on party lines. Democrats critical of the overhaul sided with union officials who said that closing the defined benefit portion of the Florida Retirement System to new employees would jeopardize the plan for those now in the plan.

New hires seeking a pension plan would be forced to join a defined contribution, 401(k)-styled investment plan beginning Jan. 1, under the legislation. The bill also would bar new employees from eligibility for disability benefits — a restriction fiercely opposed by police and fire unions.

“There's concern about the unknown,” said Matt Puckett, representing the Florida Police Benevolent Association. “That's what this is all about. There's risk in closing the plan.”

Subcommittee Chairman Jason Brodeur, R-Sanford, said lawmakers will have a better idea about the financial effects of the potential change when the state's Department of Management Services completes a study next week. But it's clear that Weatherford's push for the change helped drive Thursday's vote.

“These sensible reforms will offer a sound investment plan to future employees, while at the same time being realistic about the commitments our state government can continue to make,” Brodeur said after the vote.

The Florida Retirement System has 623,011 currently employed members, including teachers, state workers, and many local government employees, police officers and firefighters. Within the system, workers currently can choose between the traditional pension or, for the past decade, an optional 401(k)-like plan. The pension remains the favorite, though, with more than 500,000 employees enrolled, compared with only about 100,000 in the investment plan.

The pension fund has another 334,682 retirees enrolled who already collect benefits.

Weatherford, R-Wesley Chapel, has clamored for revamping the system, warning that state payments into the retirement system are projected to escalate. The pension fund currently is 87 percent funded — with Gov. Rick Scott recommending in his budget that state lawmakers add \$552 million in taxpayer money to fund the state's share of the fund's liability.

It's those payments Weatherford and other supporters of the plan would like to see reduced. Florida's fund is currently considered strong by most analysts, with the recommended minimum level of funding usually considered to be 80 percent.

But that could change, union officials told lawmakers.

“Without new people coming in, it loses its stability and loses more stability over time,” said Rich Templin of the AFL-CIO.

Florida's pension plans have proved a target for Scott and the state's Republican leadership.

Last month, the Florida Supreme Court narrowly upheld the Legislature's decision in 2011 to require workers to contribute 3 percent of their pay to participate in the Florida Retirement System. The \$2 billion collected from those payments the past two years allowed lawmakers to have more cash to plug holes elsewhere in the state budget.

Unions unsuccessfully challenged the law claiming it violated contractual rights granted public employees in 1974, when the pension was converted to a “noncontributory system.”

While the House is focused on the state system, the Senate is considering legislation aimed at revising laws governing hundreds of municipal pensions across Florida. Local governments have the choice of using the state pension system or running their own.

## **Tenn. treasurer seeks to overhaul pension plan**

By Lucas L. Johnson II on February 26, 2013

NASHVILLE, Tenn. (AP) — Tennessee's treasurer said Monday that he wants to overhaul the state's public retirement system to cut costs and ensure it can pay out benefits for years to come.

David Lillard said he will propose legislation laying out the overhaul, even though Tennessee's public pension system is faring better than those in most other states. Changes to the Tennessee Consolidated Retirement System will only apply to state employees, higher education officials and teachers hired after July 1, 2014, Lillard said

at a news conference. The retirement benefits of those currently in the system won't be affected.

The state is doing better than its peers with similar plans, but earnings of the Tennessee plan have fallen short of expectations over the past several years, he said. The changes are needed because it's uncertain how much money the retirement system's investments will yield in the future, Lillard said.

He said that in 2003, taxpayers spent about \$264 million a year to support the system. As of last year, that number had grown to \$731 million, he said.

"Based on projections we have seen, the cost could go up by one-third or more over the next 10 years if changes aren't made, which would push the taxpayers' total annual expense above \$1 billion," said Lillard, adding that at least 45 states have enacted some type of pension reform in the past few years.

There are currently about 217,000 employees in Tennessee's system, and roughly 122,000 retirees.

The changes being proposed would limit the state's future liability for pension costs by creating a type of hybrid between a defined benefit plan and a defined contribution plan.

The reforms are also intended to reduce pension costs by adjusting the formula used to calculate retirement benefits, raising eligibility requirements and collecting payroll deductions.

Under the current plan, only teachers are required to contribute 5 percent of their salaries. The new proposal would require all state employees to contribute that much.

Lillard said he realizes there may be some concern among new hires, but he said they should understand what the state is offering "versus the private sector and versus other competing entities is a very good pension benefit."

"We want to be able to say to a young state employee who is hired on July 1, 2014, that when they retire ... they can truly expect to see the benefit that we promised them," he said.

Chris Dauphin, spokesman for the Tennessee State Employees Association, said the group hasn't taken a position on the proposal but does have some concerns. He did not elaborate on those concerns.

However, Lillard said some have expressed concerns about a provision in the measure that would allow the state to change the pension plan in the future. Lillard said he doesn't plan to retract it.

"Management of a pension plan requires some flexibility going forward for the interest of the people who are in it," he said.