Agenda

ND Teachers' Fund for Retirement Board Meeting

Thursday, March 26, 2015
1:00 pm

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

1. Call to Order and Approval of Agenda - Pres. Gessner (Board Action) 5 min
2. Approval of Minutes January 22, 2015 Meeting – Pres. Gessner (Board Action) 5 min
3. 2015 Legislative Update – Fay Kopp (Information) 15 min
4. TFFR Investment Update – Dave Hunter (Information) 15 min
5. Public Pension Plan Comparisons – Fay Kopp (Board Action) 30 min
6. Actuarial Contract – Fay Kopp (Board Action) 15 min
7. GASB Update – Fay Kopp and Shelly Schumacher (Information) 15 min
8. Audit Services Update – Terra Miller Bowley (Information) 10 min
9. Retirement Staffing Update – Fay Kopp (Information) 5 min
10. Board Education Topics– Fay Kopp (Information) 10 min
11. Consent Agenda – (Board Action) 5 min
    Disability and QDRO applications
    *Executive Session possible if Board discusses confidential information under NDCC 15-39.1-30.
12. Other Business
    Next Board Meeting: April 30, 2015 - WSI Board Room
13. Adjournment

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 22, 2015, BOARD MEETING

BOARD MEMBERS PRESENT: Mike Gessner, President
Kirsten Baesler, State Superintendent
Mike Burton, Trustee
Kim Franz, Trustee
Rob Lech, Trustee
Mel Olson, Trustee
Kelly Schmidt, State Treasurer

STAFF PRESENT: Terra Miller Bowley, Audit Services Supervisor
Bonnie Heit, Admin Services Supervisor
David Hunter, ED/CIO
Fay Kopp, Deputy ED/CRO
Shelly Schumacher, Retirement Program Manager

OTHERS PRESENT: Erica Cermak, NDRTA
Dick Lokken, Guest
Gloria Lokken, NDU-Retired
Janilyn Murtha, Attorney General's Office

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 22, 2015, at Workforce Safety & Insurance Office (WSI), 1600 E Century Avenue, Bismarck, ND.

THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: SUPT. BAESLER, MR. BURTON, MRS. FRANZ, MR. GESSNER, MR. LECH, MR. OLSON, AND TREASURER SCHMIDT.

APPROVAL OF AGENDA:

The Board considered the meeting agenda.

MR. LECH MOVED AND MR. OLSON SECONDED TO APPROVE THE AGENDA AS PRESENTED.

AYES: MR. BURTON, MR. LECH, MRS. FRANZ, MR. OLSON, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

MINUTES:

The board considered the minutes of the TFFR board meeting held October 23, 2014.

MRS. FRANZ MOVED AND MR. OLSON SECONDED TO APPROVE THE MINUTES OF THE TFFR BOARD MEETING HELD OCTOBER 23, 2014.

AYES: MR. LECH, MR. OLSON, MR. BURTON, MRS. FRANZ, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

NEW TRUSTEE INTRODUCTION:

President Gessner welcomed Mr. Mike Burton, who was appointed by Governor Dalrymple to complete the unexpired term of Mr. Clarence Corneil on the TFFR Board of Trustees through June 30, 2017.

SELECTON OF TFFR REPRESENTATIVE TO SIB:

MR. LECH MOVED AND MRS. FRANZ SECONDED TO APPOINT MR. MEL OLSON AS TFFR REPRESENTATIVE ON THE STATE INVESTMENT BOARD (SIB).

AYES: MRS. FRANZ, MR. OLSON, MR. BURTON, MR. LECH AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

MR. OLSON MOVED AND MR. BURTON SECONDED TO APPOINT MRS. FRANZ AS ALTERNATE TO THE SIB.

AYES: MRS. FRANZ, MR. BURTON, MR. LECH, MR. OLSON, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

MRS. FRANZ NOMINATED MR. LECH FOR VICE PRESIDENT. MR. OLSON SECONDED.

AYES: MR. OLSON, MRS. FRANZ, MR. BURTON, PRESIDENT GESSNER AND MR. LECH.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

Treasurer Schmidt arrived at 1:15 p.m. and Supt. Baesler arrived at 1:18 p.m.

2015 LEGISLATIVE UPDATE:

Mrs. Fay Kopp, Deputy Executive Director/Chief Retirement Officer, provided an update on the TFFR technical corrections bill (HB1064), as well as other legislative proposals which could potentially affect

TFFR. Mrs. Kopp gave testimony on HB1064 January 8, 2015, and commented on follow-up questions posed by the House Government and Veterans Affairs (GVA) Committee. Mrs. Kopp reviewed the additional information from TFFR's legal counsel and outside tax counsel with respect to the legality of adopting future amendments to the IRC "as amended," the process of incorporating the IRS tax code references to reflect when each of the provisions were amended under federal law, and the potential implications of the Windsor court decision on current TFFR statutes. The House GVA Committee gave a "do pass" recommendation. The House passed the bill, 90-3, and it will now go to the Senate for consideration.

The RIO budget bill, SB2022, 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. No action has been taken by the Senate Appropriations Committee.

Other bills being monitored include: HB1080-PERS Funding-Contribution Increases; HB1250-Board Minutes on Governor's Website; HB1329-SIB Membership; HB1339-Income Tax Exclusion for Government Pensions; SB2013-DPI Budget; SB2031-School District Foundation Aid; SB2038-PERS DC Plan for New State Employees; SB2039-Public Employee Retirement Stabilization Fund; and SCR4003-Foundation Aid Stabilization Fund.

Board discussion followed.

TFFR INVESTMENT UPDATE:

Mr. David Hunter, Executive Director/Chief Investment Officer, reviewed his presentation on TFFR investment performance, capital market updates, labor market conditions, and asset class performance. Board discussion followed.

GASB UPDATE:

Mrs. Kopp reviewed the status of Government Accounting Standards Board (GASB) training and implementation efforts. She commented on the GASB schedules and required information that has been developed by Segal. About 110 individuals attended the GASB training held December 11, 2014. A video of the training, along with other GASB resources, is available on the RIO website. Mrs. Kopp also noted that employer census data audits are being conducted by the plan's external auditor, CliftonLarsonAllen, and an audit opinion on the schedules is expected soon.

Mrs. Shelly Schumacher, Retirement Program Manager, reviewed the Segal GASB 67 and 68 report and also the template note disclosure sample.

Board discussion followed. Mrs. Kopp will develop GASB talking points, and assist the State Treasurer and State Superintendent as requested with communications related to the new GASB pension standards.

ACTUARIAL CONTRACT:

Mrs. Kopp provided background information on the current actuarial contract with Segal Consulting. Over the last ten years actuarial fees paid have averaged about $131,000 per year. Actuarial costs are largely impacted by legislative proposals, special studies, compliance issues, and board initiatives. Studies or projects that are planned for the future include an experience study, asset liability study, actuarial audit, and IRS determination letter. Segal has been TFFR's actuary for four years. After board discussion,

MR. OLSON MOVED AND MRS. FRANZ SECONDED TO REQUEST A COST PROPOSAL FOR ANOTHER TWO YEAR TERM FROM SEGAL FOR BOARD REVIEW AT A FUTURE MEETING.

AYES: MR. BURTON, MRS. FRANZ, MR. OLSON, TREASURER SCHMIDT, MR. LECH, SUPT. BAESLER, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.

ANNUAL RETIREMENT STATISTICS REPORT:

Mrs. Schumacher presented the annual retirement ends and statistics report for the year ended June 30, 2014. She provided information on employers and members, collections and payments of contributions, employer and member outreach programs participation, service purchases, tier membership, service retirement, disability retirement, option usage, retiree statistics, re-employed retirees, and employer payment plan models. A copy of the report is on file at RIO. After discussion,

TREASURER SCHMIDT MOVED AND MRS. FRANZ SECONDED TO APPROVE THE ANNUAL TFFR ENDS AND STATISTICS REPORT.

AYES: MRS. FRANZ, MR. LECH, TREASURER SCHMIDT, SUPT. BAESLER, MR. BURTON, MR. OLSON, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.

The board recessed at 3:22 p.m. and reconvened at 3:37 p.m.

Treasurer Schmidt and Supt. Baesler left the meeting at 3:22 p.m.

ANNUAL RETIREMENT TRENDS REPORT:

Mrs. Schumacher presented the annual retirement trends and projections report. Of the 10,630 active TFFR members, 1,212 members are currently eligible to retire. On average, 383 teachers actually retired each year, or a total of over 3,830 for the 10 year period. The report is on file at RIO. After discussion,

MRS. FRANZ MOVED AND MR. OLSON SECONDED TO ACCEPT THE 2014 RETIREMENT TRENDS REPORT.

AYES: MR. BURTON, MRS. FRANZ, MR. OLSON, MR. LECH, AND PRESIDENT GESSNER
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

2014 CAFR AND PPCC AWARD:

Mrs. Kopp reported the 2014 Comprehensive Annual Financial Report (CAFR) is available on the RIO website. RIO has received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for the 2014 CAFR. This award has been received for 15 years. The Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council (PPCC) was also received. This award has been received since 1992.

MR. OLSON MOVED AND MR. BURTON SECONDED TO CONGRATULATE THE RIO STAFF ON A JOB WELL DONE ON RECEIVING THE GFOA AND PPCC AWARDS.

AYES: MR. OLSON, MR. BURTON, MR. LECH, MRS. FRANZ, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

RETIREMENT JOB VACANCY UPDATE:

Mrs. Kopp reported interviews have been held for the retirement program specialist job opening.

2015-16 BOARD MEETING SCHEDULE:

Mrs. Kopp presented the proposed board meeting schedule for 2015-16.

MR. LECH MOVED AND MRS. FRANZ SECONDED TO APPROVE THE 2015-16 TFFR MEETING SCHEDULE.

AYES: MR. BURTON, MR. LECH, MRS. FRANZ, MR. OLSON, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

TRUSTEE EDUCATION:

Mrs. Kopp provided the board with dates and information on trustee education and conferences that are available in 2015.

CONSENT AGENDA:

MR. LECH MOVED AND MR. OLSON SECONDED TO APPROVE THE CONSENT AGENDA WHICH INCLUDES TWO DISABILITY APPLICATIONS – 2015-1D AND 2015-2D.

AYES: MR. OLSON, MRS. FRANZ, MR. LECH, MR. BURTON, AND PRESIDENT GESSNER.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

OTHER BUSINESS:

The next board meeting will be held February 26, 2015.

ADJOURNMENT:

With no further business to come before the Board, President Gessner adjourned the meeting at 4:05 p.m.

Respectfully Submitted:

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

_____
Darlene Roppel
Reporting Secretary

TFFR Legislative Update
March 26, 2015

BILL NO.	DESCRIPTION	SPONSOR	POSITION
HB 1064	**TFFR Technical Corrections**	**TFFR Board**	**Support**

HB 1064 includes technical corrections required by federal tax law for TFFR to maintain its qualified tax status. The bill removes IRC date references and adds "as amended" language to indicate future IRC changes are intended to be incorporated. The proposed changes have no financial impact on the Fund.

Bill was assigned to the House GVA Committee. Committee hearing was held on 1/8. Fay provided testimony. The Committee had questions regarding IRS requirements, Segal actuarial review, and Ice Miller legal analysis. After receiving additional information, the Committee gave the bill a "do pass" recommendation, 14-0. On 1/19, the House approved the bill by a vote of 90-3.

Bill was referred to the Senate GVA Committee. Hearing was on 3/13. Fay presented testimony. The Committee gave the bill a "do pass" recommendation, 7-0, and the Senate approved 47-0 on 3/17. **Bill sent to Governor for signature on 3/25.**

SB 2022	**RIO Budget**	**Governor/Approp**	**Support**

SB 2022 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. (Note: SB 2022 also contains the budget for PERS.)

Bill was assigned to the Senate Appropriations Committee. Committee hearing was held on 1/14. Consistent with other state agency appropriations bills, the Committee amended the bill and reduced the Governor's recommended 4/4% salary increase for state employees to 3/3%, removed the market increases, removed the 1% retirement increase, and approved the health insurance increase. On 2/24, the Committee gave the bill a 12-0 "do pass" recommendation, and the Senate passed the amended bill 46-0.

Bill was referred to the House Appropriations Committee – Government Operations Division. Hearing was on 3/11. Dave presented testimony, with Fay and Connie also attending. A subcommittee will be appointed to meet on budget details. **Another hearing has been scheduled for 3/27 at 8:30 am.**

OTHER BILLS OF INTEREST TO TFFR:

HB 1080 PERS Funding - Contribution Increases PERS Board Monitor

HB 1080 is the PERS funding improvement bill which includes 1% member and 1% employer contribution increase effective 1/1/16, plus benefit changes similar to NDTFFR (5 year vesting, 5 year FAS calculation, minimum age 60 w/Rule of 90) for new state employees beginning 1/1/16.

Bill was assigned to the House GVA Committee**.** The Committee amended the bill to remove the 1% member and 1% employer contribution increases, reduced the benefit multiplier to 1.9% for new state employees, and gave the bill a "do pass" recommendation 10-4, On 2/24, the House approved the amended bill 68-25.

Bill was referred to the Senate GVA Committee**. Hearing was on 3/13, with various amendments offered and under discussion.**

SB 2013 DPI Budget Governor/Approp Monitor

SB 2013 is DPI's appropriations bill. It does not include any TFFR provisions at this time.

Bill was assigned to Senate Appropriations Committee. On 2/24 the Committee amended the bill, gave a 13-0 "do pass" recommendation, and approved the bill 46-0.

Bill was assigned to House Appropriations Committee. **Hearing was on 3/10.**

SB 2031 School District Foundation Aid Leg Mgmt/Educ Com Monitor

SB 2031 is the foundation aid bill for school districts. Section 1 of the bill relates to the ability of school districts to use the proceeds of levies to meet TFFR obligations. The bill does not appear to have any direct impact on TFFR, and is intended to clean up language as part of the major overhaul of the K-12 education funding formula passed last session.

Bill was assigned to the Senate Education Committee and Appropriations Committee. On 2/24, the Committee amended the bill, gave a 13-0 "do pass" recommendation, and approved the bill 46-0.

Bill was assigned to House Education Committee. **Hearing was on 3/9.**

SB 2039 Foundation Aid Stabilization Fund Leg Mgmt/Gov Fin Monitor

SB 2039 originally created a new Public Employee Retirement Stabilization Fund, and transferred certain funds from the Foundation Aid Stabilization Fund to the Public Employee Retirement Stabilization Fund for the purpose of addressing unfunded retirement benefit obligations of the main state employee retirement plan. The bill was contingent upon passage of SCR 4003.

Bill was assigned to the Senate Education Committee. The bill was amended to remove the public employee retirement stabilization fund, and instead create a scholarship fund. Committee gave the amended bill a "do pass" recommendation, and on 2/11, the Senate approved the bill 46-0.

Bill was referred to House Appropriations Committee. **Hearing was on 3/16.**

SB 2355 ESPB Licensing Sen. Davison, et al Monitor

SB 2335 originally transferred teacher licensing responsibilities from ESPB to the Supt of Public Instruction, and changed the ESPB to an advisory board. Sections 3, 4, and 5 of the bill relate to TFFR (definition of teacher, member and employer contribution rates, and retiree re-employment) since those provisions include references to ESPB and are replaced with references to the State Supt. Certain proposed changes to TFFR provisions go beyond deleting references to ESPB which was unintentional.

Bill was assigned to the Senate Education Committee. Committee hearing was on 2/11. Fay provided testimony requesting amendments to reinstate certain TFFR related provisions. The Committee amended the bill to require the State Supt to develop a customer satisfaction survey for ESPB, and to provide for a legislative management study of other educational service providers including ESPB, REAs, EduTech, CDE, and teacher center networks. All changes relating to TFFR were removed. The Committee gave the amended bill a "do pass" recommendation, 6-0. On 2/20, the Senate approved the amended bill 45-0.

Bill was referred to the House Education Committee. Hearing was on 3/11. **The bill was amended to require a private entity to perform the study, and Committee recommends a "do pass," 7-6. Amended bill failed, 45-42 on 3/23.**

HCR 3041 SIB Study Rep. Kretschmar Monitor

HCR 3041 is a concurrent resolution providing for a Legislative Management study to review, and analyze the investment practices by the State and the State Investment Board.

Resolution was assigned to House Industry, Business, and Labor Committee. The Committee gave it a 13-0 "do pass" recommendation. On 2/25, the House approved the resolution.

Resolution was referred to Senate Industry, Business, and Labor Committee. Hearing was on 3/18. **The Committee gave a 4-2 "do not pass" recommendation, and the resolution failed on 3/20.**

SCR 4003 Foundation Aid Stabil Fund – Const Amend Leg Mgmt/Gov Fin Monitor

SCR 4003 originally amended the ND Constitution relating to the Foundation Aid Stabilization Fund, and must be voted on in the June 2016 primary election. The resolution provided that the legislative assembly may appropriate or transfer any excess principal balance for the purpose of making low-interest loans for school construction projects, addressing existing or anticipated unfunded benefit obligations of state retirement funds, or other education-related purposes. Companion bill is SB 2039.

Resolution was assigned to the Senate Education Committee. The Committee amended the resolution to remove language relating to "existing or anticipated unfunded benefit obligations of state retirement funds," and gave the resolution a "do pass" recommendation, 6-0. On 2/11, the Senate approved the amended resolution 46-0.

Resolution was referred to the House Judiciary Committee. **Hearing is scheduled for 3/25 at 10:30 am.**

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TFFR Legislation: http://www.nd.gov/rio/TFFR/Legislation/default_2015.htm
ND Legislative website: http://www.legis.nd.gov/assembly/64-2015/regular

TFFR Legislative Update
March 20, 2015

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Bill was assigned to the Senate Education Committee. Committee hearing was on 2/11. Fay provided testimony requesting amendments to reinstate certain TFFR related provisions. The Committee amended the bill to require the State Supt to develop a customer satisfaction survey for ESPB, and to provide for a legislative management study of other educational service providers including ESPB, REAs, EduTech, CDE, and teacher center networks. All changes relating to TFFR were removed. The Committee gave the amended bill a "do pass" recommendation, 6-0. On 2/20, the Senate approved the amended bill 45-0.

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ND Legislative website: http://www.legis.nd.gov/assembly/64-2015/regular

HB 1064

Testimony to Senate Government and Veterans Affairs Committee
March 13, 2015

Fay Kopp, Chief Retirement Officer – ND Teachers' Fund for Retirement
Deputy Executive Director - ND Retirement and Investment Office

HB 1064 was submitted by the TFFR Board. The bill includes technical corrections which are required by federal tax law in order for TFFR to maintain its status as a qualified governmental plan. The bill does not make plan design changes, and was not submitted for funding improvement purposes.

In general, the bill removes all Internal Revenue Code (IRC) date references and adds "as amended" language to clearly indicate that future IRC changes are intended to be incorporated. According to TFFR's legal counsel from the Attorney General's Office and Legislative Council staff, Article X, Section 3, of the ND Constitution allows adoption by reference of federal income tax laws "as amended" in the future.

Section 1. NDCC 15-39.1-04 (10) Definitions: Eligible Retirement Salary

Provision relates to the maximum annual compensation limit that can be used in benefit calculations ($265,000 in 2015). No active TFFR member currently has a salary large enough to be affected by this limit.

Section 2. NDCC 15-39.1-10(4) Eligibility for benefits

Provision relates to minimum distribution requirements requiring payment of retirement benefits at age 70.5 or termination of employment, whichever is later.

Section 3. NDCC 15-39.1-10.6 Benefit limitations

Provision relates to the Section 415 maximum annual benefit limit ($210,000 in 2015). To date, no retiree's benefit has exceeded the annual benefit limit.

Section 4. NDCC 15-39.1-20 Withdrawal from Fund

Provision provides that a member or a member's beneficiary may elect to have an eligible rollover distribution paid to an eligible retirement plan as allowed under IRC regulations.

Sections 5 and 6. NDCC 15-39.1-24 (8) and (11) Purchase of additional credit

Provision provides for purchase of up to 5 years of nonqualified service credit and acceptance of eligible rollover distributions and transfers from eligible retirement plans as allowed under IRC regulations.

Section 7. NDCC 15-39.1-34 Internal Revenue Code compliance

Provision requires the board to administer the TFFR plan in compliance with various sections of the IRC and regulations as they apply to governmental plans.

Actuarial Consultant and Outside Tax Counsel Review

TFFR's actuarial consultant, Segal Company, has reviewed the bill. In their letter dated October 28, 2014, they noted the bill would not have a material actuarial cost impact on TFFR. They also stated the provisions of the bill do not appear to directly or significantly impact the benefits payable from TFFR.

Additionally, outside tax counsel (Ice Miller) was hired by TFFR to review plan statutes to determine whether any changes were necessary to comply with the U.S. Supreme Court ruling in *United States v. Windsor* relating to same-gender marriages and the definition of spouse for purposes of federal tax laws. Outside tax counsel advised TFFR that revising the IRC references to automatically update as the Code sections are amended was sufficient.

Summary

During the interim, the Legislative Employee Benefits Programs Committee reviewed this bill (Bill Draft No. 140), and unanimously gave a favorable recommendation.

On behalf of the TFFR Board, we respectfully request that your Committee give a "do pass" recommendation on HB1064.

Thank you.

TFFR Investment Update

Interim Report

March 18, 2015

Dave Hunter

Executive Director/Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

TFFR Investment Update – March 18, 2015

Net Returns – TFFR generated a net return of 5.9%, 11.9% and 9.5% over the last 1-, 3- and 5-year periods ended 12/31/14, respectively. Active management was largely responsible for 0.65% of excess return over the last 5-years. Based on $1.7 billion of average assets under management, this translates into over $55 million of incremental income for TFFR since 2010 (after deducting management fees) including $15 million of incremental income for the year ended 12/31/14.

Risk Update – Portfolio volatility was within prescribed risk tolerances at 104% of the policy benchmark for the 5-years ended December 31, 2014, versus a policy limit of 115%. Actual "Portfolio Risk", as measured by standard deviation, is well within approved guidelines.

Return Peer Performance - On an asset allocation adjusted basis, TFFR's returns for the 1-, 3- and 5-year periods ended December 31, 2014, range between the 18th and 28th percentile (based on Callan's Public Fund Sponsor Database of over 200 public pension plans). On an unadjusted basis, TFFR's returns rank in the 31st to the 44th percentile.

Risk Peer Performance - During the "Last 10 Years", Portfolio Risk has declined by 55% from 12.3% to 5.5%. TFFR's peer risk rating has migrated from the 1st quartile (or 7th percentile) in the "Last 10 Years" to the 3rd quartile (or 66th percentile) in the "Last 3 Years" (noting that a lower standard deviation is generally preferred).

Preliminary 2/28/2015 Update – TFFR's net investment returns for the eight-months ended 2/28/15 are estimated at 3% and reflective of the overall weakness in the global capital markets, but are still estimated to exceed policy benchmark (based on the plan's stated asset allocation levels) by approximately 0.50% during the last 8 months (preliminary and unaudited).

TFFR Investment Ends – December 31, 2014

Pursuant to Section D.3 of the SIB Governance Manual, SIB clients should receive investment returns consistent with their written investment policies and market variables. This "End" is evaluated based on comparison of each client's (a) actual net rate of return, (b) standard deviation and (c) risk adjusted excess return, to the client's policy benchmark over a minimum period of 5 years.

	1 Yr Ended 12/31/2014	3 Yrs Ended 12/31/2014	5 Yrs Ended 12/31/2014	Risk 5 Yrs Ended 12/31/2014	Risk Adj Excess Return 5 Yrs Ended 12/31/2014
TEACHERS' FUND FOR RETIREMENT (TFFR)					
$ 2,046,439,456					
Total Fund Return - Net	5.92%	11.96%	9.55%	9.55%	**0.29%**
Policy Benchmark Return	5.13%	10.94%	8.91%	9.20%	
Excess Return	**0.79%**	**1.02%**	**0.65%**	**104%**	

Risk Adjusted Excess Return measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to smart investment decisions or negative if driven by excess risk.

Net Return: TFFR's net investment rate of return for the 5-year period ended December 31, 2014 was 9.55% versus a policy benchmark of 8.91% resulting in an **Excess Return of 0.65%**.

Risk: TFFR's standard deviation for the 5-year period ended December 31, 2014 was 9.55% versus a policy benchmark of 9.20% resulting in a **portfolio risk ratio of 104%**. This is within TFFR's stated risk tolerance which indicates this ratio should **not exceed 115%**.

The Risk-Adjusted Excess Return of TFFR's portfolio (net of fees and expenses) was **0.29%** for the 5-year period ended December 31, 2014, thereby exceeding the stated policy benchmark.

Capital Markets Update

As of December 31, 2014

U.S Economy – GDP Growth Rates

- Quarterly GDP Growth Rates have been volatile as evidenced by the -2.1% rate in Q1/14 being preceded by +3.5% in Q4/13 and followed by +4.6% in Q2/14.
- In contrast, annual GDP Growth Rates have displayed slow to moderate growth of 1.6% to 3.1% since 2012 versus 2.4% at 4Q/14.

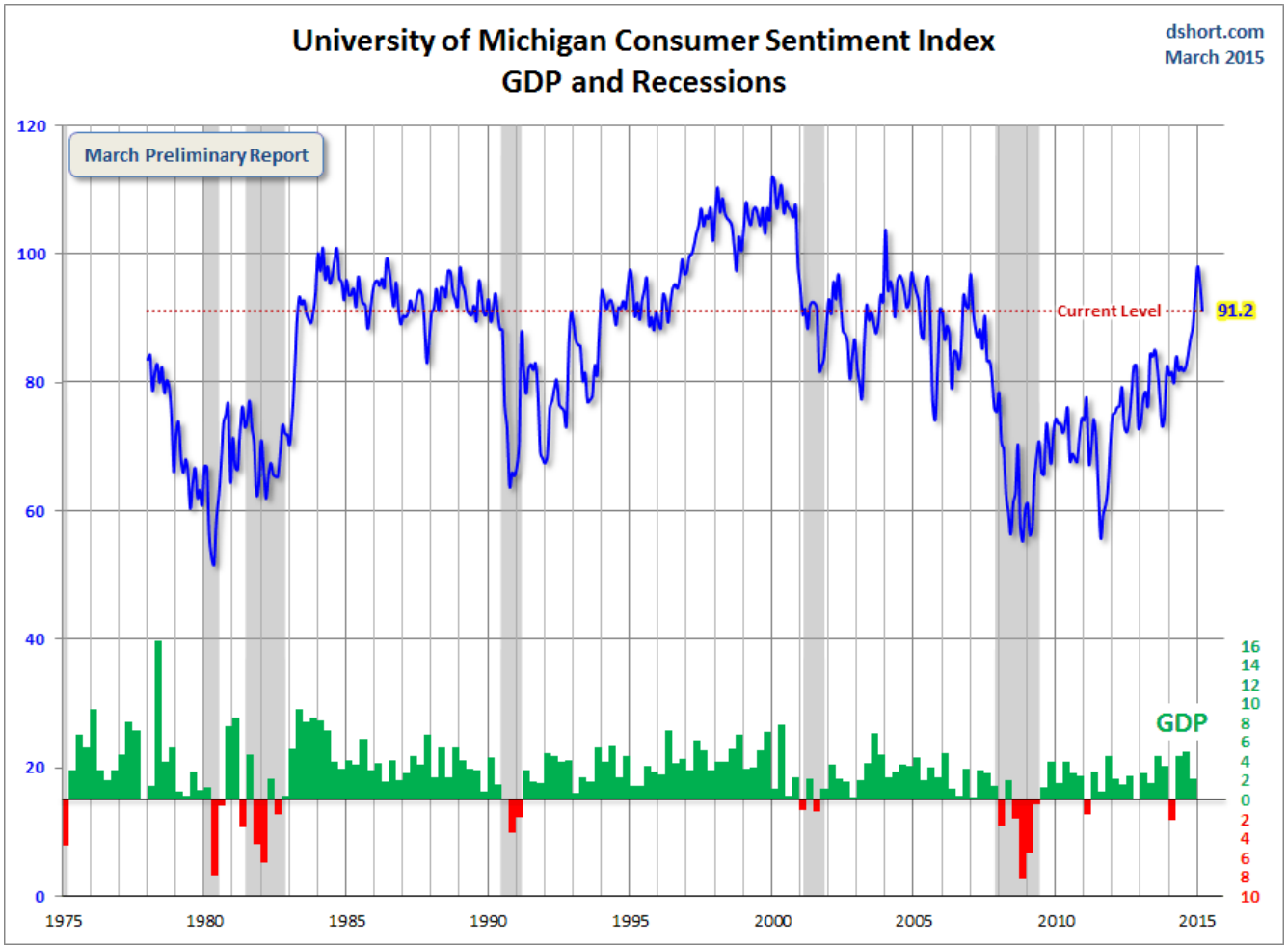
U.S Labor Market Conditions

Note: Cross-hatched area represents recession.

The U.S. Unemployment Rate has declined to <u>5.6% as of December 2014</u> after peaking at 10.0% in October of 2009 and <u>falling to 6.7% as of December 2013</u>.

Source: U.S. Department of Labor: Bureau of Labor Statistics

U.S Consumer Sentiment



Summary: The University of Michigan preliminary Consumer Sentiment for March came in at 91.2, down 4.4 points from the final reading of 95.4 in February. **The average since its inception is 85.2.** During non-recessionary years the average is 87.4 versus 69.3 during the five recessions. **The latest sentiment number of 91.2 puts us 3.7 points above the non-recession average** and 21.9 points above the average recession mindset.

The **University of Michigan Consumer Sentiment Index** is a consumer confidence index published monthly by the University of Michigan and Thompson Reuters. The index is normalized to have a value of 100 in December 1964. Each month at least 500 telephone interviews involving fifty core questions are conducted within the U.S. These interviews are used to develop an index of consumer expectations, a subset of which are included in the Leading Indicator Composite Index published by the US Dept. of Commerce and Bureau of Economic Analysis.

Asset Class Performance

Periods Ending December 31, 2014

- Russell 2000 best for quarter, gaining 9.7%, up 4.9% in 2014
- S&P 500 gained 4.9% for quarter and 13.7% for the year
- BC Aggregate rose 1.8% for quarter and 6.0% for 2014
- International equities lagged domestic equities for the quarter and year

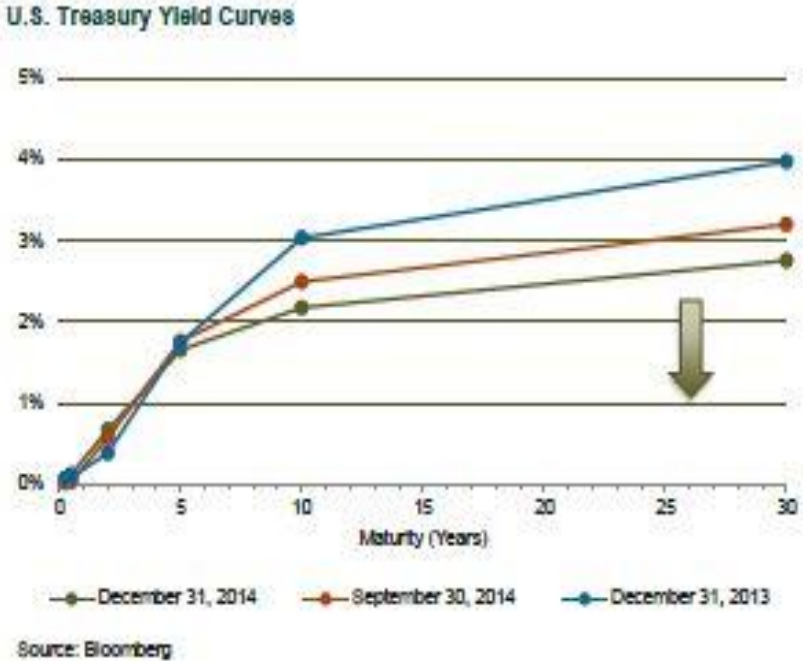
	January	YTD (2/9/15)
Russell 3000	-2.8%	-0.2%
MSCI EAFE	0.5%	1.8%
MSCI EM	0.6%	1.8%
BC Aggregate	2.1%	1.1%
BC TIPS	3.2%	1.6%

Periodic Table of Investment Returns for Periods Ended December 31, 2014

Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:2000 Index 9.7%	S&P:500 13.7%	S&P:500 20.4%	S&P:400 Mid Cap 16.5%	S&P:400 Mid Cap 9.7%
S&P:400 Mid Cap 6.3%	S&P:400 Mid Cap 9.8%	S&P:400 Mid Cap 20.0%	Russell:2000 Index 15.5%	MSCI:Emer Markets 8.8%
S&P:500 4.9%	Barclays:Aggregate Index 6.0%	Russell:2000 Index 19.2%	S&P:500 15.5%	Russell:2000 Index 7.8%
Barclays:Aggregate Index 1.8%	Russell:2000 Index 4.9%	MSCI:EAFE US$ 11.1%	MSCI:EAFE US$ 5.3%	S&P:500 7.7%
3 Month T-Bill 0.0%	3 Month T-Bill 0.0%	MSCI:Emer Markets 4.4%	Barclays:Aggregate Index 4.4%	Barclays:Aggregate Index 4.7%
MSCI:EAFE US$ (3.6%)	MSCI:Emer Markets (1.8%)	Barclays:Aggregate Index 2.7%	MSCI:Emer Markets 2.1%	MSCI:EAFE US$ 4.4%
MSCI:Emer Markets (4.4%)	MSCI:EAFE US$ (4.9%)	3 Month T-Bill 0.1%	3 Month T-Bill 0.1%	3 Month T-Bill 1.5%

Yield Curve Changes

Periods Ending December 31, 2014



- A flattening of the yield curve helped long-term Treasury returns
- The 10-year Treasury yield fell to 2.17%, a decline of 35 basis points from the end of 3rd quarter.
- Real yield on 10-year Treasury was only 0.46% at year end
- The breakeven inflation rate fell ending at 1.68% on a decline in nominal rates

Historical Asset Class Market Returns and Key Economic Indicators

		Period Ended December 31, 2014			
Asset Class	**Benchmark**	**1-Year**	**3-Years**	**5-Years**	**10-Years**
Large Cap US Stocks	Russell 1000	13.24%	20.62%	15.64%	7.96%
Small Cap US Stocks	Russell 2000	4.90%	19.21%	15.55%	7.77%
Non-US Stocks (Developed)	MSCI EAFE	-4.90%	11.06%	5.34%	4.43%
Non-US Stocks (Emerging)	MSCI Emerging Markets	-1.88%	4.39%	2.10%	8.77%
US Bonds	Barclays Aggregate	5.97%	2.66%	4.45%	4.71%
High Yield Bonds	Barclays Corporate High Yield	2.45%	8.43%	9.03%	7.74%
Non-US Debt	Citi Non-US World Govt	-2.68%	-1.94%	0.85%	2.64%
Inflation Protected	Barclays Global Inflation Linked	3.41%	2.63%	4.19%	4.29%
Real Estate	NCREIF	11.82%	11.11%	12.13%	8.38%

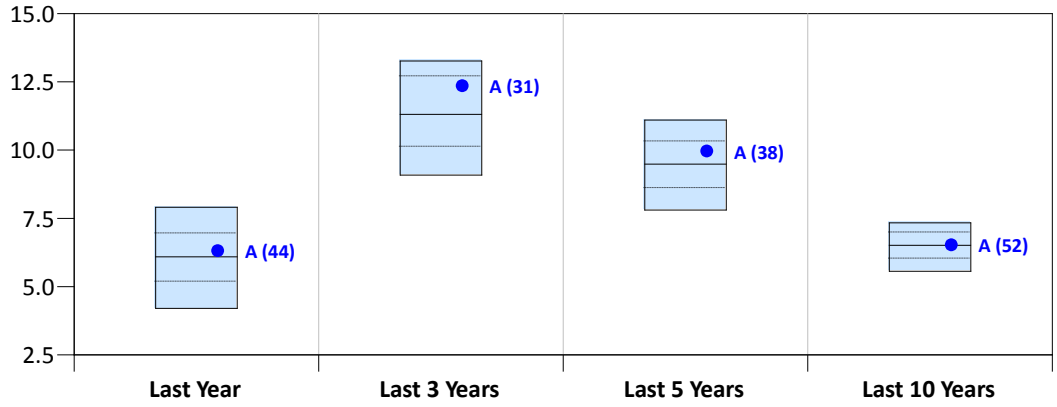
Recent Quarterly Indicators	4Q14	3Q14	2Q14	1Q14	4Q13	3Q13	2Q13	1Q13
GDP Growth	2.2%	5.0%	4.6%	-2.1%	3.5%	4.5%	1.8%	2.7%
Unemployment Rate	5.7%	6.1%	6.2%	6.6%	7.0%	7.3%	7.5%	7.7%
CPI	0.8%	1.7%	2.1%	1.5%	1.5%	1.2%	1.8%	1.5%
Consumer Sentiment	93.6	84.6	82.5	80.0	82.5	77.5	84.1	78.6

TFFR Investment Review

As of December 31, 2014

TFFR Public Fund Peer Comparison – Gross Returns
As of 12/31/14

Gross of Fee Returns
for Periods Ended December 31, 2014
Group: CAI Public Fund Sponsor Database



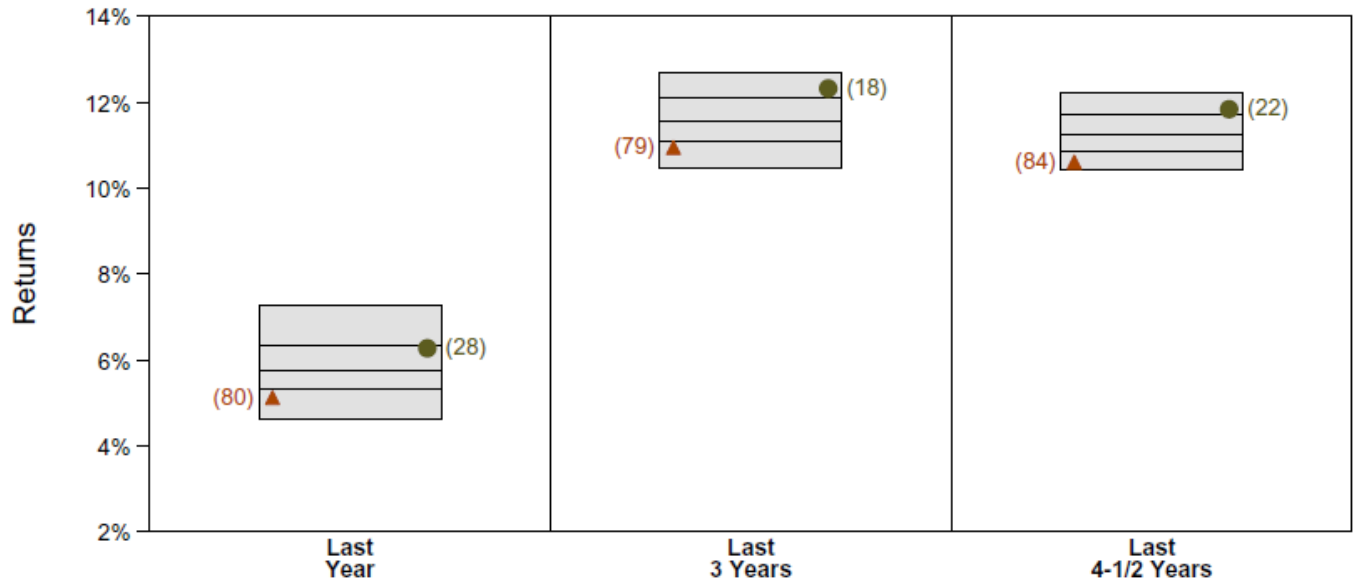
	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	7.9	13.3	11.1	7.3
25th Percentile	6.9	12.7	10.3	7.0
Median	6.1	11.3	9.5	6.5
75th Percentile	5.2	10.1	8.6	6.0
90th Percentile	4.2	9.1	7.8	5.6
Member Count	265	258	243	208
Total Fund-TFFR ● A	**6.3**	**12.3**	**9.9**	**6.5**

Callan Returns: TFFR generated 2nd quartile returns for the 1-, 3- and 5-year periods ended December 31, 2014 on an unadjusted asset allocation basis, when compared to public fund peers.

Note: TFFR Fund and peer performance are based on Callan's calculation of gross returns. *Source: Callan*

Peer Return Comparison – Asset Allocation Adjusted Basis
As of 12/31/14

Asset Allocation Adjusted Ranking



	Last Year	Last 3 Years	Last 4-1/2 Years
10th Percentile	7.27	12.67	12.21
25th Percentile	6.35	12.08	11.71
Median	5.77	11.56	11.24
75th Percentile	5.31	11.07	10.85
90th Percentile	4.63	10.46	10.43
Total Fund ●	6.27	12.32	11.83
Policy Target ▲	5.13	10.94	10.61

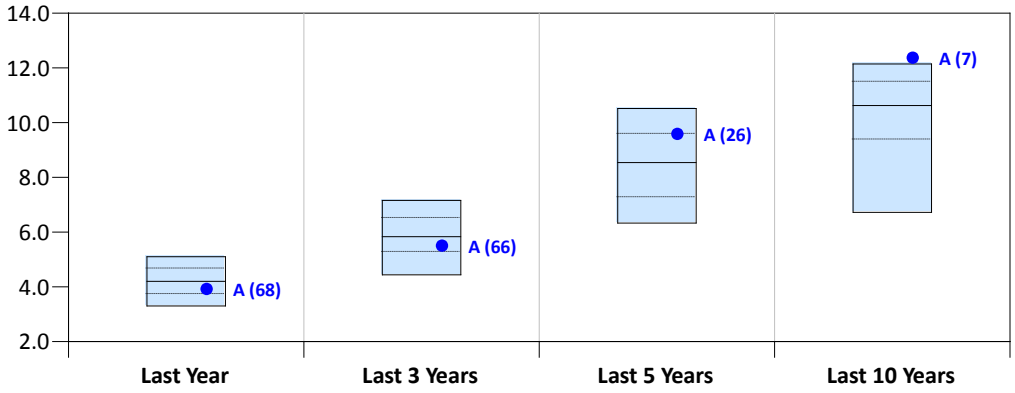
Callan Returns: TFFR generated returns ranging between 18th and 28th percentile on asset allocation adjusted basis for the 1-, 3- and 4.5 year periods ended December 31, 2014, when compared to public fund peers.

Note: TFFR Fund and peer performance are based on Callan's calculation of gross returns. *Source: Callan*

Public Fund Peer Comparison – Standard Deviation
As of 12/31/14

Standard deviation is used to measure investment (or portfolio) volatility whereas a lower standard deviation is generally preferred over a higher standard deviation.

Gross of Fee Standard Deviation
for Periods Ended December 31, 2014
Group: CAI Public Fund Sponsor Database



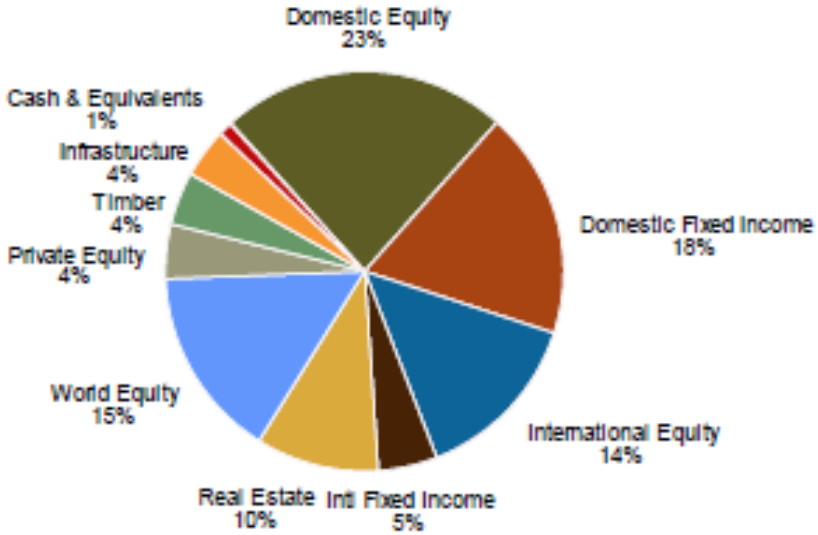
	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	5.1	7.2	10.5	12.1
25th Percentile	4.6	6.5	9.6	11.5
Median	4.2	5.8	8.5	10.6
75th Percentile	3.7	5.3	7.3	9.4
90th Percentile	3.3	4.4	6.3	6.7
Member Count	265	258	243	208
Total Fund-TFFR ● A	**3.9**	**5.5**	**9.5**	**12.3**

Standard Deviation of Callan Returns: The TFFR Fund generated 3rd quartile standard deviation for the 1- and 3-year period, 2nd quartile standard deviation for the 5-year period and 1st quartile standard deviation for the 10-year period ended December 31, 2014 when compared to public fund peers (unadjusted basis).

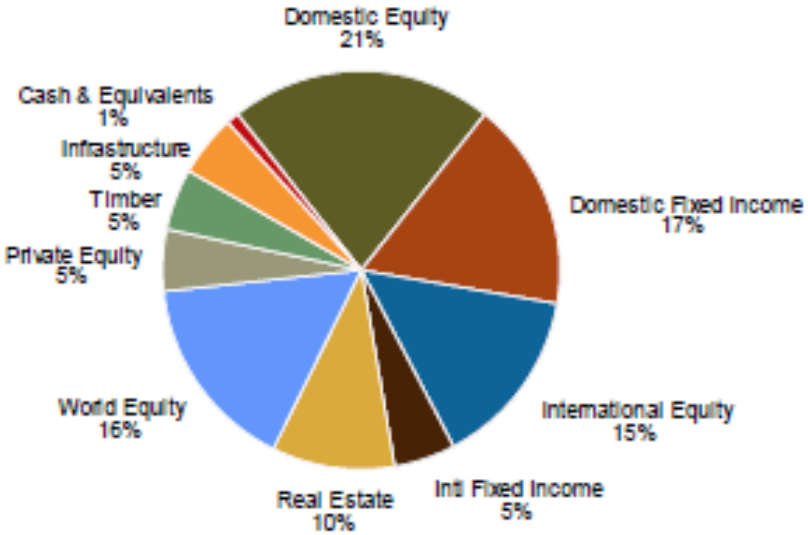
Note: TFFR Fund and peer performance are based on Callan's calculation of gross returns. *Source: Callan*

TFFR Allocation: 12/31/14

Actual Asset Allocation



Target Asset Allocation

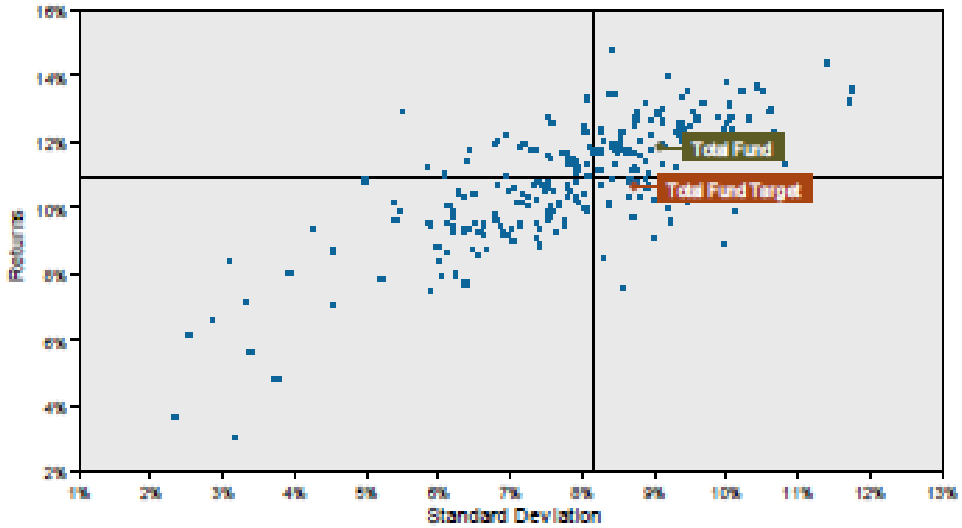


Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	476,283	23.3%	21.4%	1.9%	38,345
Domestic Fixed Income	376,960	18.4%	17.0%	1.4%	29,065
International Equity	288,931	14.1%	14.6%	(0.5%)	(9,849)
Intl Fixed Income	98,805	4.8%	5.0%	(0.2%)	(3,517)
Real Estate	205,416	10.0%	10.0%	0.0%	772
World Equity	316,767	15.5%	16.0%	(0.5%)	(10,663)
Private Equity	90,820	4.4%	5.0%	(0.6%)	(11,502)
Timber	87,653	4.3%	5.0%	(0.7%)	(14,669)
Infrastructure	82,854	4.0%	5.0%	(1.0%)	(19,468)
Cash & Equivalents	21,951	1.1%	1.0%	0.1%	1,487
Total	2,046,439	100.0%	100.0%		

TFFR Performance and Attribution: 12/31/14

TFFR's managers collectively added value over 4-1/2 years (gross and net)

Four and One-Half Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

4.5 Years Ended 12/31/14	
Gross:	11.83%
Net:	11.46
Target:	10.61
Net Added:	0.85%

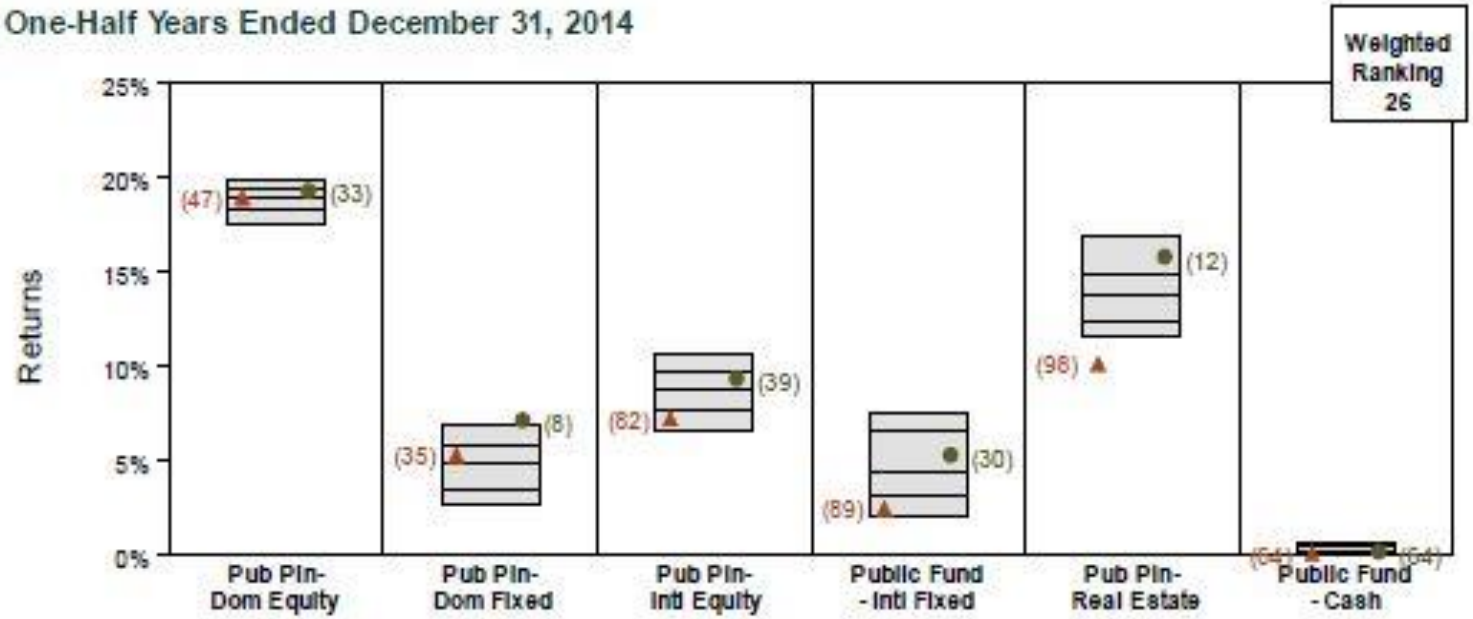
Four and One-Half Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	29%	28%	19.24%	18.97%	0.01%	0.13%	0.13%
Domestic Fixed Income	18%	18%	7.07%	5.31%	0.30%	(0.03%)	0.28%
Real Estate	10%	10%	15.74%	12.56%	0.30%	0.04%	0.33%
Timber	4%	4%	-	-	(0.34%)	0.01%	(0.33%)
Infrastructure	3%	4%	-	-	0.21%	0.14%	0.35%
International Equity	18%	18%	9.26%	7.24%	0.40%	(0.01%)	0.39%
International Fixed Incom	5%	5%	5.22%	2.47%	0.15%	(0.01%)	0.14%
Private Equity	5%	5%	6.67%	6.67%	0.00%	(0.06%)	(0.06%)
World Equity	8%	8%	-	-	0.06%	(0.05%)	0.01%
Cash & Equivalents	1%	1%	0.09%	0.09%	0.00%	(0.02%)	(0.02%)
Total			11.83% =	10.61% +	1.09% +	0.13%	1.23%

Asset Class Composite Results

TFFR's asset class results vs. other Public Pension Funds

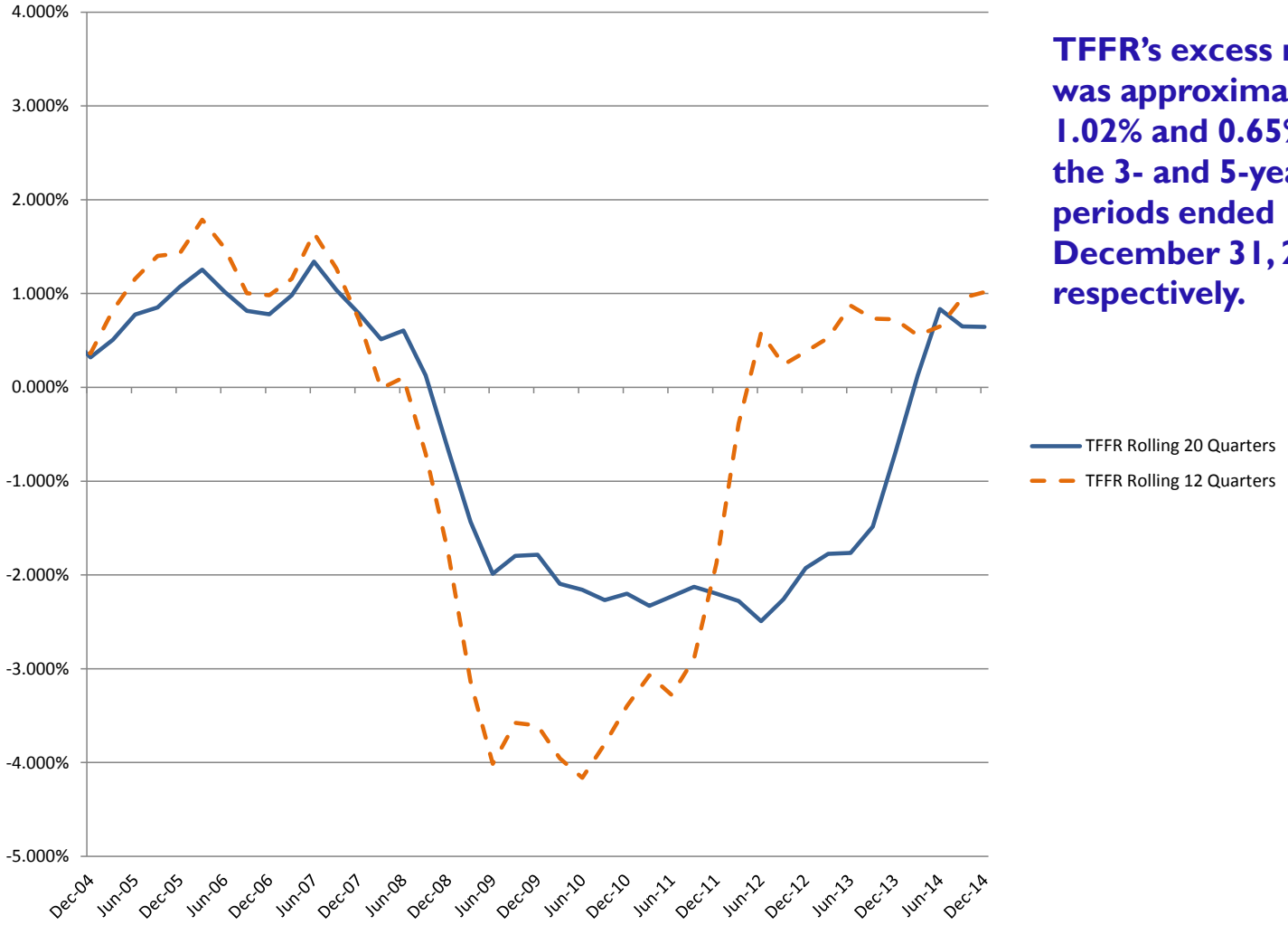
Four and One-Half Years Ended December 31, 2014



	Pub Pln-Dom Equity	Pub Pln-Dom Fixed	Pub Pln-Intl Equity	Public Fund - Intl Fixed	Pub Pln-Real Estate	Public Fund - Cash
10th Percentile	19.87	6.92	10.70	7.58	16.66	0.74
25th Percentile	19.42	5.80	9.76	6.62	14.88	0.45
Median	18.92	4.83	8.85	4.49	13.76	0.12
75th Percentile	18.28	3.55	7.74	3.20	12.34	0.05
90th Percentile	17.56	2.73	6.59	2.10	11.67	0.01
Asset Class Composite ●	19.24	7.07	9.26	5.22	15.74	0.09
Composite Benchmark ▲	18.97	5.31	7.24	2.47	10.15	0.09

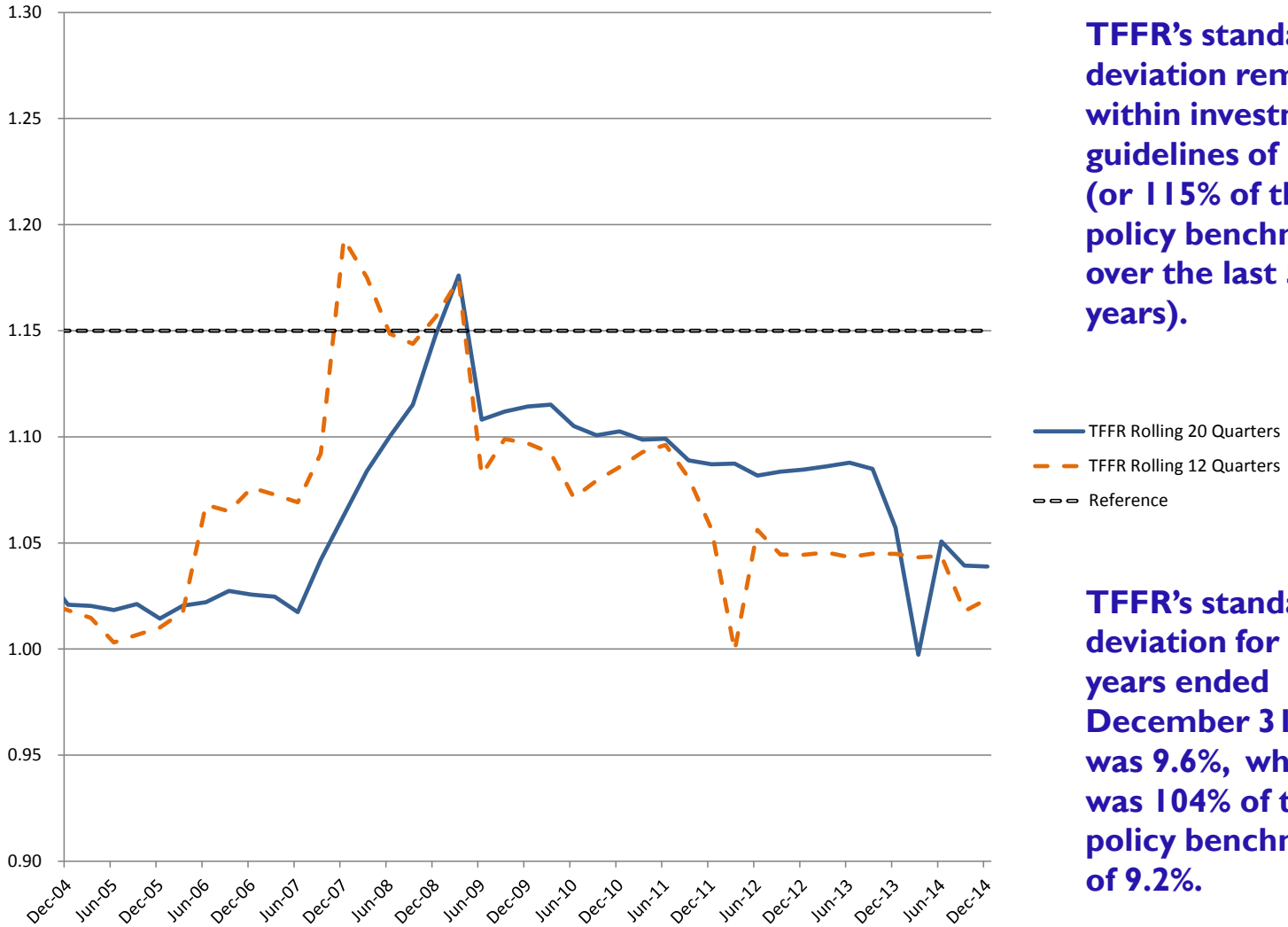
- Public market asset classes are all above their respective medians except cash
  - Cash results match the benchmark annualized return: 9 basis points.
- Fixed income and real estate returns in top quartile

Excess Return Relative to Policy Benchmark
10 Years Ended 12/31/2014



TFFR's excess return was approximately 1.02% and 0.65% for the 3- and 5-year periods ended December 31, 2014, respectively.

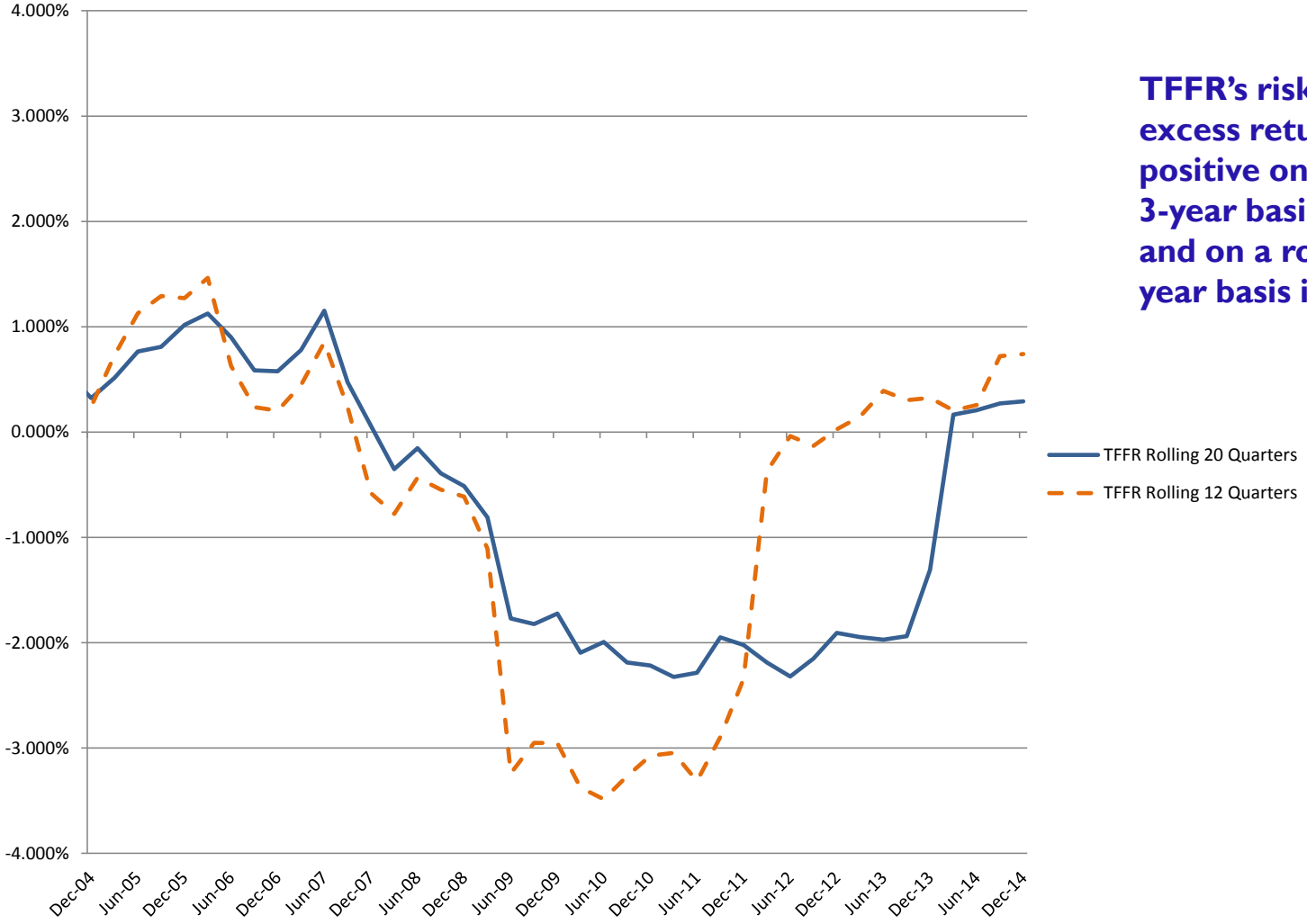
Relative Standard Deviation Relative to Policy Benchmark
10 Years Ended 12/31/2014



TFFR's standard deviation remains within investment guidelines of 1.15 (or 115% of the policy benchmark over the last 5 years).

TFFR's standard deviation for the 5-years ended December 31, 2014 was 9.6%, which was 104% of the policy benchmark of 9.2%.

Risk Adjusted Excess Return
10 Years Ended 12/31/2014



TFFR's risk adjusted excess return turned positive on a rolling 3-year basis in 2013 and on a rolling 5-year basis in 2014.

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
JANUARY 23, 2015, BOARD MEETING

MEMBERS PRESENT:
Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Lance Gaebe, Land Commissioner
Mike Gessner, TFFR Board
Adam Hamm, Insurance Commissioner
Rob Lech, TFFR Board
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

STAFF PRESENT:
Eric Chin, Investment Analyst
Connie Flanagan, Fiscal & Invt Op Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Deputy ED/CRO
Terra Miller-Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Deputy CIO
Susan Walcker, Invt Acct

OTHERS PRESENT:
Bryan Klipfel, WSI
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, January 23, 2015, at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

The SIB welcomed Mr. Mel Olson. Mr. Olson will be representing the Teachers' Fund for Retirement (TFFR) on the SIB.

AGENDA:

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE JANUARY 23, 2015, MEETING AS DISTRIBUTED.

AYES: MS. TERNES, MR. OLSON, COMMISSIONER HAMM, MR. SANDAL, TREASURER SCHMIDT, COMMISSIONER GAEBE, MR. GESSNER, MR. TRENBEATH, MR. LECH, MS. SMITH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

MINUTES:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. SMITH AND CARRIED ON A VOICE VOTE TO APPROVE THE NOVEMBER 21, 2014, MINUTES AS DISTRIBUTED.

AYES: MR. LECH, TREASURER SCHMIDT, MS. TERNES, MS. SMITH, COMMISSIONER GAEBE, MR. GESSNER, COMMISSIONER HAMM, MR. OLSON, MR. TRENBEATH, MR. SANDAL, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

APPOINTMENT OF PARLIAMENTARIAN:

Lt. Governor Wrigley asked for a volunteer to serve as Parliamentarian for the period of January 23, 2015 through June 30, 2015. Mr. Lech volunteered to serve for the remainder of the term vacated by Mr. Corneil.

INVESTMENTS:

Asset/Performance Review – Mr. Hunter updated the SIB on the status of the portfolios they manage on behalf of their clients. As of November 30, 2014, assets under management grew by approximately 18.5 percent or $1.56 billion in the last year. The Pension Trust posted a net return of over 7.9 percent with gains of $349 million. The Insurance Trust generated a net return of 5.6 percent with gains of $222 million. The Legacy Fund's net return was 4.8 percent and increased by 73 percent or $1.2 billion for the year ended November 30, 2014. SIB client assets approximated $10 billion as of November 30, 2014, based on unaudited valuations.

Novarca and Callan Fee Study Update – Mr. Hunter stated Callan provided the results of its comprehensive review of the SIB investment manager fee structures for the fiscal year ending June 30, 2014, at the SIB's November 21, 2014, meeting. After further review and discussion with Novarca, staff recommended the scope of the Novarca fee study be expanded to also include other higher cost investment strategies such as World Equity.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MR. TRENBEATH AND CARRIED BY A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION TO EXPAND THE SCOPE OF NOVARCA'S FEE STUDY TO ALSO INCLUDE WORLD EQUITY.

AYES: MR. GESSNER, COMMISSIONER HAMM, MS. SMITH, MR. OLSON, MR. TRENBEATH, COMMISSIONER GAEBE, MR. SANDAL, TREASURER SCHMIDT, MR. TERNES, MR. LECH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

Infrastructure Update – Mr. Schulz provided an update on the infrastructure strategies. The SIB at their November 21, 2014, meeting committed up to $30 million on behalf of the Pension Trust and up to $75 million on behalf of the Legacy Fund to GCM Grosvenor Customized Infrastructure Strategies Fund II. Legal counsel completed their review of the contract which resulted in a lower management fee of .6 percent to .5 percent. The first close occurred on January 21, 2015.

Mr. Schulz also stated additional subscriptions were submitted in the fourth quarter for the Pension Trust and Insurance Trust of $30 million and $75 million respectively for the JP Morgan Infrastructure Investments Fund. The capital call will be made on February 3, 2015.

ADMINISTRATION:

Meeting Schedule 2015-16 – The 2015-16 SIB meeting schedule was presented for acceptance. The July 2015 meeting will be a governance day retreat.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MS. TERNES AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE 2015-16 SIB MEETING SCHEDULE.

AYES: TREASURER SCHMIDT, MR. GESSNER, COMMISSIONER HAMM, MS. TERNES, COMMISSIONER GAEBE, MS. SMITH, MR. LECH, MR. SANDAL, MR. TRENBEATH, MR. OLSON, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

Executive Review/Survey Update – Mr. Hunter stated staff completed an employee opinion survey on the Executive Director/CIO during December 2014. There was 100 percent participation and the survey indicated that 78% "agree" or "strongly agree" with the ED/CIO effectiveness.

Mr. Hunter stated Ms. Miller Bowley is in the process of finalizing the Executive Limitations Audit for calendar year 2014. Part of the Executive Limitations audit also includes an evaluation of the ED/CIO by the SIB. The survey will be dispersed next week and the results compiled by Ms. Miller Bowley. The deadline for completion of the evaluation will be February 6, 2015. The Executive Limitation audit results will be presented to the SIB and the SIB Audit Committee at their February 2015, meetings.

QUARTERLY MONITORING:

Monitoring reports for the quarter ending December 31, 2014, were presented for consideration and acceptance: Budget/Financial Condition, Executive Limitations/Staff Relations, Investment Ends, Retirement Ends, and the Watch List.

Mr. Hunter provided comments on Staff Relations. The Employee Benefit Programs Specialist position was vacated on December 19, 2014. The position was posted and interviews were conducted on January 21, 2015. Staff is in the process of reviewing applications and an update will be provided at the next meeting.

Mr. Schulz provided comments on the "Watch List". Staff recommends PIMCO remain on the list due to previous personnel changes that have occurred. Staff recently learned Mr. Saumil Parikh, one of the portfolio managers on the SIB's Unconstrained strategy, recently departed ways with PIMCO. Staff is exploring options for the assets in the event the relationship would need to be terminated.

Staff recommends Timberland Investment Resources (TIR) remain on the list. The Springbank portfolio has a management and incentive fee agreement which will terminate on June 30, 2015. A review meeting was held on December 10, 2015, with staff. Treasurer Schmidt was also in attendance. TIR will be presenting an update on the timber portfolios at the February 27, 2015, SIB meeting.

Mr. Schulz also requested the UBS Global Bond ex-U.S. fixed income strategy with the Pension Trust be added to the list due to underperformance relative to its benchmark.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MS. TERNES AND CARRIED BY A VOICE VOTE TO ACCEPT THE QUARTERLY MONITORING REPORTS FOR THE PERIOD ENDING DECEMBER 31, 2014.

AYES: MR. SMITH, MR. SANDAL, MR. OLSON, MR. GESSNER, MR. LECH, MR. TRENBEATH, MS. TERNES, COMMISSIONER HAMM, COMMISSIONER GAEBE, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

GOVERNANCE:

Legislative Update – Mr. Hunter provided an update on legislative bills staff is tracking.

Investment Policy Statements – Mr. Hunter presented the following revised investment policy statements for the board's consideration: Legacy Fund, Budget Stabilization Fund, and Job Service.

IT WAS MOVED BY MS. SMITH AND SECONDED BY MS. TERNES AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE REVISED INVESTMENT POLICY STATEMENTS FOR THE LEGACY FUND AND THE JOB SERVICE PENSION PLAN.

AYES: MR. TRENBEATH, TREASURER SCHMDIT, MR. OLSON, COMMISSIONER GAEBE, MR. LECH, MR. SANDAL, COMMISSIONER HAMM, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

The Budget Stabilization investment policy statement was tabled for further review and discussion at the February 27, 2015, meeting.

New Clients – Mr. Hunter indicated the Tobacco Prevention & Control Trust representatives contacted him regarding contracting with the SIB for investment services. The Fund has a market value of approximately $45 million as of December 31, 2014. This Fund would not be pooled with the existing clients' assets because the portfolio cannot be invested in tobacco companies. Staff is exploring options to develop a cost effective alternative with relatively low administrative costs.

Staff was also approached by the Department of Trust Lands to explore options for shared management of the Permanent Trust Investments of approximately $3.5 billion. Staff and the Department of Trust Lands are looking at options where both RIO and the Department of Trust Lands would share in the over site of the investment of the funds as well as the managers hired to invest those assets.

The SIB requested staff to continue to explore options for both proposals and report back to the board.

The board recessed at 9:40 am and reconvened at 9:55 a.m.

Governance Process Review – The Board reviewed Section B. of the SIB Governance Manual on "Governance Process". Any modifications to the policies will be presented for a second review and possible acceptance at the next meeting.

Open Records/Meetings Review -

Ms. Murtha presented an educational segment on open records and meetings.

OTHER:

Next scheduled meetings:

SIB Meeting – February 27, 2015, 8:30 a.m. – Workforce Safety & Insurance
SIB Audit Committee Meeting – February 27, 2015, 1:00 p.m. – Workforce Safety & Insurance

ADJOURNMENT:

With no further business to come before the SIB, Lt. Governor Wrigley adjourned the meeting at 11:20 p.m.

_____
Lt. Governor Wrigley, Chair
State Investment Board

_____
Bonnie Heit
Assistant to the Board

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
FEBRUARY 27, 2015, BOARD MEETING

MEMBERS PRESENT:
Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Jeff Engleson, Dep. Land Commissioner
Adam Hamm, Insurance Commissioner
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

MEMBERS ABSENT:
Mike Gessner, TFFR Board
Rob Lech, TFFR Board

STAFF PRESENT:
Eric Chin, Investment Analyst
Connie Flanagan, Fiscal & Invt Op Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Deputy ED/CRO
Terra Miller-Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Deputy CIO

OTHERS PRESENT:
Paul Erlendson, Callan Associates Inc.
Tom Johnson, Timberland Investment Resources
Chris Mathis, Timberland Investment Resources
Jan Murtha, Attorney General's Office
Mark Seaman, Timberland Investment Resources

CALL TO ORDER:

Lt. Governor Wrigley called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, February 27, 2015, at Workforce Safety & Insurance, 1600 E Century Ave., Bismarck, ND.

AGENDA:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MS. SMITH AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE FEBRUARY 27, 2015, MEETING AS DISTRIBUTED.

AYES:TREASURER SCHMIDT, COMMISSIONER HAMM, MS.TERNES, MR. ENGLESON, MS. SMITH, MR. SANDAL, MR. TRENBEATH, MR. OLSON, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER, MR. LECH

MINUTES:

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. OLSON AND CARRIED ON A VOICE VOTE TO APPROVE THE JANUARY 23, 2015, MINUTES AS DISTRIBUTED.

AYES: MS. SMITH, MR. SANDAL, MR. OLSON, MR. TRENBEATH, MS. TERNES, COMMISSIONER HAMM, MR. ENGLESON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY

NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER, MR. LECH

INVESTMENTS:

Asset/Performance Overview – Mr. Hunter updated the SIB on the status of the portfolios they manage on behalf of their clients. Highlights included - as of December 31, 2014, assets under management grew by approximately 18 percent or $1.53 billion in the last year. The Pension Trust posted a net return of approximately 6.0 percent with gains of $265 million. All Pension Trust clients generated positive excess returns for the 1, 3, and 5 year periods ended December 31, 2014. The Insurance Trust generated a net return of 5.1 percent with gains of $204 million. Twelve out of 14 of the Insurance Trust's clients generated positive excess returns for the 1, 3, and 5 year periods ended December 31, 2014.

The Legacy Fund's net return was 4.2 percent and assets increased by 71 percent or $1.2 billion for the year ended December 31, 2014. SIB client assets, based on unaudited valuations, approximated $10.1 billion as of December 31, 2014. Mr. Hunter also informed the board the Legacy Fund's asset allocation has been fully implemented as of January 31, 2015. The asset allocation was approved by the Legacy and Budget Stabilization Fund Advisory Board on April 2, 2013, and accepted by the SIB for implementation on April 26, 2013.

Timberland Investment Resources (TIR) – TIR representatives reviewed the Springbank, Teredo, and Eastern Timber Opportunities timber portfolios they are currently managing on behalf of the SIB.

Additional discussion was held on the Springbank property. The management agreement for the property expires on June 30, 2015.

Callan Report – Mr. Erlendson reviewed the Pension and Insurance Trust's performance for the quarter ending December 31, 2014. Mr. Erlendson also provided Callan's economic outlook for both foreign and domestic markets for the same quarter.

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY TREASURER SCHMIDT AND CARRIED ON A VOICE VOTE TO ACCEPT THE CALLAN REPORTS FOR THE QUARTER ENDING DECEMBER 31, 2014.

AYES: MR. TRENBEATH, TREASURER SCHMIDT, MR. OLSON, MR. ENGLESON, MR. SANDAL, COMMISSIONER HAMM, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER, MR. LECH

The Board recessed at 10:18 a.m. and reconvened at 10:33 a.m.

ADMINISTRATION:

Audit Committee Report – Ms. Miller Bowley reported on the SIB Audit Committee meeting held on February 26, 2015. Ms. Miller Bowley stated year to date a total of ten school district audits have been completed and one not in compliance follow up review has been completed for a total of eleven audits.

The Audit Committee also met separately with staff and RIO management. The Audit Committee is satisfied that the Audit Division and RIO Management are working cohesively within the organization.

The Audit Committee also reviewed and accepted the final results of the Executive Limitations Audit for the period of January 1, 2014 – December 31, 2014.

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MR. OLSON AND CARRIED ON A VOICE VOTE TO ACCEPT THE AUDIT REPORT AS PRESENTED.

AYES: MS. TERNES, MR. OLSON, COMMISSIONER HAMM, TREASURER SCHMIDT, MR. ENGLESON, MR. TRENBEATH, MR. SANDAL, MS. SMITH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER, MR. LECH

Executive Limitations Audit – Ms. Miller Bowley stated the Executive Limitations Audit for the period of January 1, 2014 through December 31, 2014 has been completed. The audit examines the Executive Director/CIO's level of compliance with SIB Governance Manual Executive Limitation policies A-1 through A-11. The Audit Division and the Audit Committee is of the opinion that the Executive Director/CIO is in compliance with the policies.

IT WAS MOVED BY MS. SMITH AND SECONDED BY MR. TRENBEATH AND CARRIED ON A VOICE VOTE TO ACCEPT THE EXECUTIVE LIMITATIONS AUDIT REPORT.

AYES: COMMISSIONER HAMM, MS. TERNES, MR. OLSON, MR. SANDAL, TREASURER SCHMIDT, MS. SMITH, MR. ENGLESON, MR. TRENBEATH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: MR. GESSNER, MR. LECH

Executive Review Appointment – Per Governance Policy Board-Staff Relationship/Monitoring Executive Performance C-4, the Chairperson of the SIB will appoint a three member committee to review the board's evaluation of the Executive Director/CIO as well as the Executive Limitations Audit (both completed in February 2015) and bring back a recommendation to the full board regarding compensation. Lt. Governor Wrigley appointed Mr. Lech, Chair, Mr. Sandal, and Ms. Ternes.

Staff Update – Mr. Hunter stated RIO will be fully staffed March 3, 2015, with the appointment of Ms. Denise Osmond as Retirement Programs Specialist.

Callan Conference – Mr. Sandal attend Callan's annual conference January 26-28, 2015, in San Francisco, CA. Mr. Sandal stated the agenda was timely and appropriate given the issues the SIB is facing as well as pension boards across the country. Mr. Sandal stated the conference was very valuable educationally and recommended other trustees attend the conference if they have the opportunity.

Periodicals - Per Governance Policy, Governance Process/Governing Style 1.F., the Executive Director will provide the SIB with a list of periodicals available which would provide current information on pension issues. The board members will review and request subscriptions to appropriate periodicals.

Mr. Hunter provided a listing of pension and investment-related periodicals. Trustees are to let staff know if they are interested in any of the periodicals or any other educational materials and they will be provided to them.

GOVERNANCE:

Timberland Investment Resources Recommendation – Mr. Hunter stated TIR is requesting the SIB extend the term of the Springbank, LLC management agreement by seven years to June 30, 2022, in order to maximize future earnings. The current contract will terminate on June 30, 2015, with the option for a one year extension. The agreement includes a 60-day termination notice.

The SIB owns 76 percent of the Springbank properties and the other 24 percent is owned by the Houston Firefighters Relief and Retirement Fund. TIR has managed the property since October 1, 2004. As of December 31, 2014, the market value was $116 million.

TIR's recent returns have underperformed largely due to the slower economic recovery in the southeastern U.S. in which Springbank is located (along the I-75 corridor between Atlanta, GA and Chattanooga, TN). TIR has performed well over the long-term with an Inception to Date Net Internal Rate of Return of 12.3 percent. Springbank's net time weighted return since inception is approximately 7 percent.

Staff requested authorization to continue to move forward to negotiate market terms and fees along with the Houston Firefighters Relief and Retirement Fund. Staff is hoping to conclude negotiations within the next two to three months.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. SANDAL AND CARRIED BY A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION TO CONTINUE CONTRACT NEGOTIATIONS WITH TIR.

AYES: TREASURER SCHMIDT, MR. OLSON, MR. ENGLESON, MR. TRENBEATH, MR. SANDAL, COMMISSIONER HAMM, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
AYES: MR. GESSNER, MR. LECH

Legislative Update – Mr. Hunter provided an update on legislative bills staff is tracking that could possibly affect the SIB and RIO. Lt. Governor Wrigley requested he be notified when hearings are scheduled for HCR3041 - a Legislative Management study which would consist of a comprehensive review and analysis of the investment practices by the state and SIB.

Budget Stabilization IPS – Acceptance of the Budget Stabilization Fund Investment Policy Statement by the SIB was tabled for further clarification. The SIB requested the Bank of North Dakota (BND) confirm its understanding of the Budget Stabilization Fund's short-term liquidity requirements per NDCC Chapter 54.27.2 in writing. Mr. Hunter indicated Babson and JP Morgan stated they estimate their investment could be liquidated within 5 to 10 trading days. BND noted that its liquidity is strong and they have access to overnight funds in excess of $600 million.

Governance Process Review –

IT WAS MOVED BY MR. SANDAL AND SECONDED BY TREASURER SCHMIDT AND CARRIED BY A ROLL CALL VOTE TO ACCEPT THE SECOND READING OF THE GOVERNANCE PROCESS SECTION OF THE GOVERNANCE POLICIES.

AYES: MS. SMITH, MS. TERNES, TREASURER SCHMIDT, COMMISSIONER HAMM, MR. OLSON, MR. TRENBEATH, MR. SANDAL, AND LT. GOVERNOR WRIGLEY

NAYS: NONE
MOTION CARRIED
ABSENT: MR. ENGLESON, MR. GESSNER, MR. LECH

The Board received the first reading of the Executive Limitations policies. The policies will be presented for a second reading and possible acceptance at the next meeting.

OTHER:

Next scheduled meetings:

SIB Meeting – March 27, 2015, 8:30 a.m. – Workforce Safety & Insurance
SIB Audit Committee Meeting – May 22, 2015, 1:00 p.m. – State Capitol, Peace Garden Room

ADJOURNMENT:

IT WAS MOVED BY MR. TRENBEATH AND SECONDED BY MS. SMITH AND CARRIED ON A VOICE VOTE TO ADJOURN THE MEETING.

AYES: MR. OLSON, MR. TRENBEATH, COMMISSIONER HAMM, MS. SMITH, MR. SANDAL, TREASURER SCHMIDT, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED
ABSENT: MR. ENGLESON, MR. GESSNER, MR. LECH

With no further business to come before the SIB, Lt. Governor Wrigley adjourned the meeting at 11:27 a.m.

_____
Lt. Governor Wrigley, Chair
State Investment Board

_____
Bonnie Heit
Assistant to the Board

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 19, 2015**

SUBJ: **Annual Public Pension Plan Comparisons Report**
2013 Public Fund Survey

Enclosed is the Public Fund Survey (PFS) for FY 2013 (published December 2014) conducted by NASRA and NCTR. This survey provides information on key characteristics of most of the nation's largest public retirement systems.

Keep in mind the survey does not include 2014 actuarial and investment information which will be reflected in next year's survey.

As I do each year, I will make a brief presentation at the meeting comparing NDTFFR to the 2013 Public Fund Survey.

Enclosure

Public Pension Plan Comparisons

ND Teachers' Fund for Retirement Board

March 2015

2013 Public Fund Survey

- Published January 2015 for FY 2013
  - **Survey results do not include FY 2014 data.**
- Includes key characteristics of 126 large public retirement plans.
- Represents about 85% of entire state and local government (SLG) retirement system community.
- Sponsored by NCTR and NASRA since 2001.
- Accessible online at www.publicfundsurvey.org

Public Pension Plans Overview

- Retirement benefits play an important role in attracting and retaining qualified employees needed to perform essential public services, promote orderly turnover of workers, and enhance the retirement security of a large segment of the nation's workforce.

- Pension plans provide stable and adequate income replacement in retirement for long-term workers, and ancillary benefits related to disability and death before retirement.

- SLG systems generally are funded in advance by investing employee and employer contributions during employees' working years; benefits are distributed in the form of a lifetime payout in retirement.

2008-09 Market Decline

- 2008-09 market decline, combined with other factors, increased plan's unfunded liabilities – and the cost of amortizing them - for most public pension plans.
- Extent of cost increases depend on plan's:
  - Funding condition prior to the market decline
  - Adequacy of employer and employee contributions
  - Demographic composition
  - Actuarial methods and assumptions
  - Past and future investment returns
- Most plans use a 5 year smoothing period to phase in investment gains and losses. This phase-in period will extend through 2013, so most plans have completed, or are nearing completion, of recognition of the sharp investment losses incurred in 2008-09. Those losses are being offset by asset gains since the market decline.

Response to 2008-09 Market Decline

- Higher costs resulting from market decline have been calculated.
- Higher contributions are becoming due at a time when revenue for most states is stagnant or low, complicating plan's ability to fully fund pension costs.
- In past 5 years, many public plan sponsors have responded to higher pension costs by:
  - Raising contributions from employees
  - Raising contributions from employers
  - Reducing benefits (primarily for new hires) – higher retirement ages, lower retirement multipliers, increased vesting requirements, etc.
  - Capping benefits; addressing salary spiking, etc.
  - Offering DC or hybrid plan designs for new employees.
  - Postponing or reducing future retiree COLAs

Legal Authority to Make Changes

- Authority to revise benefit and financing arrangements varies widely among states, depending on a combination of constitutional and statutory provisions and case law.
  - New hires only
  - Future benefit accrual patterns for existing plan participants
  - Future retiree COLAs
  - Other
- Outcome of lawsuits in various states.

Actuarial Funding Levels

- Funding ratio is most recognized measure of plan's financial health.
- Determined by dividing actuarial value of assets by liabilities.
- Both fully funded and underfunded plans rely on future contributions and investment returns.
- Plan's funded status is a snapshot in a long-term, continuous financial and actuarial process.
- Most public pension benefits are prefunded.
  - Significant portion of assets needed to fund liabilities is accumulated during working life of participant.
- Pay-as-you-go is opposite of prefunded
  - Current pension obligations are paid with current revenues.
  - Much more expensive

Actuarial Funding Levels

- Public pension plans are designed to moderate year-to-year changes in funding levels and required costs in the face of events such as investment market volatility. This is accomplished with:
  - Portfolio diversification.
  - Long investment and funding horizons.
  - Actuarial smoothing methods, which phase in investment gains and losses over several years.
  - Amortization periods, which enable plans to set and pursue long-term funding and investment policies.
  - Use of a discount rate that is consistent with historic and projected long-term investment returns.

Actuarial Funding Levels

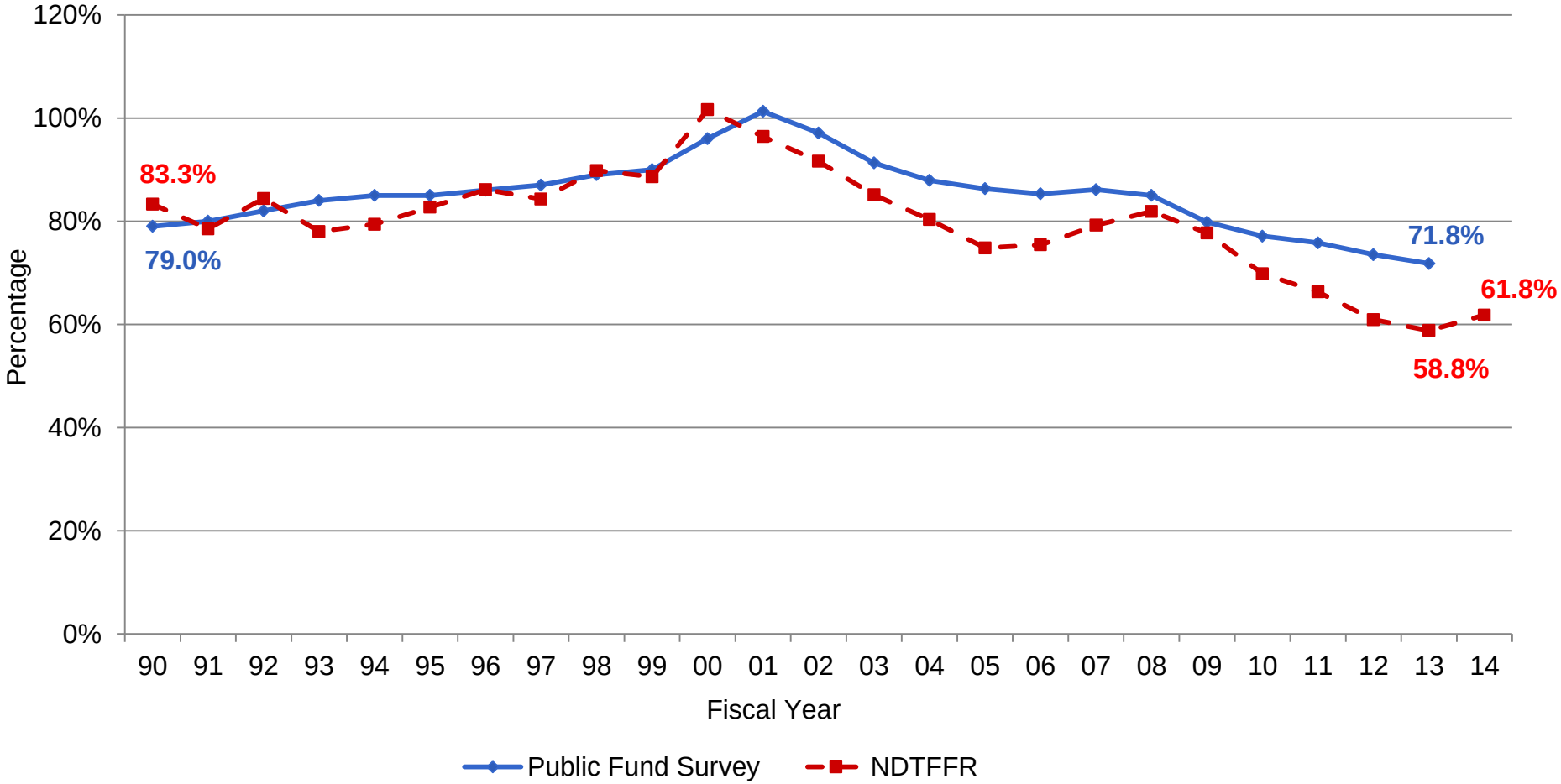
- Investment returns have a substantial effect on a pension plan's funding level.
  - Investment market performance was relatively strong during the 1990s, followed by two periods, from 2000-02 and 2008-09, of sharp market declines.
- Other factors that affect a plan's funding level include actual contributions made relative to required contributions, changes in benefit levels, changes in actuarial assumptions, and rates of employee salary growth.

Actuarial Funding Levels

- According to the 2013 Public Fund Survey, public pension funding levels declined from 73.5% in FY12 to 71.8% in FY13.
  - NDTFFR declined from 60.9% in FY12 to 58.8% in FY13.
  - NDTFFR ranking is 102 of 126 plans in 2013 Survey. (Last year, ranking was 98 of 126 plans in Survey)

  Note:
  - NDTFFR funding level increased to 61.8% in 2014.

Change in Actuarial Funding Levels

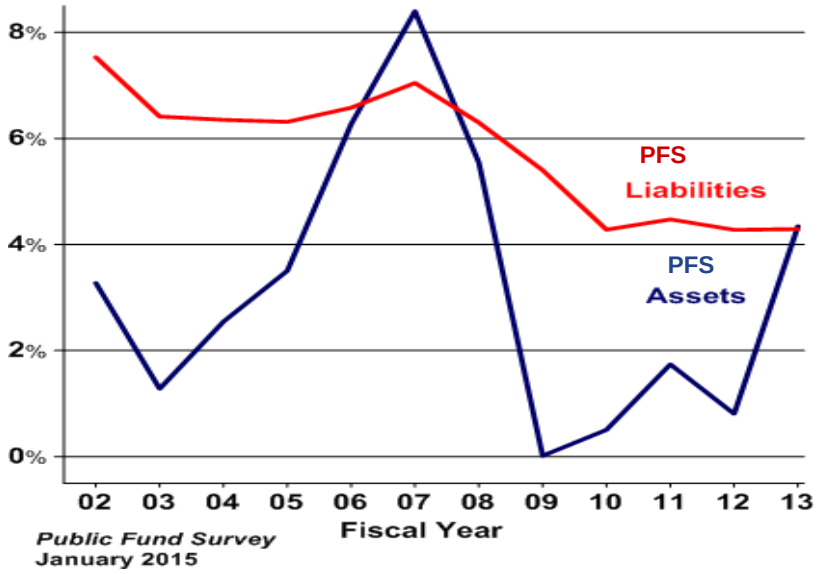


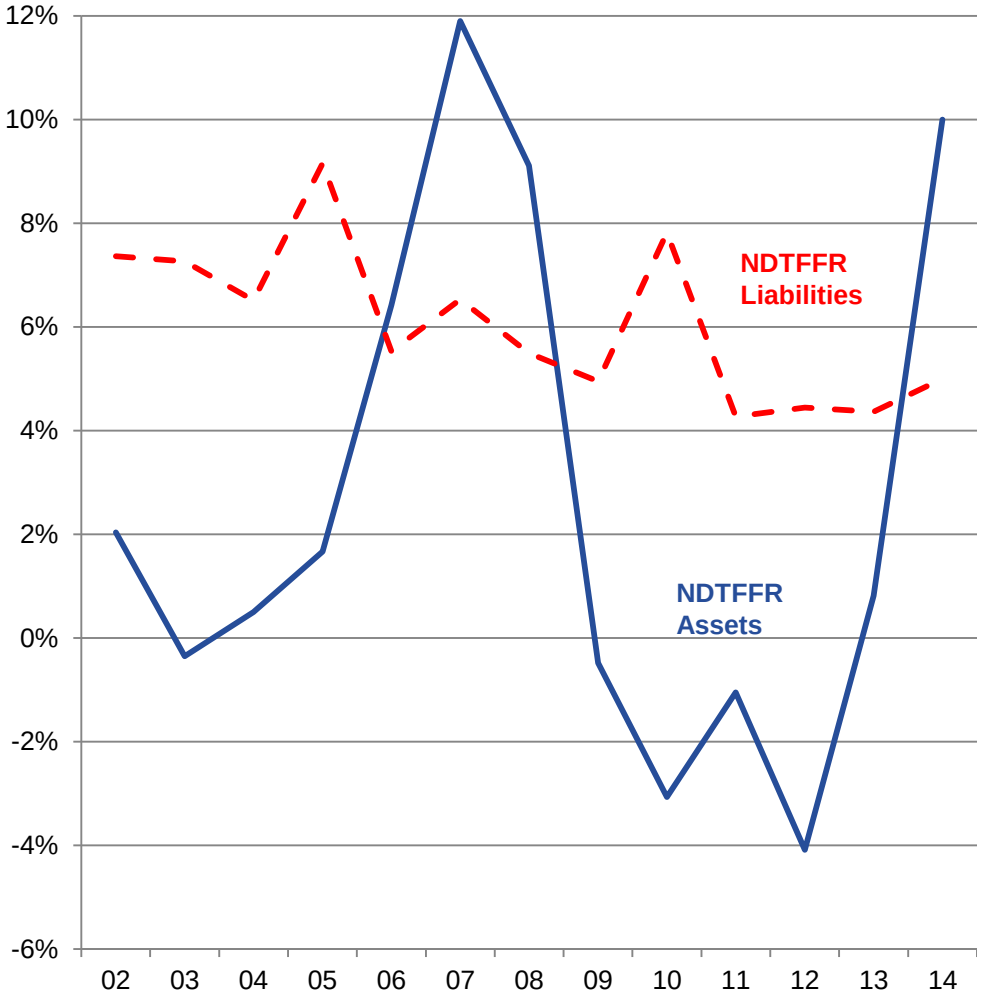
*Note: 1990-2000 PFS funding level numbers are biannual

Actuarial Assets and Liabilities

- For most plans in the PFS, liability growth has declined noticeably at a median rate of below 4.5% for 4 consecutive years.
  - Lower rate of growth in liabilities is due to low salary growth and the many reforms (reductions) in pension benefits enacted in recent years.
- Tepid asset growth reflects the actuarial smoothing of assets of the sharp market declines experienced in 2008 and 2009. These losses now have been nearly or fully recognized
- The sharp increase in FY 13 is a preview of anticipated improvement in AVA levels as market gains since 2009 are recognized.
  - For NDTFFR, liability growth has declined, but changes in actuarial assumptions (following experience studies) increased liabilities in 2005 and 2010.
  - NDTFFR asset growth has followed similar trends as the PFS, although asset returns were more volatile.

Change in Actuarial Assets & Liabilities





Membership Changes

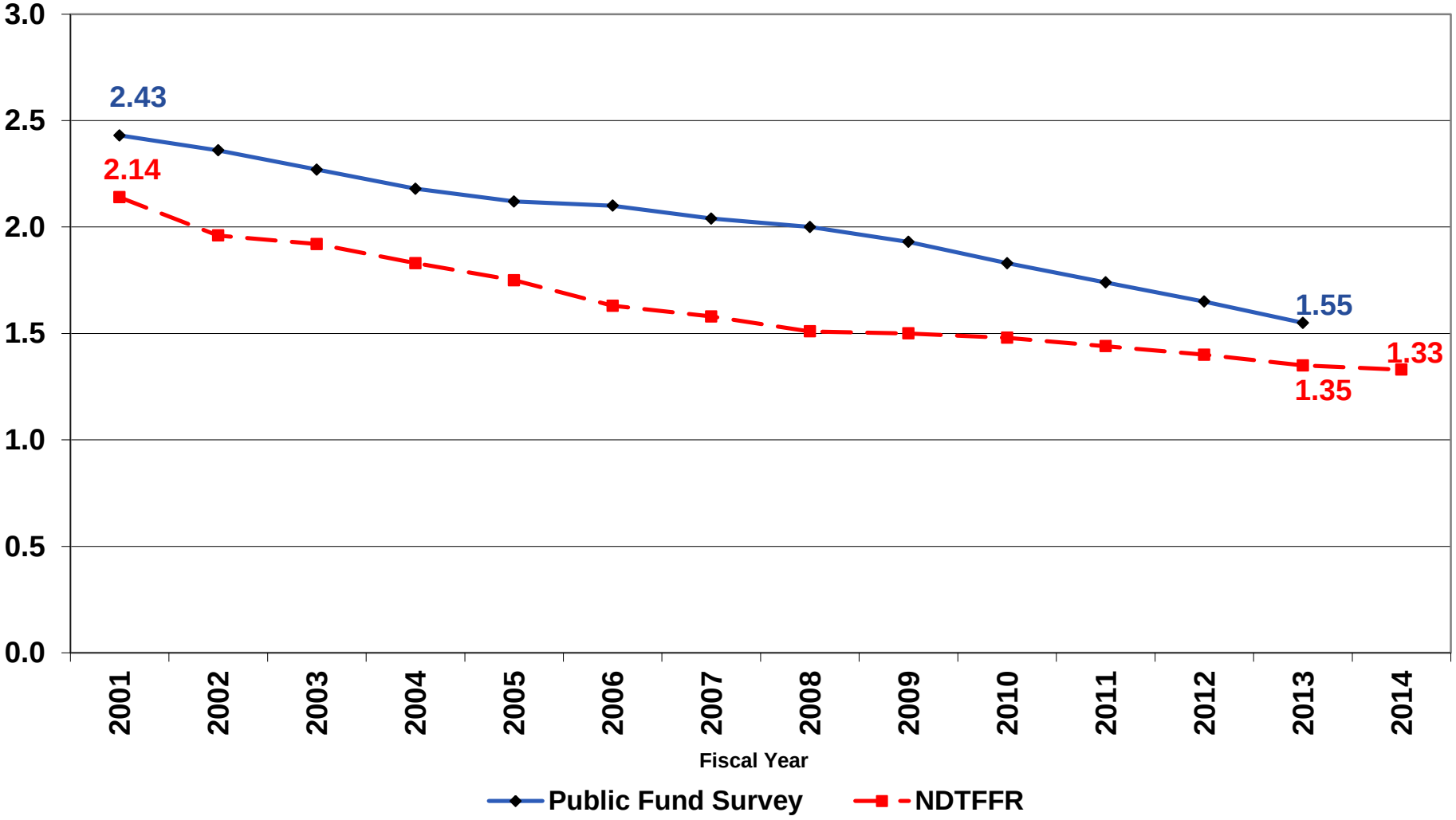
- Number of active members in PFS continues to decline which reflects the steady decline in the number of SLG employees beginning in 2008 according to US Labor Statistics.

- Number of retirees continues to grow.

- The difference between the continued increase in annuitants and a declining number of active members is driving a sustained reduction in the overall ratio of actives to annuitants. In FY13, this ratio dropped to 1.55 according to 2013 PFS.
  - For NDTFFR in FY 13, the ratio was 1.35.

- By itself, a low or declining ratio of actives to retirees is not problematic for a pension plan. However, when combined with a poorly-funded plan with a high unfunded liability, the cost as a percentage of payroll of amortizing a larger UAAL typically is higher when the ratio of actives to annuitants is lower. This results in relatively high required pension costs for plans like NDTFFR.

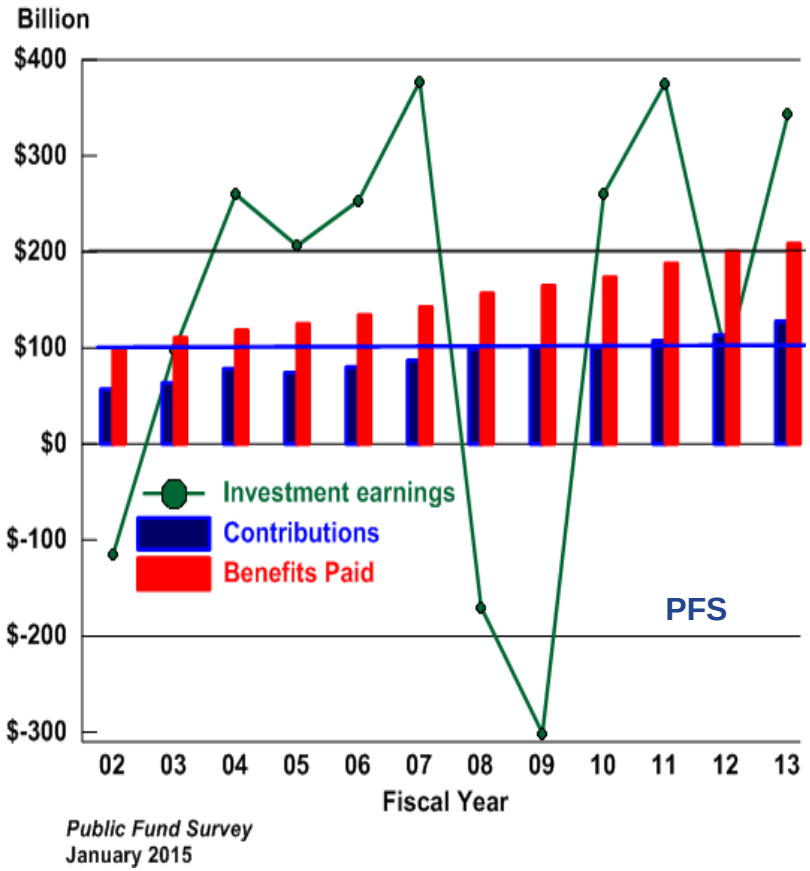
Ratio of Active Members to Annuitants

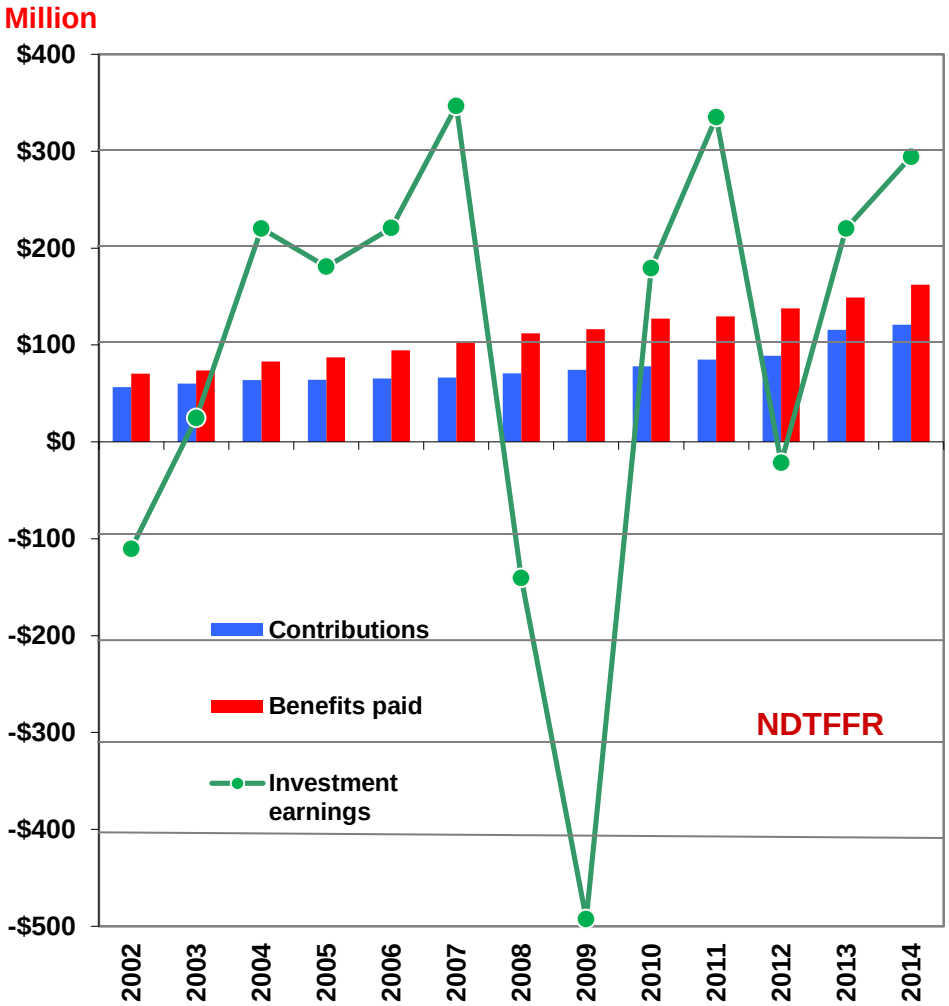


Revenues, Expenditures, and Investment Earnings

- Contributions and investment earnings accrue to pension trust funds, established for the sole purpose of paying benefits and funding administrative costs.
- Benefits paid by public retirement systems are paid from trust funds; pension payments are not made from SLG operating budgets or general funds.

TFFR Revenues and Distributions Fiscal Years 2002-2014





Annual Change in Payroll

- Median change in active member payroll from FY 10 to FY 13 was 0.8%, although plans' experience covered a wide range (from a decline of 25% to an increase of 16%). The low rate of change in payroll reflects:
  - Stagnant or declining employment levels
  - Modest salary growth (US Bureau of Labor Statistics reports the annual growth in wages and salary for employees of SLG has remained around 1% since mid 2009.)

- NDTFFR active payroll increased an average of 4.2% from $465.0 million in 2010 to $526.7 million in 2013.

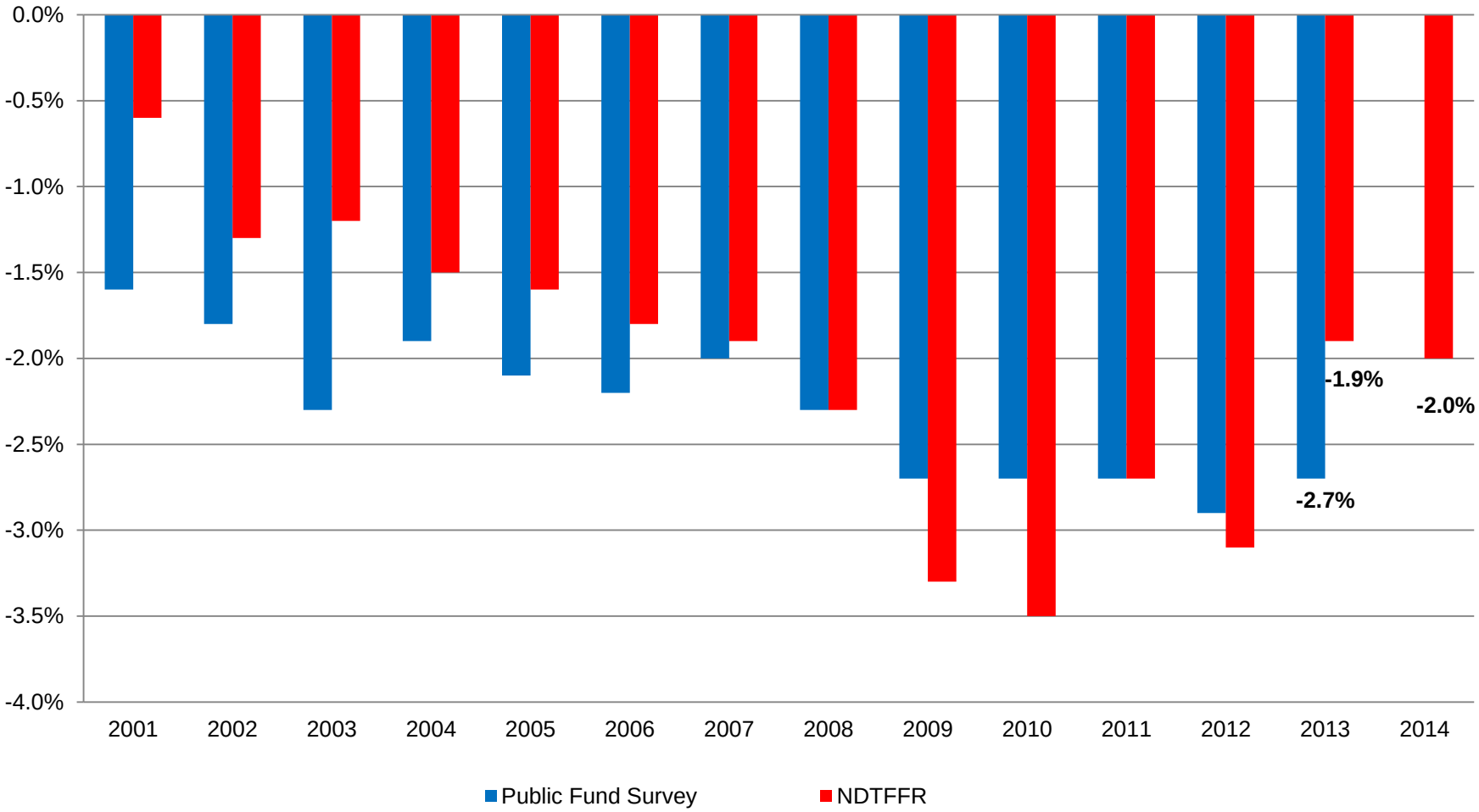
External Cash Flow

- External cash flow is the difference between a system's contributions in and payouts for benefits and administrative expenses, divided into the value of the system's assets.

- By itself, negative cash flow is not an indication of financial or actuarial distress.
  - Nearly all systems have external cash flow that is negative, meaning they pay out more each year than they collect in contributions.
  - A lower or more negative cash flow may require the system's assets to be managed more conservatively, with a larger allocation to more liquid assets in order to meet current benefit payroll requirements.

- Survey results show external cash flow changed from -2.5% in FY12 to -2.7% in FY13.
  - NDTFFR external cash flow was -3.1% in FY12, and -1.9% in FY13.

Median External Cash Flow



Annual Required Contributions

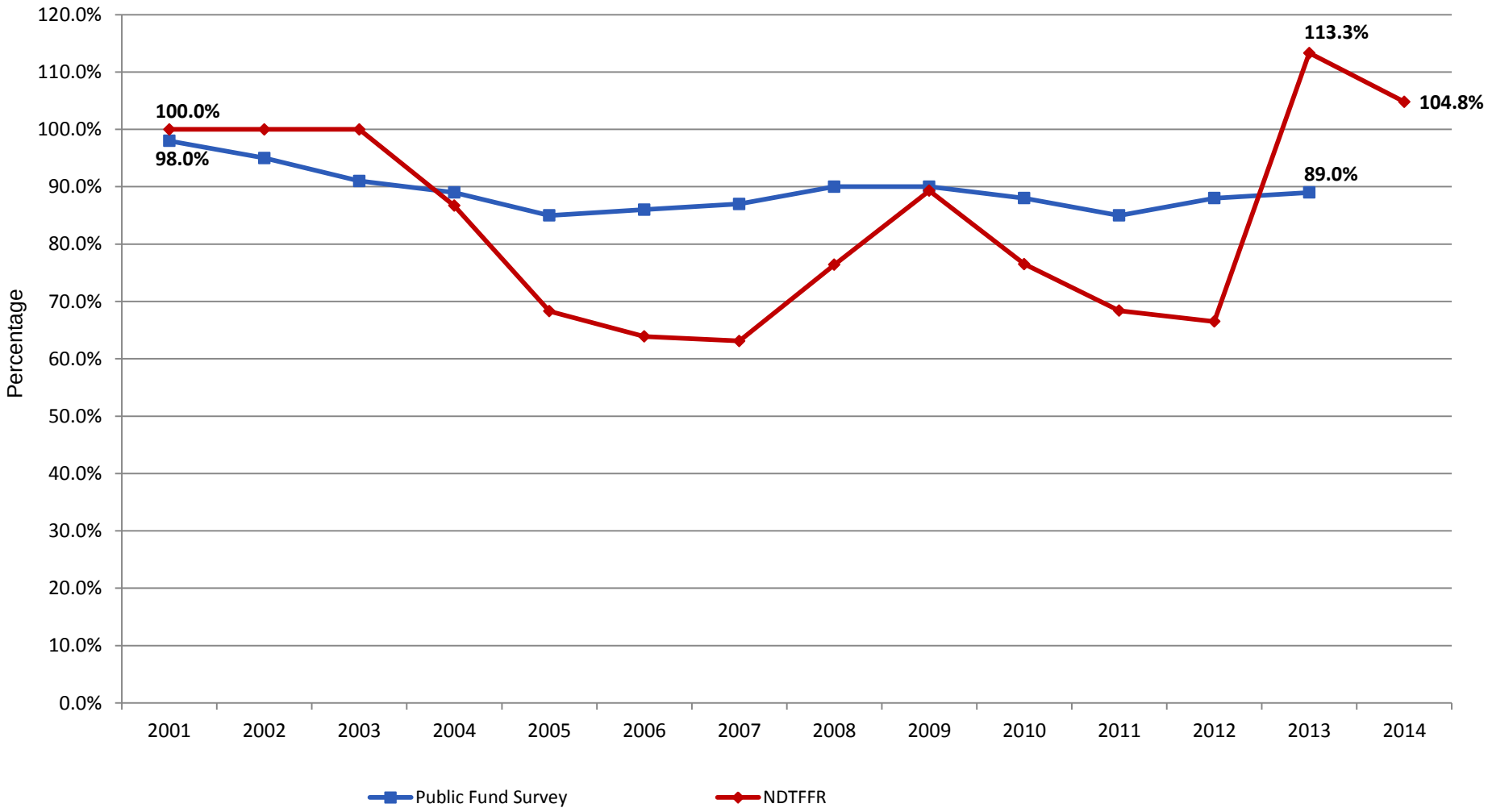
- Annual required contribution (ARC) is amount needed to fund benefits accrued in the current period (normal cost) plus the amount necessary to amortize the plan's unfunded liability over a designated period (amortization period).

- Investment market losses experienced by public pension funds in 2008-09 increased public pensions' unfunded liabilities resulting in higher costs to amortize those liabilities. Meanwhile, the Great Recession decimated SLG revenues, an experience from which most plan sponsors continue to recover.

- Efforts to fund public pensions are improving after a period of declining ARC effort during and after the Great Recession. The average ARC received by pension plans rose slightly to about 89%.
  - NDTFFR received 113.3% of ARC in 2013.

- In the past, GASB 25 and 27 defined the ARC and prescribed its reporting. Effective in FY 2014, public pension plans are no longer required to report an ARC. Instead, new GASB 67 and 68 require that when an actuarially determined contribution (ADC) is calculated, information about the ADC should be presented in financial reports of the retirement system and its employers. An ADC is a target or recommended contribution to a DB pension plan

Average ARC Received

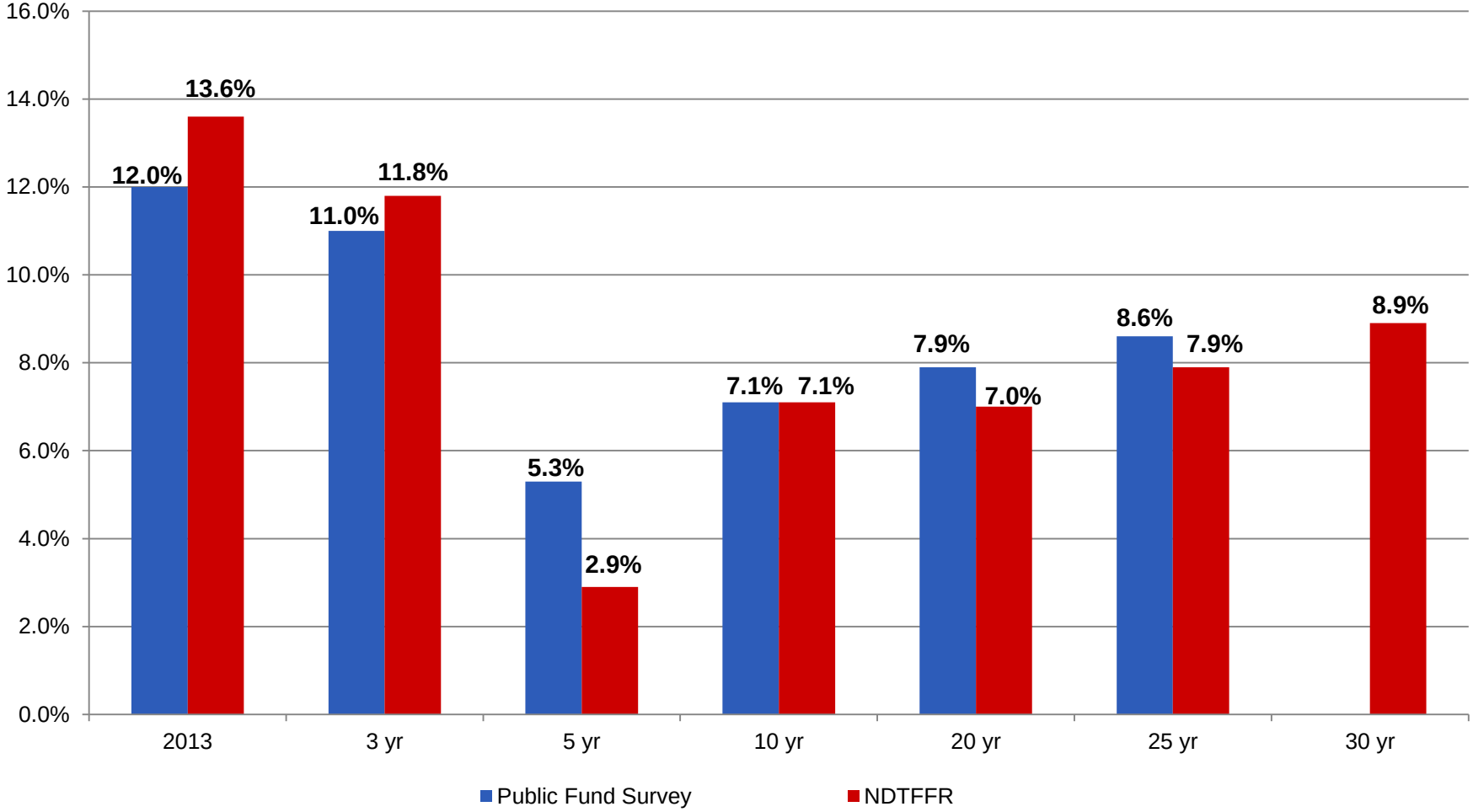


Investment Returns

- Median investment return for plans with FY end date of 6/30/13 (about ¾ of the survey participants), was 12.0%.
  - NDTFFR return was 13.63% (net of fees) for FYE 6-30-13.
  - Note: NDTFFR return was 16.5% (net of fees) for FYE 6-30-14.

- Returns for longer periods are mostly strong, with the exception of the 5-year period which includes the sharp market decline of July 2008 to March 2009. Notably, for longer periods, particularly 20+ years, median public pension fund returns are consistent with or greater than the investment return assumptions used by most plans.

Median Annual Investment Returns (net)



Actuarial Assumptions

- Actuarial valuation contains many assumptions:
  - Retirement rate
  - Mortality rate
  - Turnover rate
  - Disability rate
  - Investment return rate
  - Inflation rate
  - Salary increase rate

- Last Experience Study was conducted after the 2009 valuation report, and delivered in January 2010.
- Next scheduled Experience Study will be conducted after the 2014 valuation report, and delivered in 2015.

Investment Return Assumption

- Of all assumptions, a public pension plan's investment return assumption has the greatest effect on the long-term cost of the plan. Because a majority of revenues of a typical fund come from investment earnings, even a minor change in a plan's investment return assumption can impose a disproportionate impact on a plan's funding level and cost.
- Investment assumption is made up of 2 components
  - Inflation assumption
  - Real return assumption which is investment return net of inflation.

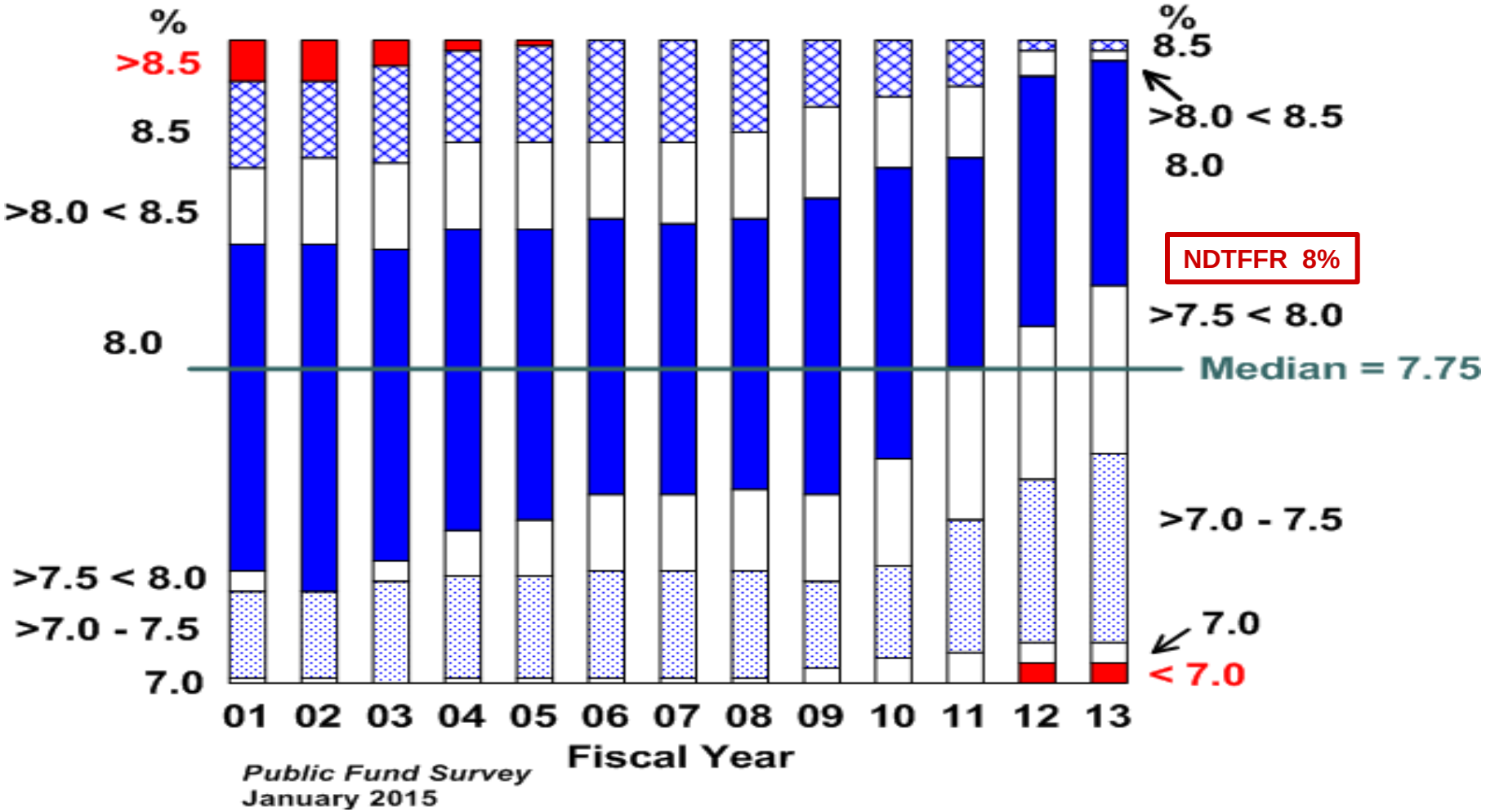
Investment Return Assumption

- The most common investment return assumption used by public pension plans was 8.0% for most of the PFS measurement period.

- Since 2009, many plans have reduced their investment return assumption.

- Median investment return assumption is 7.75% in 2013.
  - ND TFFR investment return assumption is 8.0% (3% inflation and 5% real return).

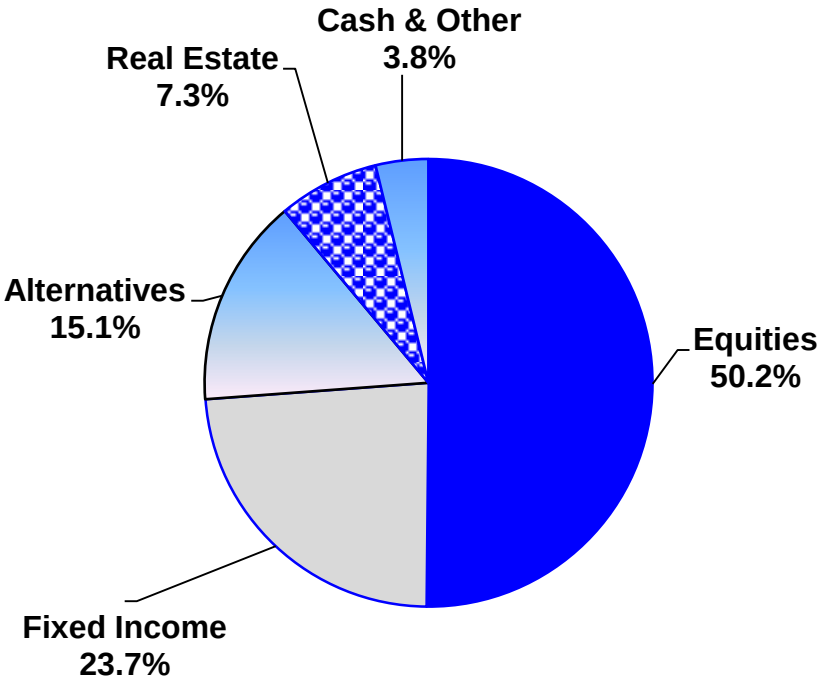
Investment Return Assumption



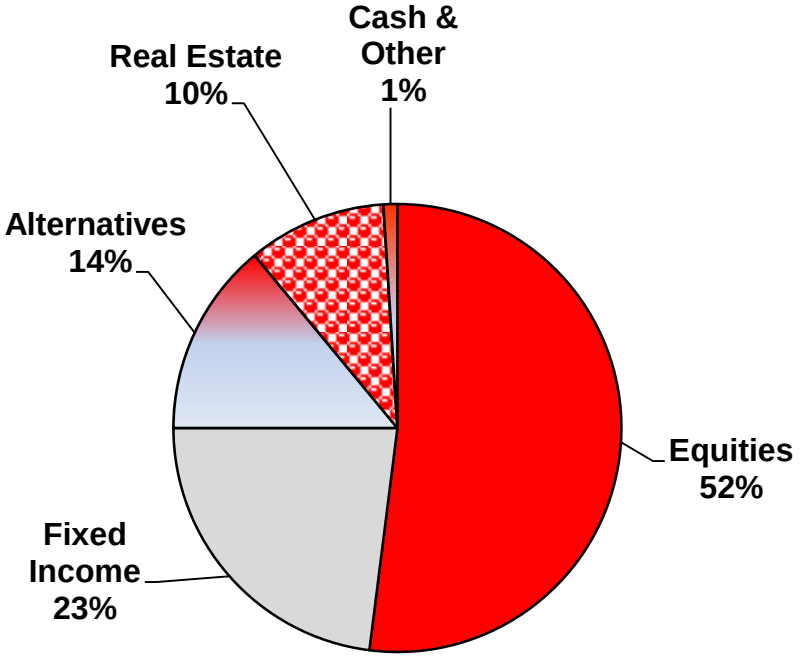
Asset Allocation

- For the first time in several years, the average allocation to Equities grew to just above 50%.
- Fixed income declined to below 24 percent, its lowest allocation ever.
- Real Estate continued to increase, now above 7 percent.
- Allocations to Alternatives (primarily private equity and hedge funds) held steady at about 15%.

Asset Allocation



Public Fund Survey
Fiscal Year 2013



NDTFFR
2013

Conclusion

- Decline in public pension funding levels, triggered chiefly by market declines in 2008-09, continued through 2013. Funding levels should begin to improve in 2014 since most plans either have completed, or are nearing completion, of recognition of the sharp investment losses incurred in 2008-09.
- Decline continues to serve as primary catalyst for plan changes (contribution increases and benefit reductions) made by many states and other pension plan sponsors.
- Currently a very difficult operating environment featuring volatile investment markets, criticism of public employees and their benefits, and challenging fiscal conditions facing many SLG.
- Most public retirement systems strive to maintain sound investment, funding, and governance practices, and seek opportunities to continuously improve in those areas.

Until next year's survey….Questions?

Summary of Findings for FY 2013 January 2015

About the Public Fund Survey

The Public Fund Survey is an online compendium of key characteristics of most of the nation's largest public retirement systems. The Survey is sponsored by the National Association of State Retirement Administrators. Keith Brainard maintains the Survey.

Beginning with fiscal year 2001, the Survey contains data on public retirement systems that provide pension and other benefits for 12.6 million active (working) members and 8.2 million annuitants (those receiving a regular benefit, including retirees, disabilitants and beneficiaries). At the end of FY 13, systems in the Survey held assets of $2.86 trillion. The membership and assets of systems included in the Survey comprise approximately 85 percent of the entire state and local government retirement system community.

The primary source of Survey data is public retirement system annual financial reports. Data also is culled from actuarial valuations, benefits guides, system websites, and input from system representatives. The Survey is updated continuously as new information, particularly annual financial reports, becomes available. This report focuses on fiscal year 2013. Using graphs, this summary describes changes in selected elements of the survey.

Summary of Findings

Figure A plots the aggregate actuarial funding level among plans in the Survey since its inception in FY 2001. The funding level in FY 13 declined to 71.8 percent, down from 73.5 percent the prior year. The aggregate actuarial value of assets grew slightly, by 3.4 percent, from $2.65 trillion to $2.74 trillion. Liabilities grow primarily as active plan participants accrue retirement benefit service credits. This increase was outpaced by growth in the actuarial value of liabilities, from $3.60 trillion to $3.81 trillion, or 5.9 percent. The actuarial value of assets reflects the phasing-in, or smoothing, of investment gains and losses. Most plans either have completed, or are nearing completion, of recognition of the sharp investment losses incurred in 2008-09. Those losses are being offset by asset gains since the market decline.

Figure A

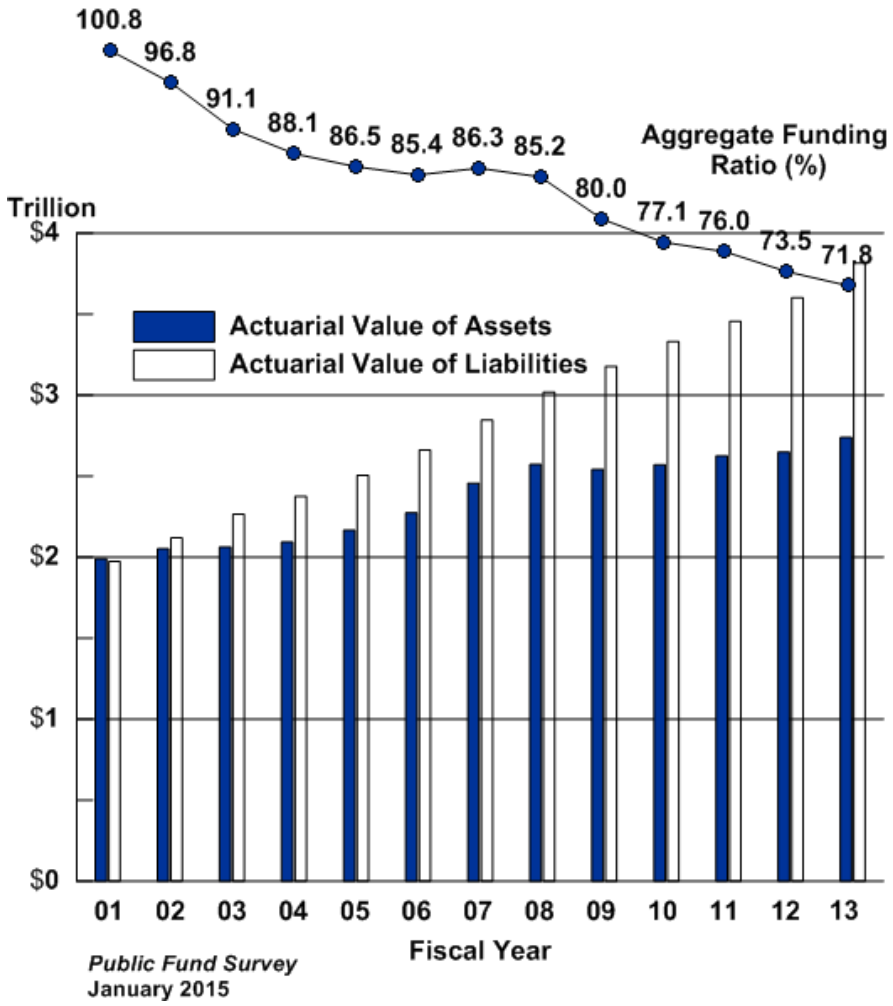


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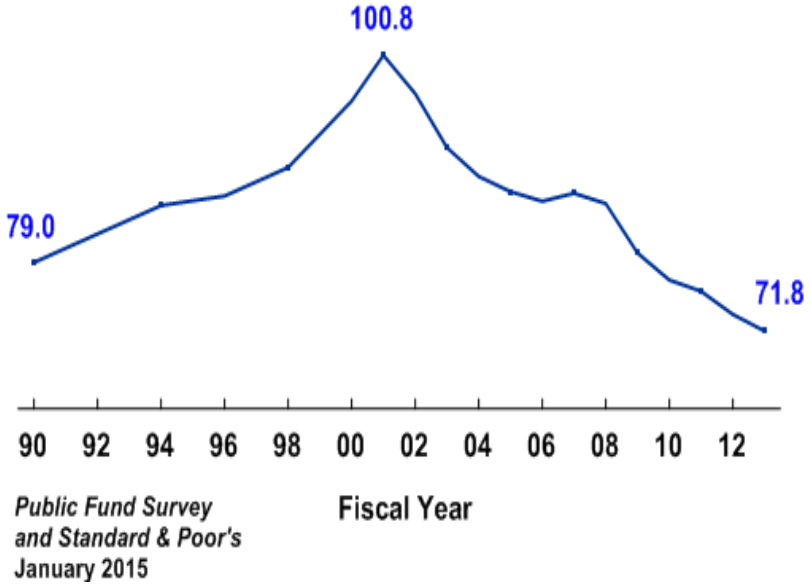
Figure B presents the aggregate actuarial funding level since 1990, measured by Standard & Poor's from 1990 to 2000 and the Survey since 2001. This figure illustrates the substantial effect investment returns have on a pension plan's funding level: investment market performance was relatively strong during the 1990s, followed by two periods, from 2000-2002 and 2008-09, of sharp market declines. Other factors that affect a plan's funding level include contributions made relative to those that are required; changes in benefit levels; changes in actuarial assumptions, and rates of employee salary growth.

Figure B



The individual funding levels of the 126 plans in the Survey are depicted in Figure C. The size of each circle in the chart is roughly proportionate to the size of each plan's actuarial liabilities—larger bubbles reflect larger plans and smaller bubbles reflect smaller plans. The median funding level is 72.8 percent, and the range is 25.8 percent to 134.3 percent.

Figure C

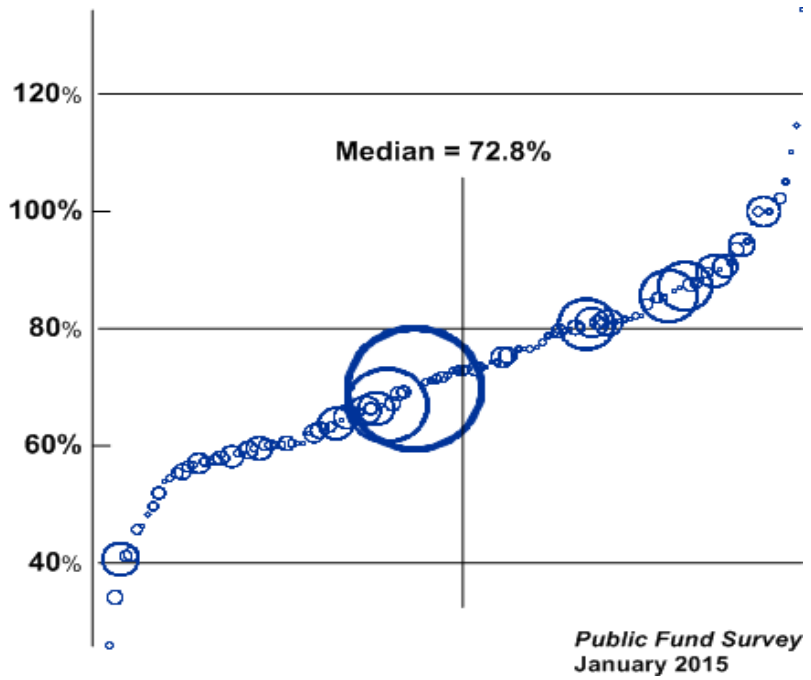
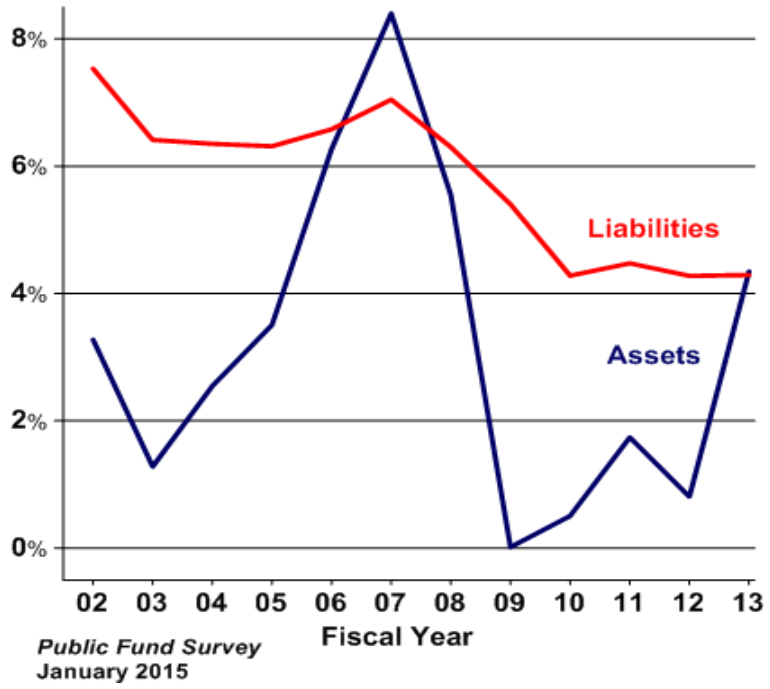


Figure D plots the median annual change among plans in the Survey in the actuarial value of assets and liabilities since FY 01. For a pension plan's funding level to improve, its actuarial value of assets must grow faster than its liabilities. Liability growth remains notably lower, at a median rate of below 4.5 percent for four consecutive years. This lower rate of growth in liabilities is due to several factors, chiefly low salary growth and the many reforms (reductions) in pension benefits enacted in recent years. Tepid asset growth reflects the phased recognition (also known as actuarial smoothing of assets) of the sharp market declines experienced in 2008 and 2009. These losses now have been nearly or fully recognized, depending on the length of each plan's smoothing period; the sharp increase in FY 13 is a preview of anticipated improvement in actuarial value of asset levels as the robust market gains since March 2009 are

recognized (see Figure L).

Presenting the annual change in assets and liabilities based on median (midpoint) data, rather than aggregate (total), reduces the effects that very large plans and plans with extreme or exceptional results would have on the total. This method of presentation enables readers to focus on the experience of a typical plan instead of seeing results that could be skewed by the experience of a few outliers.

Figure D



The Survey measures two types of retirement system members: Actives and Annuitants. Actives are those who currently are working and earning retirement service credits. Annuitants are those who receive a regular benefit from a public retirement system; these are predominantly retired members, but also include those who receive a disability benefit, and survivors of retired members or disabilitants.

As shown in Figure E, the rate of increase in annuitants among systems in the Survey continued a pattern of annual growth of more than four percent. For the fifth consecutive year, the number of active members declined. This decline is consistent with US Census Bureau reports showing a reduction in the number of persons employed by state and local government, a trend Census data shows began in August 2008.

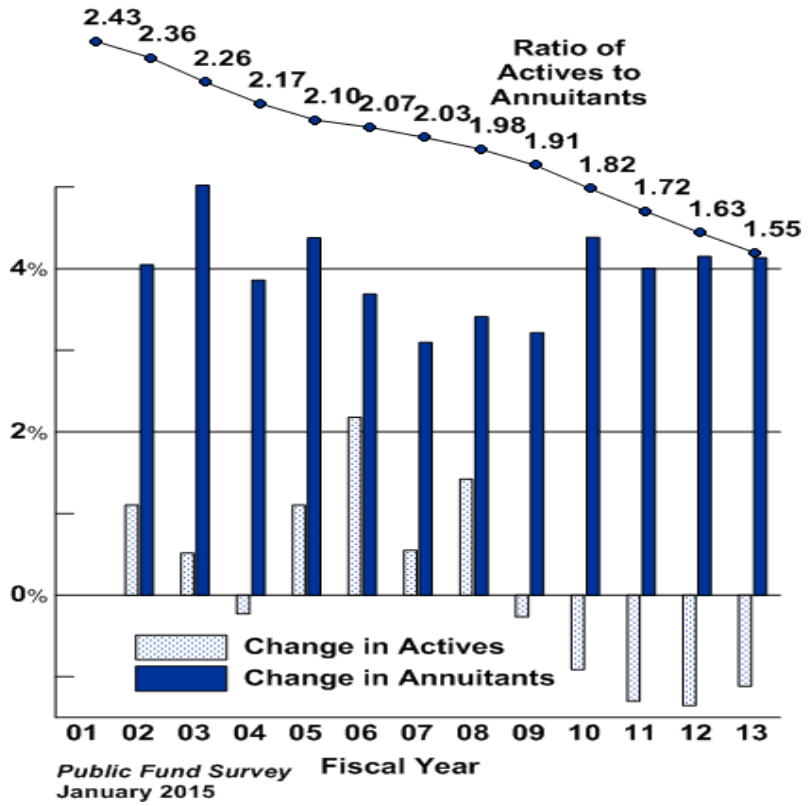
The difference between the continued increase in annuitants and a declining number of active members is driving a sustained reduction in the overall ratio of actives to annuitants. In FY 13, this ratio dropped to 1.55.

A low or declining ratio of actives to annuitants is not necessarily problematic for a public pension plan, because the typical public pension funding model features accumulation, during plan participants' working years, of assets needed to fund retirement benefits.

When combined with an unfunded liability, however, a low or declining ratio of actives to annuitants can cause fiscal distress for a pension plan sponsor. An unfunded liability represents a shortfall in accumulated assets, and results in an increase to the required cost of the plan. A lower ratio of actives to annuitants results in costs to amortize a plan's unfunded liability over a

relatively smaller payroll base, which increases the cost of the plan as a percentage of employee payroll. Thus, although a declining active-annuitant ratio does not, by itself, pose an actuarial or financial problem, when combined with a poorly-funded plan, a low or declining ratio of actives to annuitants can result in relatively high required pension costs.

Figure E



On a market value basis, as of FY 13, systems in the Survey held a combined $2.86 trillion in assets. Figure F, which plots the fiscal year-end value of public pension funds in the Survey, reflects the result of market volatility in recent years, including the strong asset gains since 2009.

Figure F

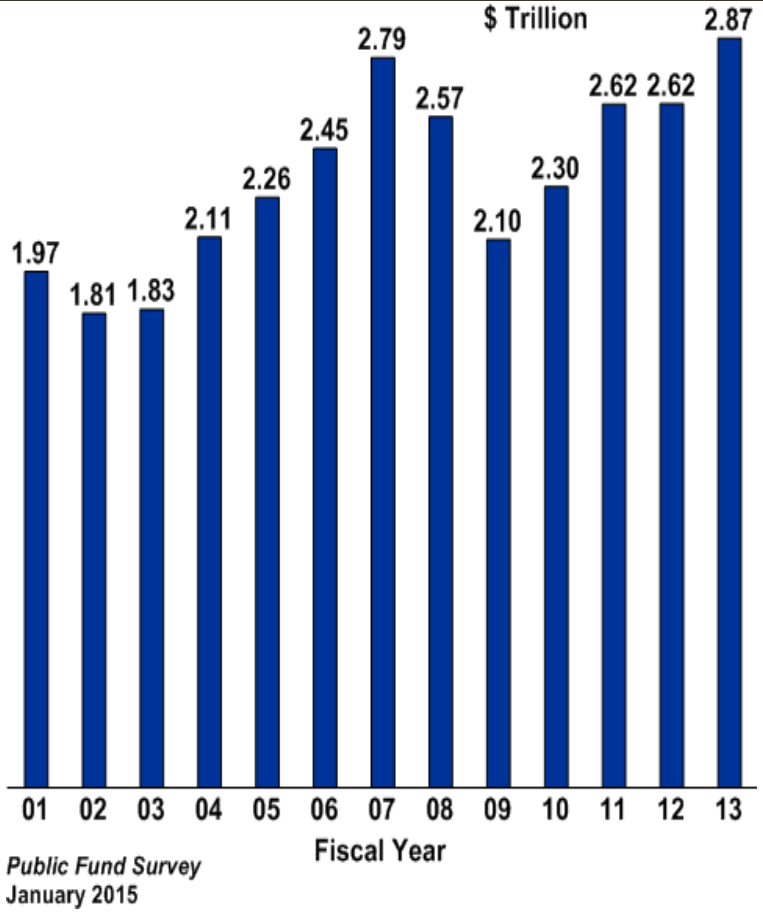


Figure G plots the combined revenues and expenditures of the systems in the Public Fund Survey. The green line reflects investment gains and losses, which vacillate as investment markets fluctuate. Blue bars indicate contributions, from employees and employers, and red bars show benefit payments. Contributions and investment earnings accrue to pension trust funds, established for the sole purpose of paying benefits and funding administrative costs. The benefits paid by public retirement systems are paid from trust funds; pension payments are not made from state and local government operating budgets or general funds.

Figure G

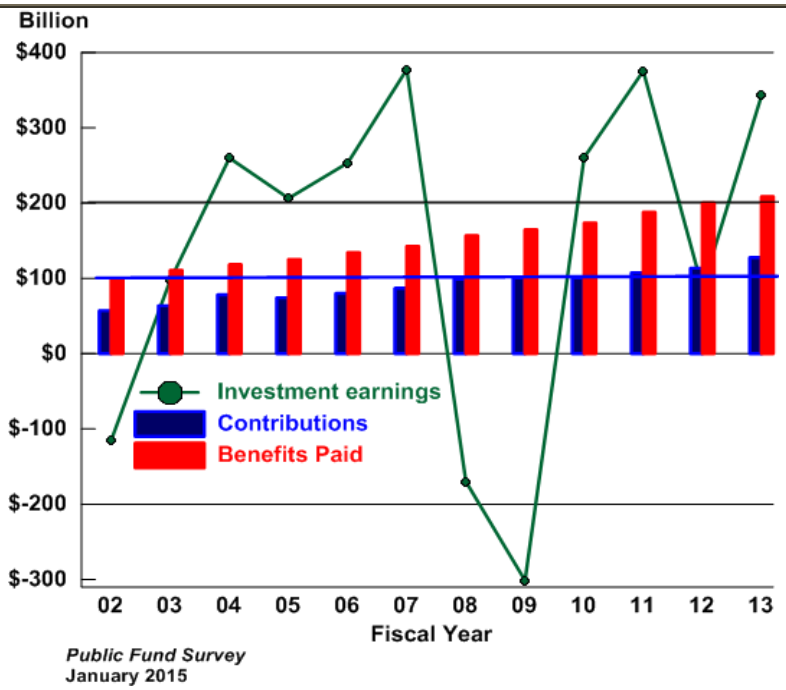


Figure H plots the distribution of changes in payroll over the three-year period from FY 10 to FY 13, among 113 plans in the survey for which this data is available. (The chart excludes plans in the Survey that are closed to new hires: the Alaska PERS and TRS, Michigan SERS, and three plans in Washington state.)

As the chart shows, the median change in payroll over this three-year period was 0.8 percent, although plans' experience covered a wide range, from a decline of 25 percent to an increase of 16 percent. (The plan with the 25 percent decline experienced the withdrawal of a large employer.) Two-thirds of these plans experienced total payroll growth over the three-year period of less than three percent, and the aggregate change during the period was a reduction of 0.9 percent. The decline in payroll reflects two basic factors: stagnant or declining employment levels, combined with modest salary growth among employees of state and local government. Information provided by the U.S. Bureau of Labor Statistics indicates that annual growth in wages and salaries for employees of state and local government has remained around one percent since mid-2009. BLS data suggest that wage growth for public workers has increased at a higher rate since FY 13.

Figure H

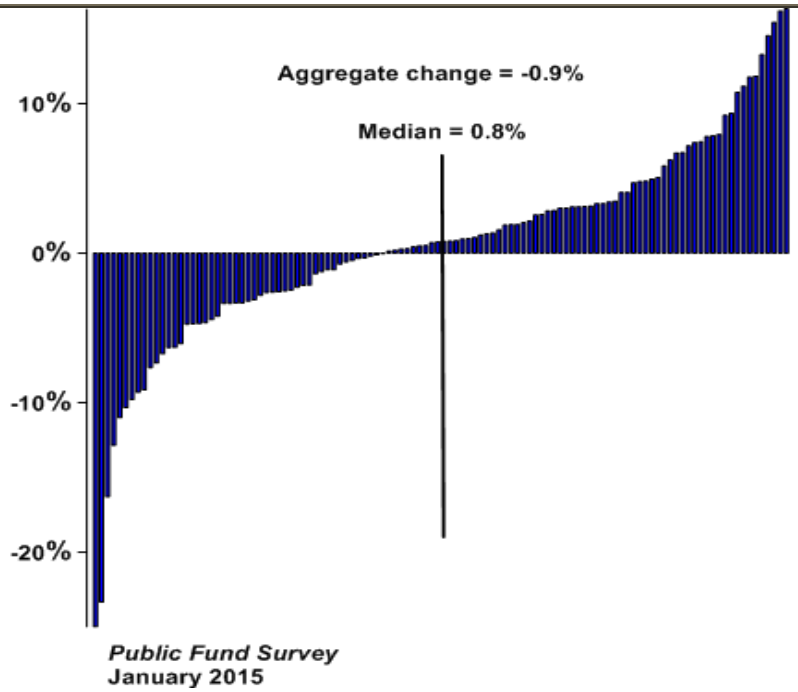


Figure I plots median external cash flow since FY 01. External cash flow is the difference between a system's revenue from contributions, and payouts for benefits and administrative expenses. Dividing a system's cash flow into the value of the system's assets produces a measure of cash flow as a percentage of assets, which is shown in Figure H. A growing number of annuitants, combined with a low or negative rate of growth in active members will result in a reduction in a retirement system's external cash flow. Conversely, a growing asset base will offset a rate of negative cash flow.

A negative cash flow is not, by itself, an indication of financial or actuarial distress. Nearly all systems in the survey have an external cash flow that is negative, meaning they pay out each year more than they collect in contributions. A lower (more negative) cash flow may require the system's assets to be managed more conservatively, with a larger allocation to more liquid assets in order to meet current benefit payroll requirements.

Figure I

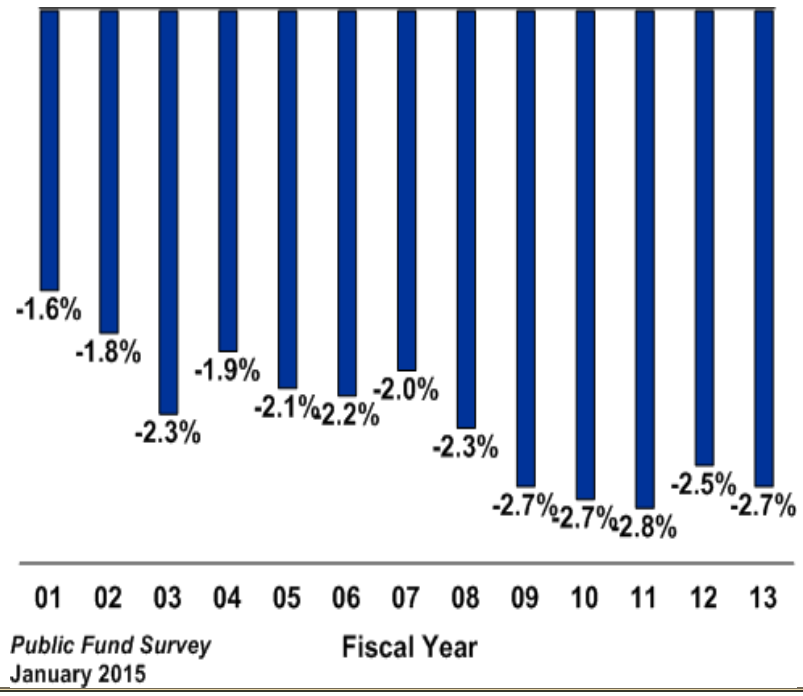
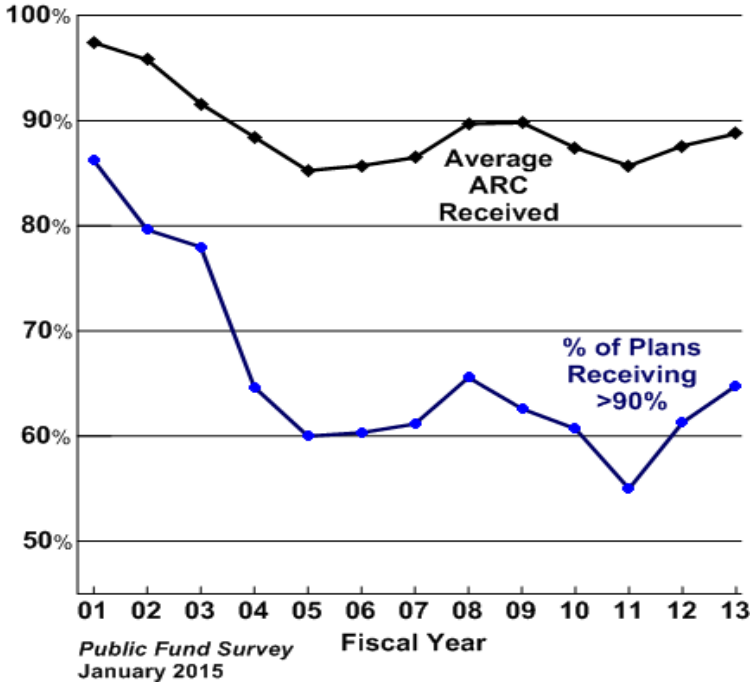


Figure J illustrates the changes over time in two measures pertaining to the Annual Required Contribution (ARC): the average ARC received by all plans in the Survey; and the percentage of plans that received at least 90 percent of their ARC. The investment market losses of 2008-09 increased public pensions' unfunded liabilities, resulting in higher costs to amortize those liabilities. Meanwhile, the Great Recession decimated state and local government revenues, an experience from which most plan sponsors continue to recover.

Implementing higher contributions, from employees and employers, takes time. The effect of factors that change contribution rates, such as investment losses, must first be measured through an actuarial valuation; then a legislature or other governing body must approve new rates. This cycle, from actuarial event to implementation of higher contribution rates, can take several years. Figure J indicates that efforts to fund public pensions are improving after a period of declining ARC effort during and after the Great Recession.

Governmental Accounting Standards Board Statements 25 and 27 defined the ARC and prescribed its reporting by public pension plans and their sponsoring employers. Effective in FY 2014, public pension plans no longer are required by GASB to calculate and report an ARC. New GASB statements (67 and 68) require that, when an "actuarially determined contribution" is calculated, information about the ADC should be presented in the financial report of the retirement system and its sponsoring employer(s) (except in cases of agent plans). Per the new statements, an actuarially determined contribution is "A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted."

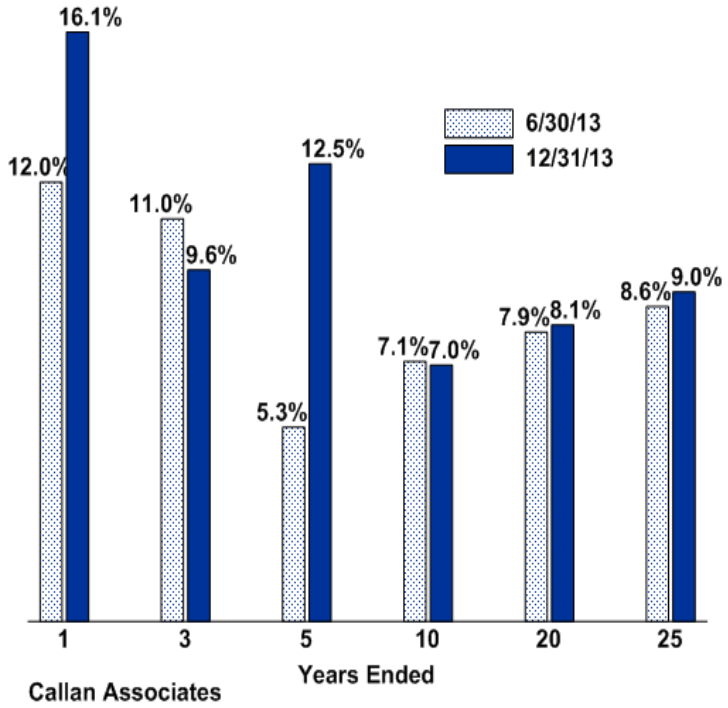
Figure J



As shown in Figure K, the median investment return for plans with a FY-end date of June 30, 2013 (used by approximately three-fourths of the funds in the survey), was 12.0 percent; the return for plans whose fiscal year-end coincides with the calendar year was 16.1 percent.

Returns for longer periods are mostly strong, with the exception of the five-year period ended 6/30/13, which includes the sharp market decline of July 2008 to March 2009. Notably, for longer periods, particularly 20+ years, median public pension fund returns are consistent with or greater than the investment return assumptions used by most plans.

Figure K



Of all actuarial assumptions, a public pension plan's investment return assumption has the greatest projected effect on the long-term cost of the plan. This is because a majority of revenues of a typical public pension fund come from investment earnings. Even a minor change in a plan's investment return assumption can impose a disproportionate impact on a plan's funding level and cost.

For most of the Public Fund Survey's measurement period, the median investment return assumption used by public pension plans was 8.0 percent. Since 2009, a majority of plans have reduced their investment return assumption, resulting in a reduction to the median to 7.75 percent. Figure L compares the distribution of investment return assumptions since the inception of the Survey through FY 13. Figure L illustrates the steady reduction in assumed rates of return, particularly since 2009.

Figure L

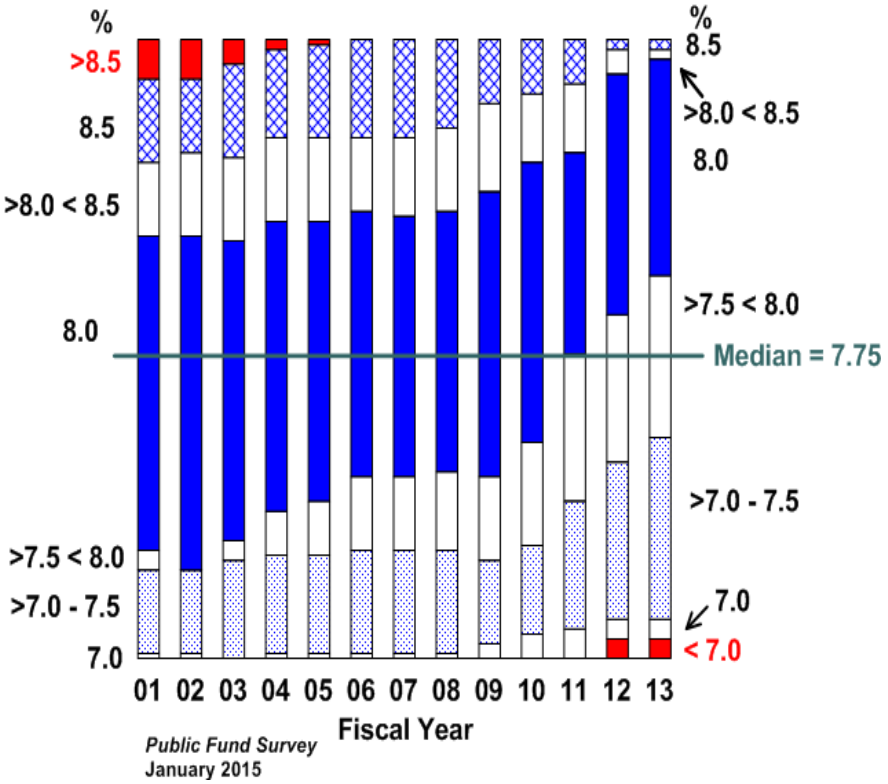
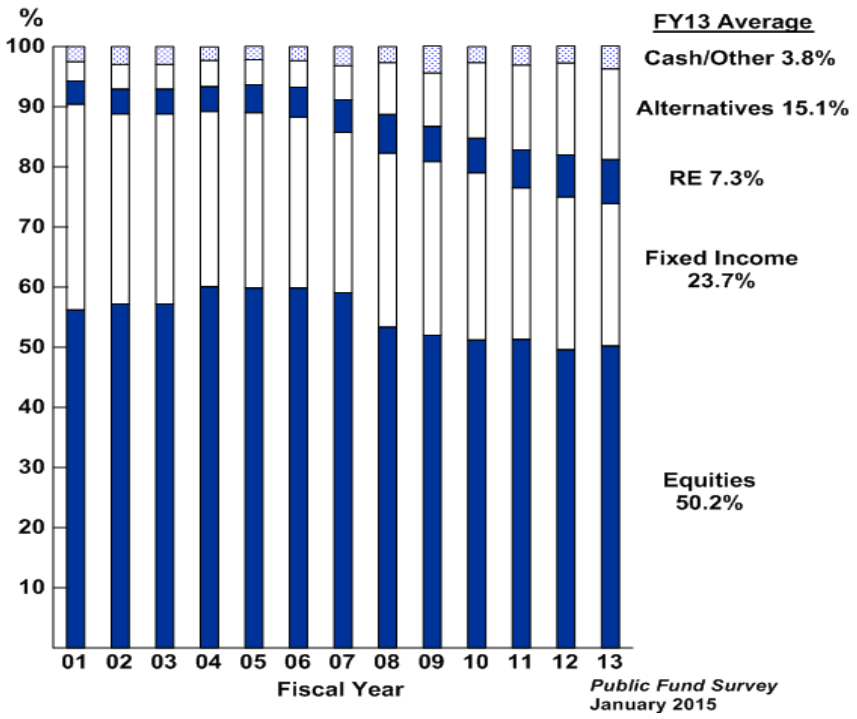


Figure M plots the average asset allocation of 96 funds in the Public Fund Survey since its inception. For the first time in several years, the average allocation to equities grew, to just above 50 percent, while Fixed Income declined to below 24 percent, its lowest allocation ever. Real Estate continued to increase, now above 7 percent, while allocations to Alternatives, which is composed primarily of private equity and hedge funds, held steady at around 15 percent.

Figure M



Appendix A and B are accessible via the Report Selection page to registered users of the Public

Survey. Access these appendices by logging in via the User Login page.

- Appendix A presents a listing of systems in the survey, including their market value of assets and membership counts.
- Appendix B presents a listing of plans in the survey, including their actuarial value of assets and liabilities and funding levels.

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MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 19, 2015**

SUBJ: **National Council on Teacher Quality (NCTQ) Report**

Also enclosed is a new report from the National Council on Teacher Quality (NCTQ) entitled "Doing the Math on Teacher Pensions." This report was released in January 2015. (Note: the report shows that it was based on 2014 information, but most of the NDTFFR data is July 1, 2013.)

Generally speaking, this NCTQ report challenges the claims of pension boards and other groups about the cost-effectiveness, fairness, and flexibility of the traditional defined benefit pension plans in place in most states.

NCTQ's report card gives States an average overall grade of C- for their teacher pension policies. ND TFFR received a D grade according to NCTQ standards.

The National Council on Teacher Retirement (NCTR) has analyzed the report, and refutes many of the claims made by NCTQ.

- According to NCTQ, states are "making it harder for teachers to receive benefits" by increasing vesting periods, and have noted that "fewer than half of teachers will qualify for retirement benefits."

NCTR responds by stating that the majority of current teachers participating in public defined benefit plans are expected to vest and a large majority of those who vest are expected to retire from the plan. NCTR further points out that there are many ways in which a retired teacher can receive a benefit without having an uninterrupted career or reaching normal retirement age (i.e. vested deferred benefit, disability benefit, returning to covered employment, reciprocity agreements between plans within same state, etc.)

- NCTQ also claims that “an average of 70 cents of every dollar contributed to state teacher pension systems is paying off ever increasing pension debt.”

  NCTR states that while a close reading of the NCTQ report indicates that this statement reflects contributions made only by employers, the characterization in their press release suggests that this analysis applies to all contributions, including those of employees. Such a broad statement significantly overstates the portion of the total contributions that are used to amortize the plans’ unfunded actuarial accrued liabilities.

  The vast majority of teacher retirement systems require member contributions, and if these are included as payments toward the normal cost, then it is likely that the portion of total contributions going to pay down the UAAL is much smaller than 70 cents.

- NCTQ claims that public sector DB plans are somehow cheating teachers out of their future retirement security.

  NCTR responds that they have seen no data that supports the idea that younger employees who devote only a few years to teaching would roll-over any vested monies into another tax-preferred retirement plan when they leave, and in fact, most research shows just the opposite. Many, if not most, of these former teachers cash out their retirement savings, and this leakage problem is the unspoken danger in many portability discussions. Once vested, contributions can remain in the DB plan and a retirement benefit, typically one that cannot be outlived, will be available to the employee at retirement. All too often, portability does not result in roll-overs, but instead translates into being able to “cash out” which offers nothing more than a false promise of retirement security.

Notwithstanding NCTQ’s “report card,” NCTR states that NCTR member systems represent a prudent, adequate, affordable, and sustainable long-term commitment to invest in every teachers’ retirement security, during his/her career and beyond.

Enclosure

January 2015

Doing the Math on Teacher Pensions

How to Protect Teachers and Taxpayers

National Council on Teacher Quality

Authors

Kathryn M. Doherty, Sandi Jacobs and Martin F. Lueken

Acknowledgments

NCTQ acknowledges the generous support of the Laura and John Arnold Foundation and the Joyce Foundation.

The views expressed here are those of the authors and should not be attributed to the funders.

Each state teacher retirement system formally received a draft of NCTQ's analysis and recommendations in July 2014 for comment and correction; systems also received a final draft of the report for their state a month prior to release. Not all of the systems responded to our inquiries, but the cooperation and assistance of those that did has helped to ensure the factual accuracy of the final product.

NCTQ is also grateful to Michael J. Podgursky for his feedback and counsel in producing this report.

About NCTQ

The National Council on Teacher Quality is a non-partisan research and policy organization working to ensure that every child has an effective teacher.

NCTQ is available to work with individual states to improve teacher policies. For more information, please contact Sandi Jacobs at sjacobs@nctq.org or 202-393-0020.

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Executive Summary

Doing the Math on Teacher Pensions: How to Protect Teachers and Taxpayers

Do the math on teacher pensions and it just doesn't add up. In 2014 teacher pension systems had a total of a half trillion dollars in unfunded liabilities — a debt load that climbed more than $100 billion in just the last two years. Across the states, an average of 70 cents of every dollar contributed to state teacher pension systems goes toward paying off the ever-increasing pension debt, not to future teacher benefits.

Yet despite the overwhelming evidence that current pension policies cannot be sustained and don't meet the needs of the 21st century teacher workforce, state lawmakers, regulators and pension boards continue to deny or ignore the crisis.

Since 2008, the National Council on Teacher Quality (NCTQ) has tracked the health of teacher pension systems in each of the 50 states and the District of Columbia. The state-by-state report cards included in this report present comprehensive state data on pension funding and pension system rules, and grade the states on the extent to which they:

Offer teachers the option of a flexible and portable primary pension plan, such as a defined contribution (DC) plan.

DC plans are portable retirement plans similar to 401(k)s that set a fixed level of contributions for both teachers and their employers but do not guarantee a set level of benefits. **Alaska**, which earns an A for providing teachers with a fully portable and fair retirement plan, is the only state in the nation that has adopted a mandatory DC pension plan for teachers. **Florida**, **Michigan**, **Ohio**, **South Carolina** and **Utah** also provide DC pension plans as a choice for teachers' primary retirement plan.

Each state's pension policy report card — including a full analysis of teacher pension policies, NCTQ's recommendations and the state's response — is available at NCTQ's state policy dashboard at: **www.nctq.org/statepolicy**

Ensure that traditional defined benefit (DB) pension plans are portable, flexible and fair for all teachers.

South Dakota, which earns a B+, demonstrates that states can meet the principles of flexibility, sustainability and fairness without abandoning defined benefits. In addition to South Dakota's model, cash-balance pension plans may be an ideal "hybrid" model for some systems as they provide greater flexibility and a safety net to teachers while also offering more financial stability to states and districts.

At a minimum, ensure some basic principles of fairness in traditional systems.

Allow teachers to: 1) vest no later than the third year of employment; 2) have options for withdrawal that, importantly, include funds contributed by the employer; and 3) purchase service time for previous teaching experience, as well as for all official leaves of absence, such as maternity or paternity leave.

Pension boards and other advocates of traditional retirement plans often emphasize that teachers should be fearful of the risks of alternatives. But what they haven't emphasized is how risky the current pension systems are for teachers — it is the risk that a teacher will never collect pension benefits because he or she does not remain in the system long enough. Whether intended or not, the pension systems now depend on these non-collectors in order to stay afloat. In 2014, all but three states (**Arizona**, **Minnesota** and **South Dakota**) make teachers wait more than three years to vest in retirement plans. Fifteen states — **Alabama**, **Connecticut**, **Delaware**, **Georgia**, **Hawaii**, **Illinois**, **Indiana**, **Maryland**, **Massachusetts**, **Michigan**, **New Hampshire**, **New Jersey**, **New York**, **Pennsylvania** and **Washington** — have vesting periods of 10 years (up from nine states just five years ago).

Shore up pension funding for existing commitments.

Debt is debt, and there is no magic policy potion that can make accrued liabilities disappear. But there is no excuse for inaction, and states must adopt a two-fold approach. They need to adjust unrealistic assumed rates of return and make scheduled payments to their current pension systems while also providing new options for teachers. In 2014, just **Delaware**, the **District of Columbia**, **Idaho**, **North Carolina**, **Oregon**, **South Dakota**, **Tennessee**, **Washington** and **Wisconsin** have well-funded teacher pension systems — and some of these may not be as well funded as they appear. Since 2008, more than half of the states have increased teacher contribution rates, and in 36 states the required teacher contributions are excessive, taking too big of a chunk from teachers' paychecks.

Require that pension systems smoothly accrue pension wealth with each year of work.

Many state pension systems set up teachers to earn vastly different benefits for the same number of years worked and backload benefits so that teachers don't build the nest egg they need until very late in their teaching careers. Proponents of traditional DB plans argue that this structure provides an incentive to keep teachers from leaving, but teacher retention rates and rates of withdrawal from state retirement systems suggest otherwise. Today only 14 states consistently base retirement eligibility on age only, which is fairer to teachers and taxpayers alike; and just 13 states only offer plans that accrue pension benefits fairly: **Alaska**, **Alabama**, **California**, **Illinois**, **Louisiana**, **Maine**, **Michigan**, **Minnesota**, **New Hampshire**, **New Jersey**, **Rhode Island**, **South Dakota** and **Washington**.

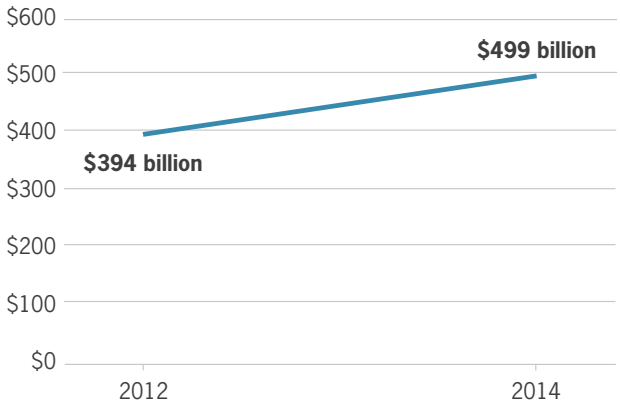
The average state teacher pension policy grade across the states for 2014 is a C-.

Pension reform is too often framed as a zero sum game, a tug of war between the interests of teachers versus taxpayers or school districts, or other public sector employees in the state. But when we do the math, the truth is that all stand to lose — and teachers most of all — if the crisis continues to be ignored.

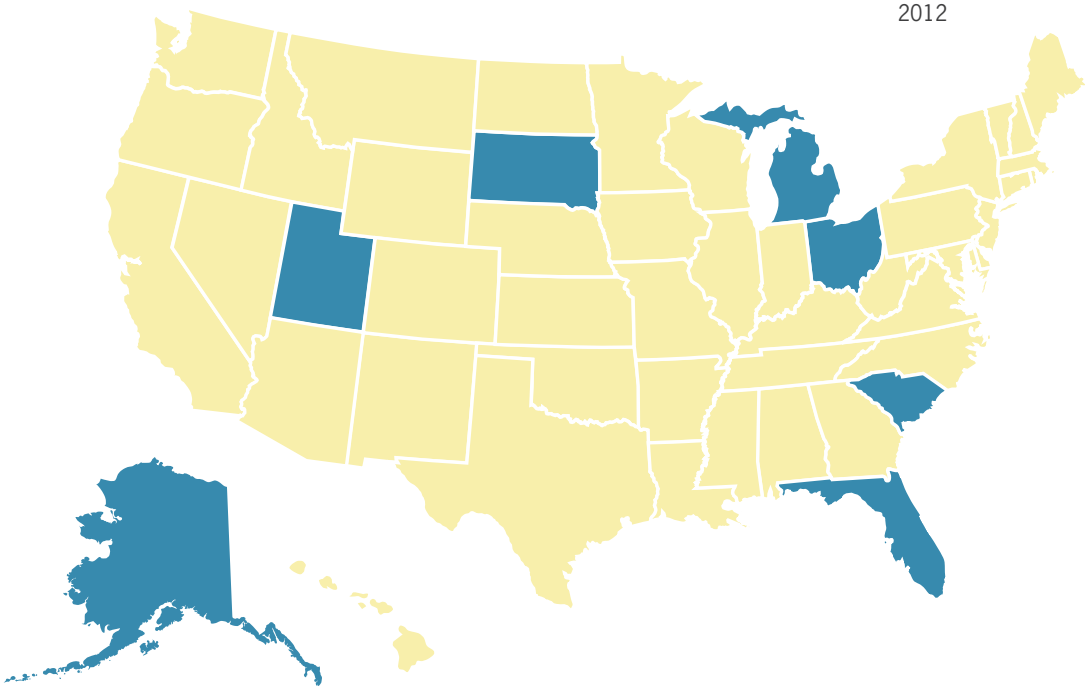
Secure and fair retirement options that allow every teacher to benefit from his or her years of dedication to our nation's children do exist, but to move forward we must first recognize that holding on to the status quo only prolongs the downward spiral of teacher retirement benefits.

Teacher pension trends in the U.S.

Teacher pension system debt has reached a half trillion dollars.

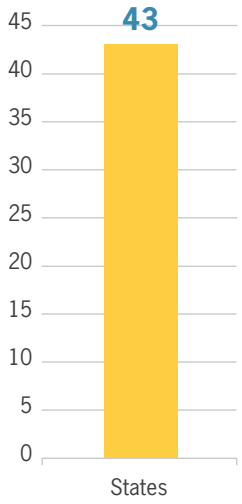


Just seven states offer a fully or nearly fully portable primary pension plan for teachers.

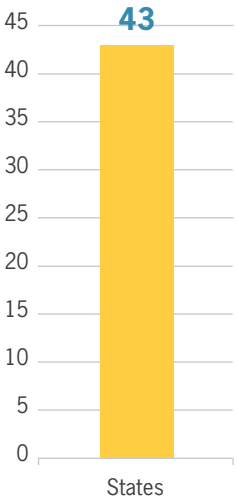


Other indicators also reflect worrisome trends.

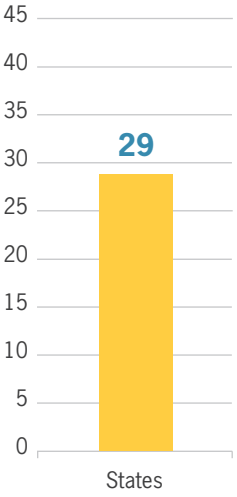
Number of states where pension funding ratios have decreased since 2008



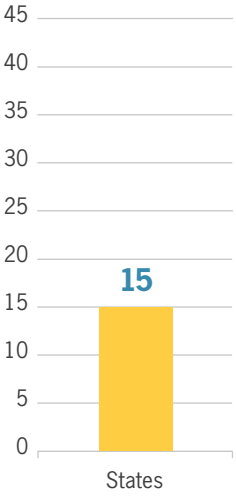
Number of states that require excessive contributions of teachers, employers or both



Number of states that have increased teacher contribution rates since 2008



Number of states that have ten-year teacher vesting periods



Doing the Math on Teacher Pensions

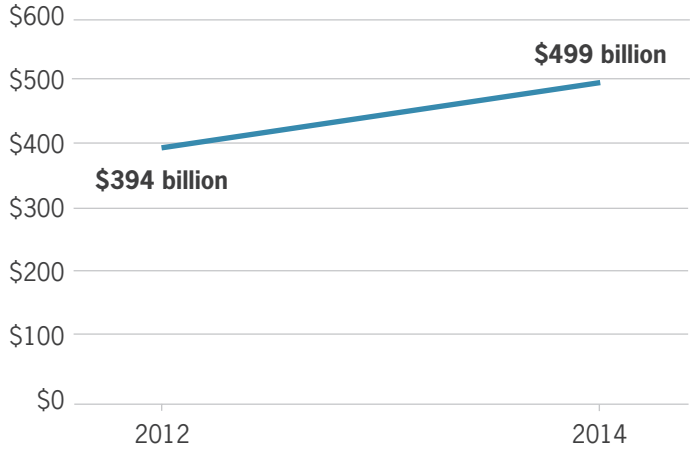
How to Protect Teachers and Taxpayers

It is not news that there is a teacher pension crisis in the United States. It *should* be news that little is being done about it.

Do the math and it is clear that most state pension systems serving teachers are in peril and getting more unstable all the time. In 2014, teacher pension systems had a half trillion dollars in unfunded liabilities[1] — a debt load that climbed more than $100 billion in just the last two years.[2]

States need look no further than the role pension debt played in bankruptcies in municipalities as varied as Detroit; San Bernardino, California; and Central Falls, Rhode Island, for a wake up call.

Figure 1. Increase in U.S. teacher pension debt



Despite the overwhelming evidence that current pension policies cannot be sustained and don't meet the needs of the 21st century teacher workforce, state lawmakers, regulators and pension boards continue to deny or ignore the crisis. The pension math is not the only problem facing teacher retirement systems. Unfortunately, the traditional pension plans that most states cling to are out of step with what is needed to attract and retain the best and brightest to the teaching profession.

1 Estimate based on the most recently publicly available Comprehensive Annual Fiscal Reports (CAFRs) or actuarial valuations for the state pension plans in which teachers participate. For states in which teachers are part of a larger public employee system, NCTQ's calculation was adjusted to reflect an estimate of the percentage of teachers in the system. The shortfall for all state-level public pension plans is $915 billion. When local retirement plans are included, the gap between what is owed and the value of assets on hand to pay them exceeds $1 trillion (Pew, 2014). http://www.pewtrusts.org/~/media/Assets/2014/03/31/Pew StatesWideningGapFactsheet2.pdf

2 See NCTQ's *No One Benefits* (2012) at http://www.nctq.org/p/publications/docs/nctq_pension_paper.pdf

A critical problem is that the debate over pension reform so often pits teachers against other stakeholders. Pension reform is framed as a zero sum game, a tug of war between the interests of teachers versus taxpayers or school districts, or other public sector employees in the state, even though all stand to lose — and teachers most of all — if the crisis continues to be ignored.

This report challenges the many claims of pension boards and other groups about the cost effectiveness, fairness and flexibility of the traditional defined benefit (DB) pension structure in place in 38 states across the nation. The central point of these claims is that the DB pension system, which provides guaranteed lifetime benefit payouts as long as teachers continue to teach in the same state for 25 or 30 years until retirement eligibility — is the best route to attracting and keeping high-quality teachers.

There are tremendous disadvantages to DB plans, and more viable options do exist. In order to recruit and retain high-quality teachers for today's workforce while at the same time maintaining fiscally responsible commitments to retirees, states will need to:

- Ensure teachers have flexible and portable teacher pension plan options.
- Manage pension systems responsibly to ensure their sustainability, meaning that system unfunded liabilities are not excessive, and that states have an appropriate timeline for paying off these liabilities.
- Require pension formulas to be transparent and fair, meaning that each year of work accrues pension wealth in a uniform way.

Today, in the majority of states, most of the increasing pension contributions made by employers and teachers go toward paying a mounting pension debt. Across all states, an average of 70 cents of every dollar contributed to state teacher pension systems goes toward this liability, leaving just 30 cents allocated for the actual retirement of the teacher who's on the job today.

Many of the states' so-called pension policy "reforms" are woefully inadequate. For the most part, policy changes have focused on achieving cost savings, often amounting to relatively minor savings to the system at great expense to teachers.

Each state's pension policy report card — including a full analysis of teacher pension policies, NCTQ's recommendations and the state's response — is available at NCTQ's state policy dashboard at: **www.nctq.org/statepolicy**

Making Pensions Add Up for Teachers

Since 2008, NCTQ has tracked the health of teacher pension systems in each of the 50 states and the District of Columbia. The 2014 state-by-state report cards included in this report present comprehensive state data on pension funding and pension system rules, with indicators for how well — or poorly — state teacher pension systems are performing.

In grading state teacher pension policy, NCTQ benchmarks the 50 states and the District of Columbia against a more forward looking and sustainable approach to teacher retirement benefits. In practical terms, states should:

1. **Offer teachers the option of a flexible and portable primary pension plan, such as a defined contribution (DC) plan.** DC plans are portable retirement plans similar to 401(k)s that set a fixed level of contributions for both teachers and their employers but do not guarantee a set level of benefits.

   As is commonplace in so many other professions, all teachers should have the option of a fully portable pension system as their primary pension plan. Yet today, **Alaska** is the only state in the nation that has adopted a mandatory DC pension plan for teachers. **Florida**, **Michigan**, **Ohio**, **South Carolina** and **Utah** provide DC pension plans as a choice for teachers' primary retirement plan.

   Interestingly, in Florida, 25 percent of new teachers choose to participate in the DC plan rather than the DB plan. Considering that the state has made the DB plan the automatic default for new teachers, this is a significant statement that teachers value the flexibility that is associated with a portable plan.

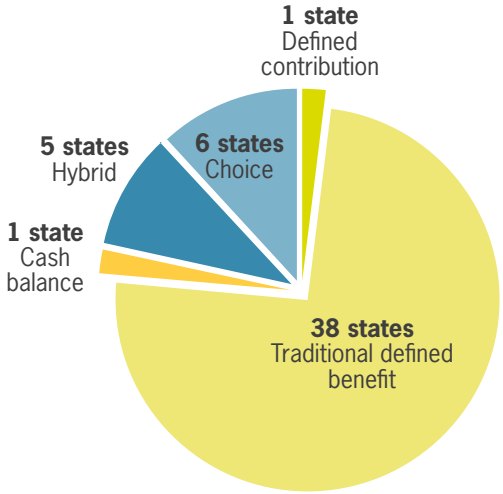
   Despite what defenders of the current pension landscape may argue, there is simply no good reason to deny teachers choices when it comes to planning for their retirement.

   Although making a DC option available does not solve the problem of unfunded liabilities that have already accrued, adopting these more progressive DC systems will help prevent future liabilities, lower costs in the long run, and offer systems that are more fair and portable for all teachers. Perhaps most important, there is simply no good reason to deny teachers a choice in how they plan for their own retirement.

2. **Ensure that DB pension plans are portable, flexible and fair for all teachers. South Dakota** has what NCTQ considers the "gold standard" of traditional DB systems, demonstrating that states can meet the principles of flexibility, sustainability and fairness without abandoning defined benefits. Design is critical, however.

If states are going to maintain their DB plans, South Dakota offers one model. States could also consider restructuring these systems as cash-balance plans. In a cash-balance plan, teachers have individual retirement accounts — similar to 401(k) plans — which are funded by contributions from both employers and employees. Unlike typical individual accounts, members are still guaranteed a minimum rate of return by the system rather than being subject to market fluctuations. They are more sustainable because benefits are tied to actual contributions and can increase fairness by spreading the financial risk among employees and taxpayers rather than placing all the risk on employees (as with DC plans) or taxpayers (as with DB plans).

Figure 2. Types of state teacher pension systems[3]



The cash-balance model shares some features of both DB and DC plans. It resembles a DC plan because benefits accrue smoothly and are portable, but with the addition of a kind of safety net. Assets are pooled and professionally managed, as with DB plans. Today, only **Kansas** has adopted a cash-balance plan (for teachers entering the system beginning in 2015).[4] Unfortunately, Kansas's cash-balance plan is still structured like a traditional DB plan in many ways.

3. **At a minimum, ensure some basic principles of fairness in DB systems.** Allow teachers to: 1) vest[5] no later than the third year of employment; 2) have options for withdrawal that, importantly, include funds contributed by the employer; and 3) purchase service time for previous teaching experience, as well as for all official leaves of absence, such as maternity or paternity leave.

   In 2014, **Arizona**, **Minnesota** and **South Dakota** are the only three states in the nation where teachers vest in DB retirement systems in three years or less.

4. **Shore up pension funding for existing commitments.** Debt is debt, and there is no magic policy potion that can make accrued liabilities disappear. The enormous pension debt that has already accumulated isn't going anywhere, but that is no excuse for inaction, or, worse, for short-changing new teachers to maintain the status quo. States must adopt a two-fold approach. They need to adjust unrealistic assumed rates of return and make scheduled payments to their current

3 Defined contribution: Alaska; Cash balance: Kansas; Hybrid: Indiana, Oregon, Rhode Island, Tennessee, Virginia; Choice: Florida, Michigan, Ohio, South Carolina, Utah, Washington

4 Louisiana adopted a cash-balance pension plan for teachers but it was struck down in the state court.

5 Vesting is the length of service needed for teachers to be entitled to pension benefits.

pension systems while also providing new options for teachers. In 2014, just **Delaware**, the **District of Columbia**, **Idaho**, **North Carolina**, **Oregon**, **South Dakota**, **Tennessee**, **Washington** and **Wisconsin** have well-funded teacher pension systems — and some of these may not be as well funded as they appear. Since NCTQ started tracking state pension policy in 2008, the number of states that can report adequately-funded DB teacher pension systems has declined each year.

5. **Require that pension systems smoothly accrue pension wealth with each additional year of work.** Many state pension systems set up teachers to earn vastly different benefits for the same number of years worked and backload benefits so that teachers don't build the nest egg they need until very late in their teaching careers (and provided they don't move out of the system). These practices are unfair to teachers and costly to pension funds. The formula that determines pension benefits should be neutral (i.e., not determined by the number of years worked). Just 13 states only offer plans that accrue pension benefits fairly: **Alabama**, **Alaska**, **California**, **Illinois**, **Louisiana**, **Maine**, **Michigan**, **Minnesota**, **New Hampshire**, **New Jersey**, **Rhode Island**, **South Dakota** and **Washington**.

Teacher tenure and pension vesting have nothing to do with each other.

There is nothing contradictory in NCTQ's advocating for teachers to have a long (4-5 year) probationary period before they receive tenure but a short (less than 3 years) vesting period in retirement plans. These are two wholly separate issues. School districts need adequate time to assess teacher effectiveness in order to make a meaningful tenure decision. Regardless of whether a teacher earns tenure, fairness demands that working teachers have rights to the retirement savings that have been a part of their compensation — the earlier the better — regardless of their classroom performance.

Figure 3. Key elements of fair, neutral and portable teacher pension systems

	State offers a fully or nearly fully portable pension plan	State sets a short vesting period for teachers of three years or less	State ensures that teacher pension systems are well funded	State sets reasonable teacher/ employer contribution rates	Teachers leaving can take at least partial employee contribution	Retirement eligibility based on age only	State ensures a fair accrual of pension benefits to teachers
Alabama						■	■
Alaska	■			■	■	■	■
Arizona		■					
Arkansas							
California				■		■	■
Colorado					■		
Connecticut							
Delaware			■				
District of Columbia			■	■			
Florida	■			■		□	□
Georgia				■			
Hawaii							
Idaho			■				
Illinois						■	■
Indiana				■			
Iowa					■		
Kansas							
Kentucky							
Louisiana						■	■
Maine				■		■	■
Maryland							
Massachusetts						■	
Michigan	■					■	■
Minnesota		■				■	■
Mississippi							
Missouri							
Montana							
Nebraska							
Nevada							
New Hampshire						■	■
New Jersey						■	■
New Mexico							
New York						■	
North Carolina			■				
North Dakota							
Ohio	■				■	□	□
Oklahoma							
Oregon			■				
Pennsylvania							
Rhode Island						■	■
South Carolina	■					□	□
South Dakota	■	■	■	■	■		■
Tennessee			■				
Texas				■			
Utah	■				■	□	□
Vermont							
Virginia							
Washington			■			■	■
West Virginia							
Wisconsin			■				
Wyoming							
TOTAL	**7**	**3**	**9**	**9**	**6**	**14**	**13**

□ = Not for all offered plans

A Report Card on State Pension Policy

Looking across the principles of pension portability, fairness and sustainability, **Alaska** is the only state to earn an A grade for providing teachers with a fully portable and fair DC retirement plan. As of July 1, 2006, the state's DC plan is the only type of plan available to new teachers in Alaska. The plan is fully portable, flexible and fair to all. Teachers in Alaska vest immediately in their own contributions and the earnings from their contributions' investments. They are fully vested in employer contributions after five years. Until the five-year mark, the vesting rate is graduated: 25 percent after two years; 50 percent after three; 75 percent after four.

Contrary to what defenders of the traditional DB pension system might argue, getting high grades for teacher pension policy doesn't depend on states adopting DC pension plans. **South Dakota** earned a very strong B+ because its pension system provides portability and flexibility, rare among DB plans, all while maintaining a healthy funding level. South Dakota's vesting at three years of service is better than almost every state, and it allows flexibility for teachers who leave the system. Teachers with fewer than three years of experience who choose to withdraw their contributions upon leaving can receive their own contributions, plus interest, and a 50 percent employer match. Teachers with at least three years of experience may withdraw their contributions plus interest and an 85 percent employer match.

The overall average state grade for teacher pension policy for 2014 is a C-.

The state earning the lowest grade is **Mississippi**. It earned a failing grade for having a poorly funded teacher pension system that is not portable or fair to all teachers. In addition, teachers are subject to long vesting periods and are required to provide excessive contributions to their retirement plans. Mississippi's pension system for teachers is only about 58 percent funded with current pension debt of nearly $12,000 per pupil.

Arizona, **Kentucky**, **Missouri** and **Vermont** earned barely passing grades of D-. Arizona, for example, eliminated the ability to withdraw any employer contributions when leaving the system for teachers hired after July 2011. And Missouri's system requires districts and teachers to contribute a combined annual rate of approximately 29 percent of teachers' salaries into the pension system, and still the system is underfunded — with liabilities reaching almost $8,000 per student. The two largest districts in the state — Kansas City and St. Louis — have their own systems. Yet there is no

Figure 4. State teacher pension grades (2014)

	Pension grade
Alaska	A
South Dakota	B+
Florida	B-
Michigan	B-
Ohio	B-
Rhode Island	B-
Tennessee	B-
Utah	B-
Washington	B-
District of Columbia	C+
Oregon	C+
South Carolina	C+
Wisconsin	C+
California	C
Delaware	C
Idaho	C
Illinois	C
Indiana	C
Maine	C
Minnesota	C
New Jersey	C
North Carolina	C
Texas	C
Virginia	C
Alabama	C-
Colorado	C-
Louisiana	C-
Nevada	C-
New Hampshire	C-
Arkansas	D+
Connecticut	D+
Georgia	D+
Kansas	D+
Maryland	D+
Massachusetts	D+
New York	D+
Oklahoma	D+
Pennsylvania	D+
West Virginia	D+
Hawaii	D
Iowa	D
Montana	D
Nebraska	D
New Mexico	D
North Dakota	D
Wyoming	D
Arizona	D-
Kentucky	D-
Missouri	D-
Vermont	D-
Mississippi	F
NATIONAL AVERAGE	**C-**

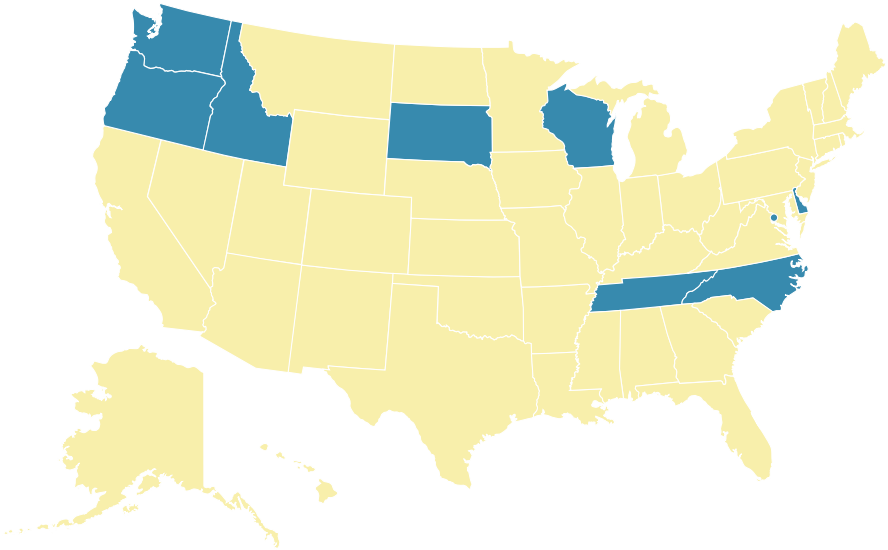
reciprocity between the state and St. Louis plans and limited reciprocity with the Kansas City plan, substantially penalizing even teachers who move short distances down the road. Finally, retirement benefits in Missouri are so back-loaded and tied to longevity that any teacher who doesn't have a lifelong career in the system ends up being shortchanged.

Pension Sustainability

While pension debt certainly burdens taxpayers, it is a mistake to portray this as a teacher vs. taxpayer issue.

In 2014 the accrued teacher pension debt in the United States is a staggering $499 billion. What's worse is that this debt estimate is probably too rosy, based on unrealistically optimistic rates of returns on investments by the pension systems, as well as exceedingly long balance payoff dates (amortization periods). Economists are in almost complete agreement that the pension liability figures across the United States are grossly underestimated. And there's more. Health care costs for retirees are not included in these debt loads and present an additional, yet critical, set of challenges down the line.

Figure 5. States with well-funded (at least 90%) pension systems



Since NCTQ started tracking pension liability levels, the number of states with fully funded pension systems has decreased — from 14 states in 2008 to just nine states in 2014. Only Delaware, the District of Columbia, Idaho, North Carolina, Oregon, South Dakota, Tennessee, Washington and Wisconsin still have teacher pension systems that are at least 90-percent funded. Even in these states, it is possible that some funding positions are weaker than what states report.[6] Although some increase in liabilities might be expected given the economic downturn in 2008, the low number of states near full funding coupled with the large proportion of states with massive unfunded liabilities, is alarming.

6 For example, if states have a statutory requirement to make the full required contribution amount, they may choose to raise revenue for those payments in ways that also accumulate debt. One practice by some states is to issue Pension Obligation Bonds (POBs). For instance, in 2003 alone California, Illinois, Kansas, New Jersey, Oregon, West Virginia and Wisconsin issued POBs (Snell, 2003) http://www.ncsl.org/documents/fiscal/2003_pension_summary.pdf That year, Illinois issued a POB for a staggering $10 billion. This practice runs potentially serious risk, however, and primarily serves to delay meeting today's obligations (Munnell et al., 2010). http://crr.bc.edu/wp-content/uploads/2010/01/SLP_9-508.pdf

Figure 6. Unfunded pension liabilities by state (2014)[7]

	Unfunded liability	Percent of system funded
Alabama	$9,465,359,317	66.5%
Alaska[8]	$3,204,783,000	49.9%
Arizona	$4,214,430,000	75.4%
Arkansas	$4,471,000,000	73.3%
California	$73,667,000,000	66.9%
Colorado	$14,067,932,000	60.3%
Connecticut	$11,127,397,000	55.2%
Delaware	$191,749,870	91.1%
District of Columbia	$173,268,000	90.1%
Florida	$6,543,404,630	88.5%
Georgia	$12,086,346,000	82.3%
Hawaii	$935,966,959	59.0%
Idaho	$397,496,000	93.9%
Illinois	$55,731,797,000	40.6%
Indiana	$11,522,815,414	45.7%
Iowa	$3,647,587,716	80.2%
Kansas	$6,780,000,000	47.9%
Kentucky	$13,854,474,000	51.9%
Louisiana	$11,348,552,354	56.4%
Maine	$1,352,979,130	77.6%
Maryland	$5,608,714,802	67.1%
Massachusetts	$17,347,748,000	55.7%
Michigan	$24,266,000,000	61.3%
Minnesota	$6,644,003,000	71.6%
Mississippi	$5,870,394,270	57.7%
Missouri	$7,315,018,539	80.1%
Montana	$1,524,780,000	66.8%
Nebraska	$2,281,814,491	77.1%
Nevada	$4,015,520,647	71.2%
New Hampshire	$997,382,578	54.0%
New Jersey	$21,896,797,751	57.1%
New Mexico	$6,533,731,488	60.1%
New York	$11,841,300,000	87.5%
North Carolina	$2,119,513,903	94.2%
North Dakota	$1,234,817,443	58.8%
Ohio	$31,775,908,000	66.3%
Oklahoma	$8,112,109,202	57.2%
Oregon	$1,092,000,000	95.8%
Pennsylvania	$32,598,554,000	63.8%
Rhode Island	$1,439,612,019	58.1%
South Carolina	$8,489,344,990	64.7%
South Dakota	$0	100.0%
Tennessee	$282,376,550	96.0%
Texas	$28,936,275,228	80.8%
Utah	$3,317,938,200	77.9%
Vermont	$1,013,910,285	60.5%
Virginia	$11,881,714,000	71.2%
Washington	$954,000,000	94.0%
West Virginia	$4,179,234,000	57.9%
Wisconsin	$26,486,000	99.9%
Wyoming	$768,926,009	78.6%
NATIONAL	**$499,150,263,787**	

7 For states in which teachers are part of a larger public employee system, the liability was adjusted to reflect the percentage of teachers in the system. See Appendix D.

8 Alaska offered a DB plan until 2006, when it closed it and opened its current DC plan. The unfunded liabilities from the DB plan are still being paid down by the state. Other states that closed DB plans and still face legacy costs include Indiana, Oregon, Utah, and Washington.

A telling indicator of the poor fiscal health of teacher pension systems is how much of employer contributions goes to service the current debt for the system.

Across the states there is wide variation in the employer contributions to teacher pension systems. On average, employers are required by law to contribute about 16 percent of a teacher's annual salary into retirement systems. Less than half of this, however, is being invested into employees' future retirement (known as the normal cost of each system). In 32 states, at least half of all annual employer pension contributions go to pay the ever-increasing debt service. Across all states, an average of 70 cents of every dollar contributed to state teacher pension systems is marked for paying off accrued unfunded liabilities.[9]

The fact that debt costs are distributed on a per teacher basis contributes to an unfair public perception that teachers demand and receive overly generous benefits. Take Louisiana, for example. The average Pelican State citizen reading that almost 28 percent of each teacher's salary is contributed towards retirement benefits might be quite outraged at teachers for a figure so far above what is typical in the private sector. But that newspaper reader has no way of knowing that, in fact, only 18 percent of each dollar contributed actually funds that teacher's future retirement benefits, while 82 percent funds the accrued debt.

9 For actuarial accounting purposes, teacher contributions are typically counted towards paying normal costs.

Figure 7. Funding the debt

	Required employer contribution	Percentage of annual employer contribution that goes toward: Normal costs of pension system	Percentage of annual employer contribution that goes toward: Paying the teacher pension debt
Alabama	11.1%	11.1%	88.9%
Alaska[10]	49.7%	0.0%	100%
Arizona	11.5%	17.2%	82.8%
Arkansas	16.2%	42.5%	57.5%
California	24.9%	41.3%	58.7%
Colorado	21.9%	16.6%	83.4%
Connecticut	24.1%	15.5%	84.5%
Delaware	9.6%	73.2%	26.8%
District of Columbia	10.4%	60.5%	39.5%
Florida	6.1%	58.2%	41.8%
Georgia	13.2%	46.7%	53.3%
Hawaii	17.6%	31.4%	68.6%
Idaho	11.3%	64.2%	35.8%
Illinois	33.6%	23.9%	76.1%
Indiana	6.5%	87.2%	12.8%
Iowa	8.9%	50.3%	49.7%
Kansas	16.0%	14.5%	85.3%
Kentucky	29.2%	23.0%	77%
Louisiana	27.7%	18.2%	81.9%
Maine[11]	13.9%	n/a	n/a
Maryland	17.4%	32.4%	67.6%
Massachusetts	28.9%	7.2%	92.8%
Michigan	22.3%	20.2%	79.8%
Minnesota	19.4%	44.5%	55.5%
Mississippi	15.8%	13.1%	86.9%
Missouri	14.6%	65.2%	34.8%
Montana	11.0%	9.6%	90.4%
Nebraska	11.9%	17.5%	82.5%
Nevada	13.4%	48.9%	51.1%
New Hampshire	17.9%	51.2%	48.8%
New Jersey	23.0%	16.5%	83.5%
New Mexico	17.5%	17.5%	82.5%
New York[11]	17.5%	n/a	n/a
North Carolina	8.8%	58.8%	41.2%
North Dakota	10.3%	4.0%	96%
Ohio[11]	14.0%	n/a	n/a
Oklahoma	14.6%	67.1%	32.9%
Oregon	18.9%	33.2%	66.8%
Pennsylvania	23.8%	36.0%	64%
Rhode Island	23.1%	20.0%	80%
South Carolina	10.9%	18.8%	81.2%
South Dakota	6.2%	59.5%	40.5%[12]
Tennessee	9.0%	62.2%	37.8%
Texas	8.7%	18.9%	81.1%
Utah	17.6%	35.1%	64.9%
Vermont	12.5%	15.1%	84.9%
Virginia	15.0%	43.6%	56.4%
Washington	10.7%	53.6%	46.4%
West Virginia	29.9%	14.7%	85.3%
Wisconsin[11]	6.8%	n/a	n/a
Wyoming	8.9%	46.7%	53.3%

10 Alaska offered a DB plan until 2006, when it closed it and opened its current DC plan. The unfunded liabilities from the DB plan are still being paid down by the state. Other states that closed DB plans and still face legacy costs include Indiana, Oregon, Utah, and Washington.

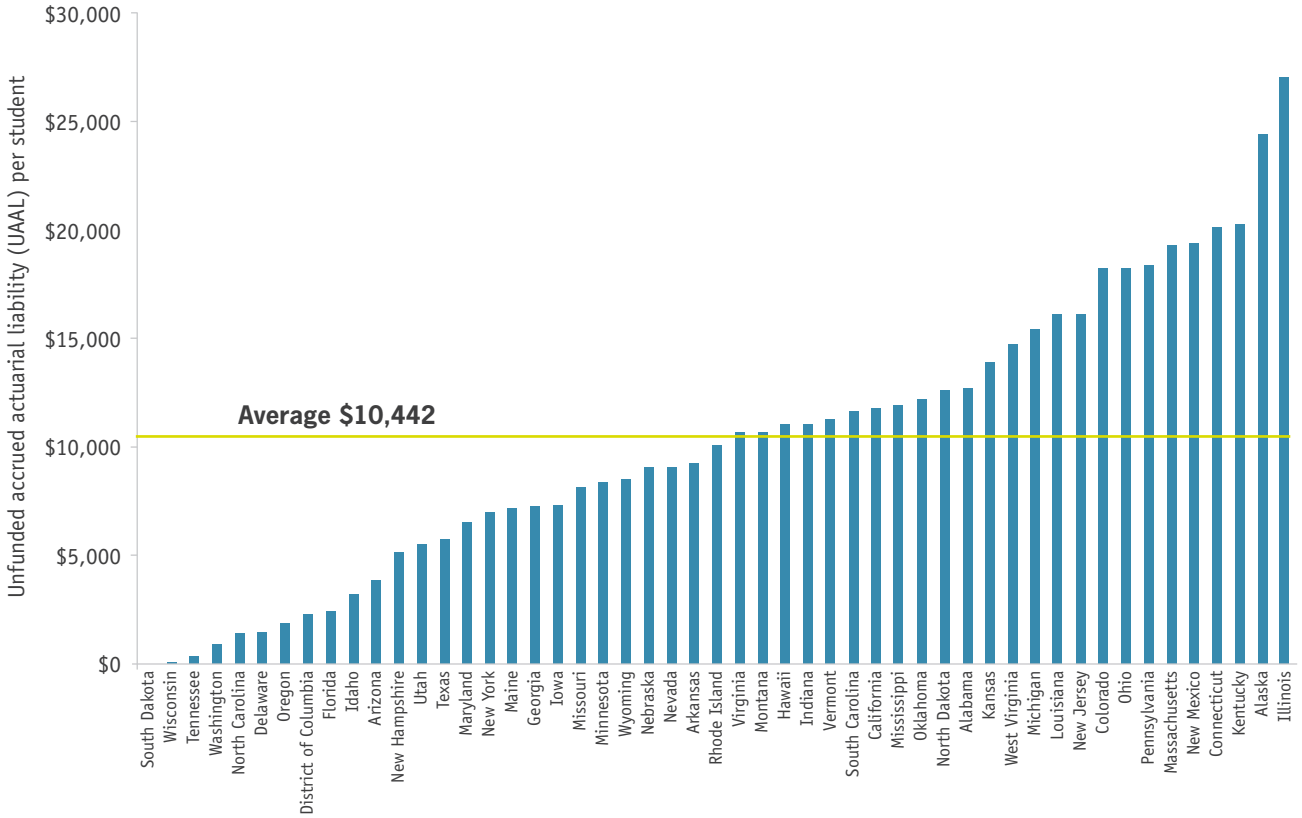
11 The breakdown of contributions between normal cost and debt service was not available for these states.

12 South Dakota's actuarial valuation identifies the breakdown in the event of unfunded liabilities. As noted in Figure 6, South Dakota's system is 100 percent funded.

Nationwide more than two thirds of employee contributions are used to pay system debt that has accumulated.

Looking through another lens, consider teacher pension debt spread out across the K-12 student population. Each American student's share of the teacher pension deficit is more than $10,000 and growing.[13]

Figure 8. Accrued pension debt per K-12 public school student by state, 2014



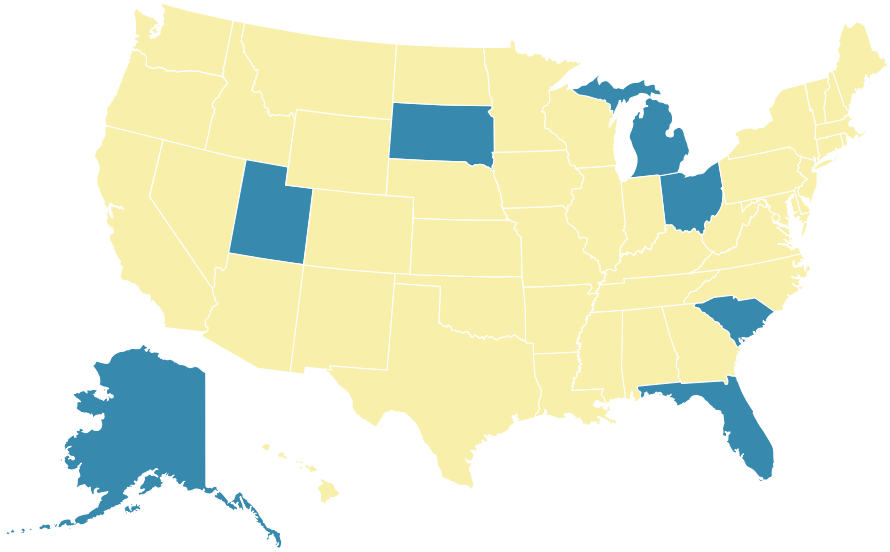
13 See Appendix C for actual dollar amounts shown in Figure 8.

Pension Flexibility

Defenders of traditional DB plans decry financial risk to teachers participating in DC plans. But there is also risk in DB retirement plans: The odds are that many teachers won't collect.

Many Americans with DC plans suffered significant losses to their retirement savings in the market downturn a few years ago. Pension boards and other advocates of traditional DB retirement plans have long claimed that this is exactly why teachers should be fearful of the risks of alternatives plans. But what they haven't emphasized is how risky DB systems are for teachers — namely, the risk that an individual teacher will never collect pension benefits or achieve adequate retirement savings because he or she does not remain in the system for 25-30 years until reaching retirement eligibility. Whether intended or not, the pension systems now depend on these non-collectors in order to stay afloat.

Figure 9. States with fully or nearly fully portable primary pension plans for teachers.



Consider this. According to a recent analysis of state vesting rules and teacher withdrawal rates by Bellwether Education Partners, less than half of the nation's teachers (44.5 percent) vest in state teacher pension systems. Even more compelling is that less than 20 percent (19.7 percent) of new teachers will stay in a retirement system long enough to reach the point at which they are eligible for full retirement benefits.[14]

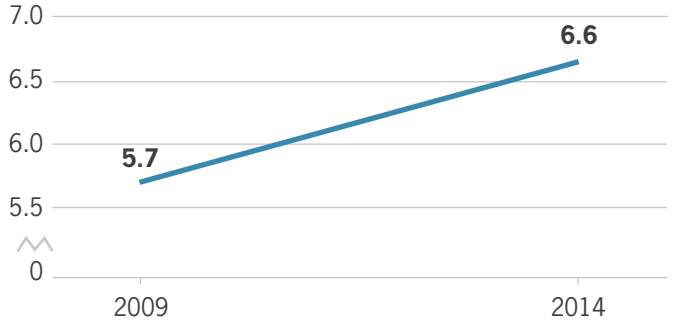
14 Aldeman, C., & Rotherham, A. J. (2014). *Friends without benefits: How states systematically shortchange teachers' retirement and threaten their retirement security*, Bellwether Education Partners.

State policies that increase vesting periods and back-load benefits so that teachers don't collect unless they stay for 25-30 years cheats teachers. It's a calculated cost-saving tactic. And it ensures systems don't have to pay full benefits to the vast majority of teachers.

Teachers who leave the system before vesting do not receive benefits upon retiring; they can only withdraw their own contributions (sometimes with interest). In a few states — such as **Illinois** and **Kentucky** — teachers are not even entitled to withdraw the full amount they contributed to the system.

In 2014, all but three states make teachers wait more than three years to vest in retirement plans. Fifteen states — **Alabama**, **Connecticut**, **Delaware**, **Georgia**, **Hawaii**, **Illinois**, **Indiana**, **Maryland**, **Massachusetts**, **Michigan**, **New Hampshire**, **New Jersey**, **New York**, **Pennsylvania** and **Washington**[15] — have vesting periods of 10 years (up from nine states just five years ago). Because most members of the workforce, not just teachers, need and want the option of changing employers without geographic limitations, increasingly long vesting periods prevent teachers from building the nest eggs they deserve.

Figure 10. Average vesting period for teachers continues to rise.



Some states refer to changes they have made to vesting periods as pension reform. However, the consequence of raising teachers' vesting age is only to reduce the number of teachers who receive benefits. It may be done in an effort to control costs and meet fiscal challenges — but this "fix" lands squarely on the shoulders of teachers. It increases the possibility that teachers will not have a secure retirement later in life, especially for new teachers and for lifelong career teachers who may need to change jobs or move across pension borders (i.e., state lines) at some time during their careers.

Consider this example of how lengthy vesting periods and lack of portability, characteristic of DB pension systems, hurt teachers:

Kathy is a 5th grade teacher in the Springfield, Missouri, Public School District. Her husband Jake has a job in sales, and after 15 years in Missouri he is offered a position in Colorado. They face a dilemma, however, as Missouri's pension system lacks portability for teachers. After 15 years, Kathy has contributed 14.5 percent of her earnings, or more than $98,000, into the retirement system, but the value of her pension benefit if she quits at this point is about $80,500, which is less than she put in.[16]

15 Teachers in Washington vest in the hybrid plan at 10 years. Vesting in the state's DB plan occurs at 5 years.

16 Pension benefit calculations reflect present discounted values (discounted for inflation and survival probabilities).

Figure 11. Years required for vesting by state (2014)[17]

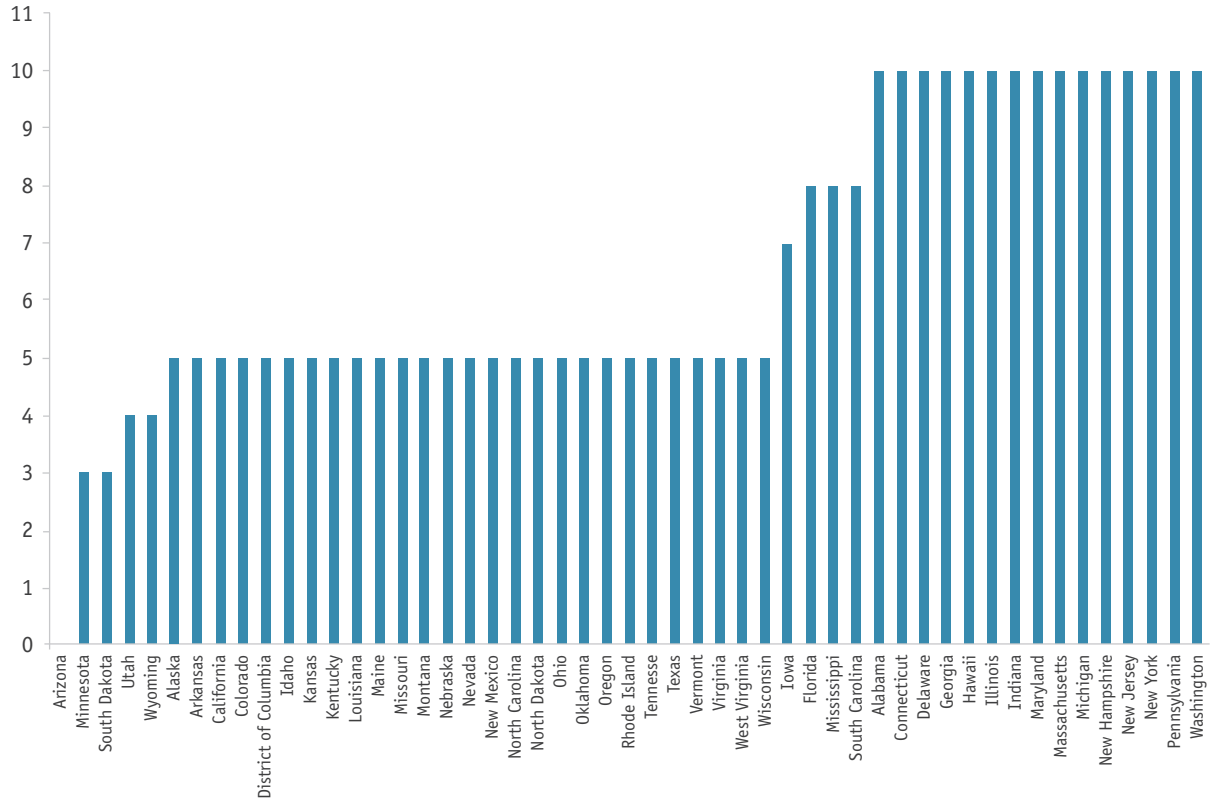
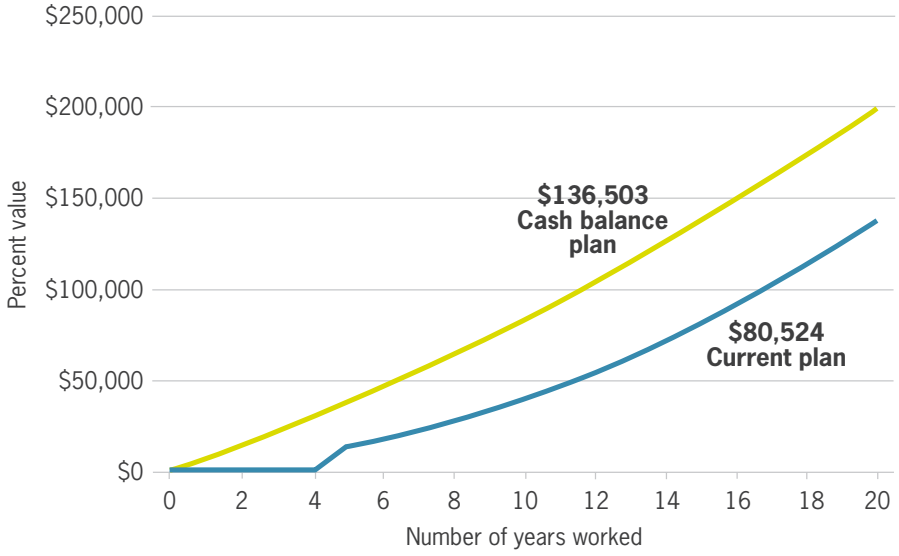


Figure 12. Pension benefit for Missouri teacher in Springfield under the current retirement plan (blue line) and hypothetical cash-balance plan (green line)[18]



17 Vesting in Washington's hybrid plan occurs at year 10.

18 Calculations are based on Springfield (MO) Public School District's salary schedule; assumptions include 2.5 percent interest rate and 2.5 percent inflation; survival probabilities used in the calculations come from the Centers for Disease Control's Life Tables.

If Missouri had a smooth accrual plan with portability such as the cash-balance plan shown in figure 12, Kathy could accrue $136,000 (after adjusting for inflation) and take it with her when she moves back to Colorado.[19] This would afford her a better opportunity to build up a secure retirement, especially because teachers in Missouri are not enrolled in Social Security.

As states have increased teacher vesting periods in DB plans, so too have they increased the contributions teachers are required to pay into the systems from which they may realize little or no return.

Since 2008, more than half of the states have increased teacher retirement contribution rates, and in 36 states the required teacher contributions are excessive, meaning too big of a chunk is coming out of their paychecks.[20]

19 This plan is based on a cash-balance notional account where both employer and employees contribute 10 percent of earnings (20 percent combined) and credit 5 percent interest. Higher than ideal contribution rates were used since Missouri's current contribution rates total 29 percent.

20 Analysts generally agree that workers in their 20's with no previous retirement savings should save, in addition to Social Security contributions, about 10-15 percent of their gross income in order to be able to live during retirement on 80 percent of the salary they were earning when they retired. While the recommended savings rate varies with age and existing retirement savings, NCTQ has used this 10-15 percent benchmark as a reasonable rate for its analyses. To achieve a total savings of 10-15 percent, teacher and employer contributions should each be in the range of 4-7 percent. In states where teachers do not participate in Social Security, the total recommended retirement savings (teacher plus employer contributions) is about 12 percent higher, to compensate for the fact that these teachers will not have Social Security income when they retire. In order to achieve the appropriate level of total savings, teacher and employer contributions in these states should each be in the range of 10-13 percent. Higher rates are excessive.

Figure 13. Teacher Contribution Rates

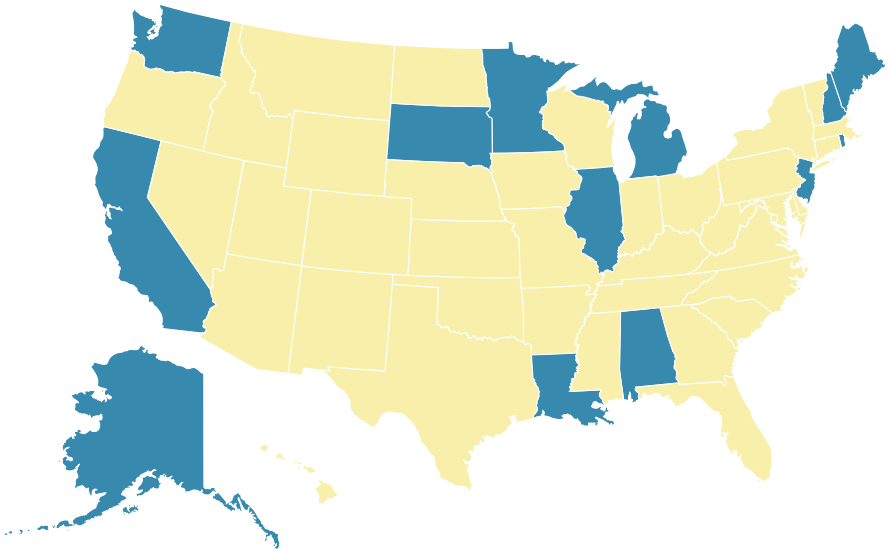
	2008 (%)	2014 (%)	Teachers Participate in Social Security (+6.2%)
Alabama	5	6	Yes
Alaska	8	8	No
Arizona	9.5	11.5	Yes
Arkansas	6	6	Yes
California	8	8	No
Colorado	8	8	No
Connecticut	7.3	7.3	No
Delaware	3	5	Yes
District of Columbia	8	8	No
Florida	0	3	Yes
Georgia	5	6	Some/depends on district
Hawaii	6	8	Yes
Idaho	6.2	6.8	Yes
Illinois	9.4	9.4	No
Indiana	3	3	Yes
Iowa	4.1	6	Yes
Kansas	4	6	Yes
Kentucky	9.9	12.9	No
Louisiana	8	8	No
Maine	7.7	7.7	No
Maryland	2	7	Yes
Massachusetts	11	11	No
Michigan	6.4	6.4	Yes
Minnesota	5.5	7.5	Yes
Mississippi	7.3	9	Yes
Missouri	13	14.5	No
Montana	7.2	8.2	Yes
Nebraska	7.3	9.8	Yes
Nevada	10.3	12.3	No
New Hampshire	6.7	7	Yes
New Jersey	5	6.8	No
New Mexico	7.9	10.7	Yes
New York	3	3-6	Yes
North Carolina	6	6	Yes
North Dakota	7.8	9.8	Yes
Ohio	10	11	No
Oklahoma	7	7	Yes
Oregon	6	6	Yes
Pennsylvania	7.5	7.5-12.3	Yes
Rhode Island	9.5	3.8	No
South Carolina	6.5	8	Yes
South Dakota	6	6	Yes
Tennessee	5	5	Yes
Texas	6.4	6.7	No
Utah	0	0	Yes
Vermont	3.5	5	Yes
Virginia	4	4	Yes
Washington	4.3	4.7-15	Yes
West Virginia	6	6	Yes
Wisconsin	6	6.8	Yes
Wyoming	5.7	7.5	Yes

Fairness and Neutrality

Many of the rules and policies that make DB teacher pension systems unfair to teachers are only apparent upon a closer look at pension formulas and retirement eligibility rules.

Most state pension systems do not treat all years of teacher service equally in that the pension formulas that determine benefits are not neutral over the course of teachers' careers, with service generally counting for more at the back end than in the early years.

Figure 14. States that ensure a fair accrual of pension benefits to teachers

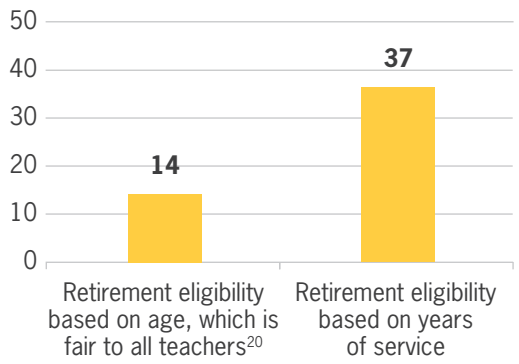


Just as long vesting periods and lack of portability disadvantage a mobile teacher population, the inequities built into formulas for calculating teacher pension benefits heavily advantage only those teachers who spend their whole careers in one system.

Retirement eligibility rules based on years of service lead to uneven accrual of pension wealth for teachers over the course of a career — which is known as "pension spiking." Proponents of traditional DB plans have argued that this structure provides an incentive to keep teachers from leaving, but teacher retention rates and rates of withdrawal from state retirement systems suggest otherwise.

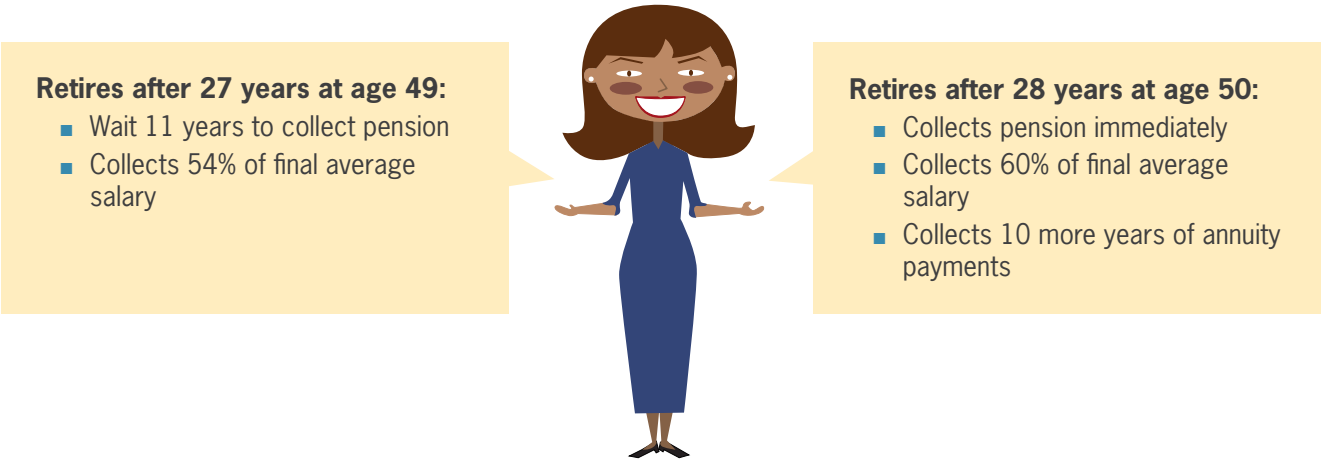
A fairer system would set a standard, conventional retirement eligibility age for all teachers, without factoring in years of service. This does not mean that all teachers of the same age should receive the same benefits regardless of years of service; it merely means that eligibility should be determined in a way that treats all teachers equitably.

Figure 15. Are states' retirement eligibility rules fair?



Here is how pension spiking works.[22] Consider an educator who began teaching in Arkansas at age 22 and leaves at age 49 after 27 years of service. She must wait 11 years until age 60 to collect her pension, at which time she'll be able to collect 54 percent of her final average salary. If she were to retire just one year later, at age 50 with 28 years of service, she would have been eligible to collect a pension immediately and her benefit would be worth 60 percent of her final average salary. She would also collect 10 years more worth of annuity payments than if she left with 27 years of service. The difference of waiting one additional year for retirement is potentially worth tens to hundreds of thousands of dollars in pension wealth.

Figure 16. Pensions spiking: What a difference a year makes



Basing retirement eligibility on years of service is often defended because it allows for "early" retirement before the conventional age. Arizona, for example, allows teachers to retire sometimes as young as age 51. But as life expectancies continue to increase, teachers are likely to draw benefits out of the system for many more years than they contributed — at a cost of more than $700,000 per teacher from ages 51 to 65. This practice is not a prudent use of a system's limited funds and contributes to the unsustainability of pension plans. Early retirement options can be equitably provided if benefits are reduced accordingly.

21 States with retirement eligibility based on age are Alabama, Alaska, California, Illinois, Louisiana, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Rhode Island and Washington

22 See Costrell & Podgursky (2008). http://educationnext.org/peaks-cliffs-and-valleys/

Figure 17 illustrates the costs to states and districts of allowing unreduced benefits to teachers who begin their career at age 22 and retire before age 65.

Interestingly, although retirement eligibility and benefit payments in current teacher pension systems are most often tied to the number of years a teacher has worked, 20 states do not allow teachers to purchase time for previous teaching experience in other states or for approved leaves of absence, such as maternity or paternity leave (see Appendix E). Such purchases of service are based on an actuarial valuation of the cost to the system. While teachers may find that they simply don't have the cash to buy the time, allowing purchases of service time is generally cost neutral to the system. Thus, systems can provide service credits that, on average, are costless to the system while benefiting career teachers who have crossed states lines or taught in the private sector as well as teachers who sat out for a number of years for approved personal reasons (such as caring for their young children) and still want to retire at traditional ages. Perhaps states may not be permitting these purchases because doing so would increase the likelihood that teachers will ultimately collect full benefits, putting further cost burdens on the system.

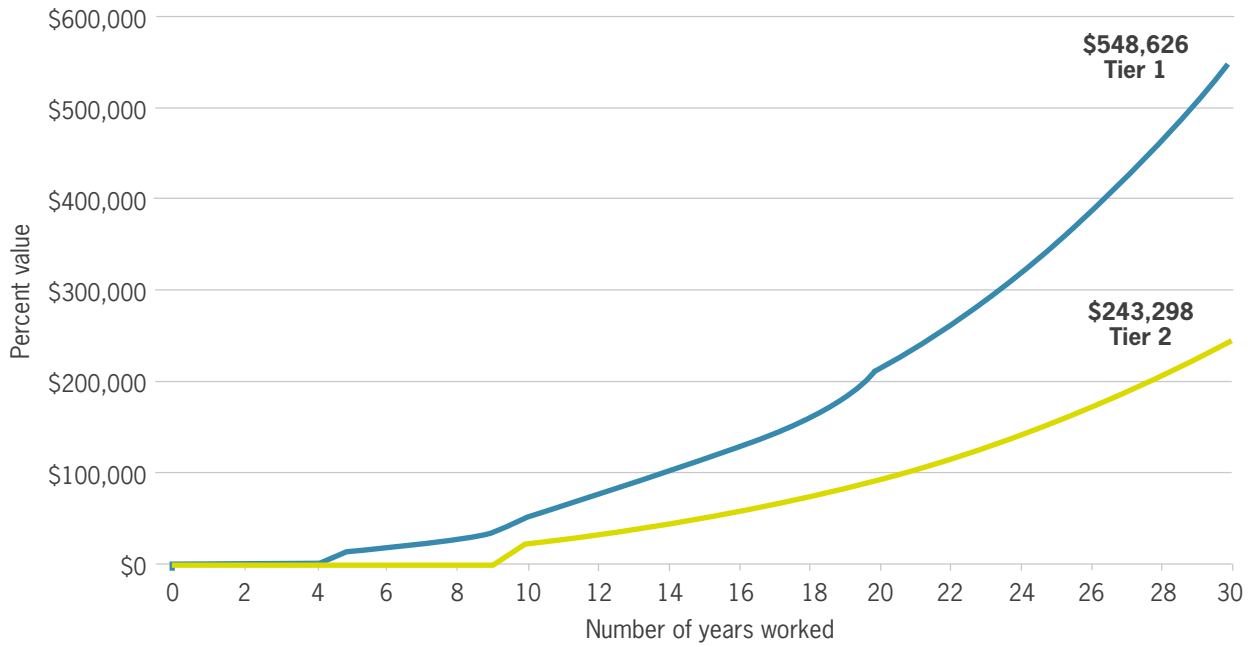
One of the most troubling realities of the pension crisis is the opaque policymaking used to prop up failing pension systems — almost always at the expense of newer teachers. Take the following example: Amy and Allison are two young Illinois teachers working in the Springfield Public School District. Both started at age 25. Amy was hired in November 2010 and therefore receives benefits under the state's Tier 1 pension plan. Allison was hired January 5, 2011, and is covered under the Tier 2 plan. Because of the severe underfunding of that state's pension system, Illinois lawmakers added the Tier 2 plan that applies only to public employees hired after December 31, 2010. This new plan substantially cuts retirement benefits for Tier 2 members.

Figure 17. Costs to states of allowing unreduced benefits for early retirees[23]

	At a per teacher cost of (from eligible retirement age to age 65)	Eligible for retirement benefits at age
Alaska	$0	N/A
Illinois	$0	67
Maine	$0	65
Minnesota	$0	66
New Hampshire	$0	65
New Jersey	$0	65
Rhode Island	$0	67
Washington	$0	65
New York	$272,760	63
Alabama	$284,193	62
Tennessee	$306,524	56
Virginia	$306,524	56
California	$344,476	62
Michigan	$347,025	60
Indiana	$349,500	55
Massachusetts	$375,944	60
Texas	$396,147	62
Hawaii	$404,862	60
Oregon	$413,184	58
Kansas	$427,997	60
Utah	$438,758	57
Maryland	$459,786	56
North Dakota	$462,700	60
Oklahoma	$462,700	60
Wisconsin	$468,008	57
South Dakota	$492,478	55
Florida	$508,364	55
Montana	$530,605	55
Vermont	$540,925	56
South Carolina	$557,874	56
Louisiana	$578,375	60
Connecticut	$585,010	57
North Carolina	$612,290	52
Idaho	$613,048	56
Delaware	$622,383	52
Iowa	$625,827	55
Nebraska	$635,455	55
West Virginia	$635,455	55
Wyoming	$664,981	53
District of Columbia	$672,847	52
Georgia	$672,847	52
Mississippi	$672,847	52
Arkansas	$727,242	50
Arizona	$730,774	55
Colorado	$731,263	57
Pennsylvania	$731,263	57
Ohio	$740,131	52
New Mexico	$790,595	52
Nevada	$841,058	52
Kentucky	$841,158	49
Missouri	$845,724	51

23 These calculations are based on a three year final average salary calculation, do not include COLA or inflation, and assume a standard salary scale with a starting salary of $35,000 that increases annually.

Figure 18. Pension wealth for Tier 1 and Tier 2 teachers in Springfield, IL public schools[24]



Amy and Allison have similar credentials and follow the same steps on the district's salary schedule. Both plan to have long careers in teaching in this school district, and will leave after teaching for 30 years. Both will contribute the same amount into the pension system — almost $200,000. But they will receive very different pensions. Amy's pension will total nearly $550,000 while Allison's will be less than half as much — about $243,300.[25] In fact, even if they leave earlier (after vesting) and with the same years of service, Allison's pension will be valued at about 42-46 percent of Amy's. Allison's retirement will be significantly less secure, and she's getting a very low return on her investment. More than 80 percent of the total value of her retirement benefit represents her own contributions.

24 Calculations are based on Springfield (IL) Public School District's salary schedule; assumptions include 2.5 percent interest rate and 2.5 percent inflation; survival probabilities used in the calculations come from the Centers for Disease Control's Life Tables.

25 These calculations are based on a measure known as pension wealth. Pension wealth is the present discounted value of the sum of the stream of payments she would collect, discounted for survival probabilities.

Other Ways Forward

Secure and fair retirement options that allow every teacher to benefit from his or her years of dedication *do exist*, but to move forward we must first recognize that holding on to the status quo only prolongs the downward spiral of teacher retirement benefits. States must honor the commitments they have made to teachers. But they can't continue to make promises they cannot afford to keep.

State leaders and pension plan sponsors have the power to do the math and change the trajectory of state pension plans for teachers. Just as they have set the current pension policies, these leaders can enact systemic reform by offering flexible and portable options and by resetting retirement eligibility requirements, contribution and benefit accrual rates and other design features they are entrusted to establish. The decisions leaders face are not easy ones, but the severity of the crisis demands that they put aside personal and/or political interests and act in the best interests of our nation's hardworking taxpayers and deserving teachers.

Teacher Pension Policy in **North Dakota**

A report card on the sustainability, flexibility and fairness of state teacher pension systems

D

For more information about North Dakota and other states' teacher retirement policies, including full narrative analyses, recommendations and state responses, see **www.nctq.org/statePolicy**

North Dakota's pension system ratings

Sustainability
Pension system is stable and well–funded. ○

Flexibility
Pension system is flexible and fair to all teachers. ◔

Neutrality
Retiree benefits to teachers accrue uniformly with each additional year of work. ◑

● fully meets goal ◕ nearly meets goal ◑ meets goal in part
◔ meets a small part of goal ○ does not meet goal

Snapshot of North Dakota's pension system

Teacher pension system is well-funded (at least 90%).	**NO**
Teachers have the option of a fully portable primary pension plan.	**NO**
Teachers vest in three years or less.	**NO**
Teachers leaving early can take at least a partial employer contribution with them.	**NO**
Teacher and employer contribution rates are reasonable.	**NO**
Retirement eligibility is based on age only.	**NO**
Pension benefits accrue in a way that treats each year of work uniformly.	**NO**

North Dakota's pension system characteristics

Type of plan	Defined benefit (DB)
Unfunded liabilities (percent of system funded)	$1,234,817,443 (58.8%)
Vesting period	5 years
Teacher contribution rate (percent of salary)	9.75%
Employer contribution rate (percent of salary)	10.75%
Basis for retirement eligibility	Years of service
Cost of living adjustments	Ad hoc
Participation in Social Security	Yes
Contributions teachers may withdraw from plans if they leave after 5 years	Own, plus interest
Policy for purchasing time for prior teaching or approved leave	Unlimited
Cost per teacher of allowing retirement before age 65	$462,700

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 19, 2015**

SUBJ: **Actuarial Contract**

At the January meeting, the TFFR Board reviewed actuarial costs and services provided by TFFR's current actuarial consultant, Segal Company.

You may recall that the Board selected Segal as their actuarial consultant in 2011 after a competitive RFP process for the 2011-13 time period with an option to renew the contract. The contract was renewed for 2013-15. The Board has now requested a cost proposal from Segal to renew the contract for another 2-year term. Their proposal dated February 10, 2015 is enclosed. The TFFR Board will need to decide whether to accept the Segal cost proposal and extend the contract for 2015-2017.

Segal's proposal includes the 2015 and 2016 annual actuarial valuations (fixed fee of $42,000 each for 2015 and 2016 compared to $40,000 each for 2013 and 2014), as well as other consulting services at an hourly rate of $295 per hour (compared to $280 hour for 2013-15). This amounts to about a 5% increase. In visiting with other public pension plans with varying actuarial consultants and payment structures, the Segal proposal appears to be very competitive.

As a reminder, over the last 10 years, actuarial fees paid averaged about $131,000 per year. For the fiscal year ending June 30, 2014, actuarial fees paid ($71,000) were about .003% (3/1000 of 1%) of market value ($2.09 billion). Actuarial costs are largely impacted by legislative proposals, special studies, compliance issues, and board initiatives.

Segal has worked closely with RIO staff, RIO external auditor, and the State Auditor's office on GASB planning and implementation which will continue into the next biennium. Understanding of the plan and consistency in approach, methodology, and calculations is very important as we move forward.

Staff recommendation: Accept Segal's proposal to extend the actuarial consulting contract for 2015-17 as outlined in their February 10, 2015 letter.

Enclosure

SEGAL

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February 10, 2015

VIA E-MAIL: fkopp@nd.gov

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:

Segal Consulting (Segal) is pleased to submit this proposal to continue performing professional actuarial and consulting services for the North Dakota Teachers' Fund for Retirement (TFFR). Segal has been serving in this capacity to the TFFR for the past four 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. Prepare actuarial calculations and disclosures needed for GASB 67 and GASB 68.

3. Provide actuarial and technical analysis of proposed legislation.

4. Provide actuarial factors, tables and other calculations as required.

5. Assist with the ongoing administration of TFFR, including the review and calculation of benefits, service purchases, QDROS, and other calculations.

6. Assist with the development of procedures, forms, publications, tables, and computer systems.

7. Provide information and assistance with Federal and State tax issues affecting the TFFR plan, members, and employers.

8. Summarize and discuss actuarial and administrative implications of federal and state laws and rules governing TFFR.

9. Develop and implement statutes, rules, policies, and procedures.

10. Provide periodic educational presentations or discussions with TFFR Board, staff, legislative committees, or others, as requested.

11. 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.

12. Provide asset/liability modeling support work as requested.

13. Provide assistance with special projects or studies as requested.

14. 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
Valuation Consulting Services		
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 September	Determination of actuarial value of assets, valuation results, and contribution rates.
Draft report to TFFR	Early October	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.
Consulting Services and Projections		
General consulting services	As requested	Delivery of these consulting services will depend on the nature of the issue. In most instances, we anticipate being 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	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. 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.
Proposed legislative benefit changes: (a) Review of proposal (if possible, a copy of the actual bill draft is preferred)	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	Segal 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.
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	Segal 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. 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.
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 2019	Analyze experience for period July 1, 2014 to June 30, 2019.

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 keeping 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 we 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.

IRS Determination Letter Application

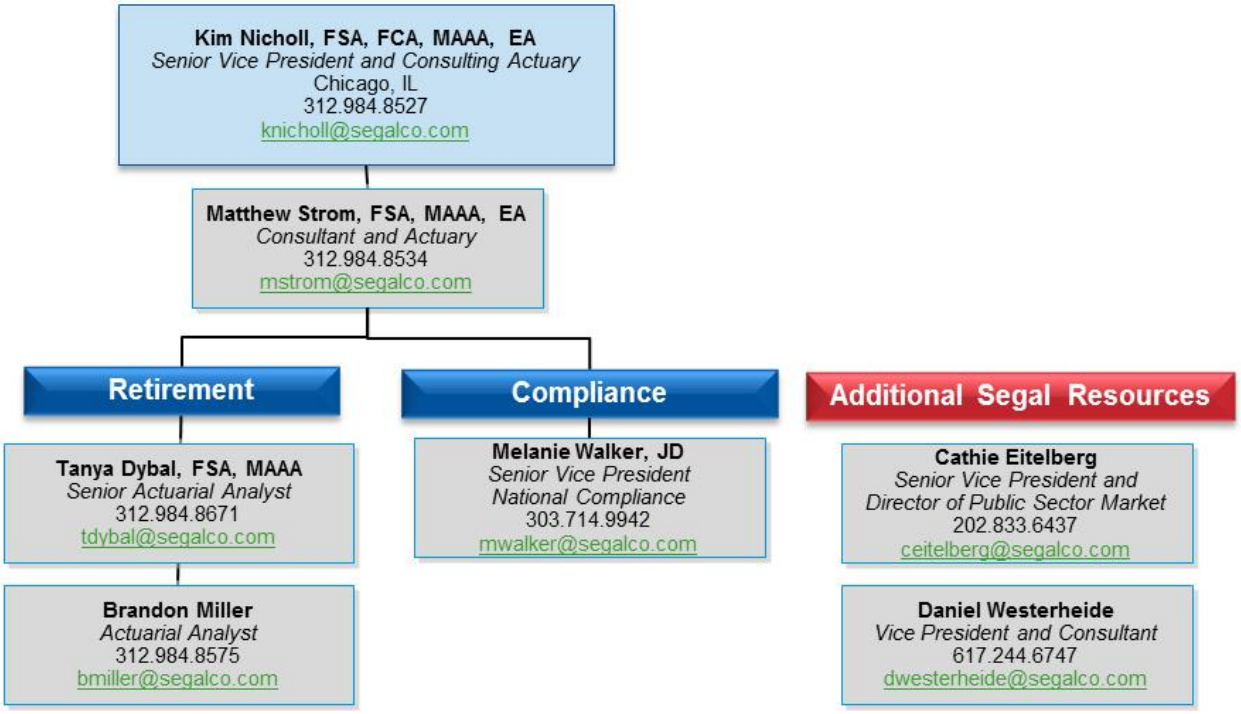
TFFR will need to submit an application to the IRS for a determination letter in 2015. Melanie Walker will work with TFFR on this process. For this purpose, we will complete all forms and prepare all materials necessary to request a favorable determination letter from the IRS, based on information provided by TFFR. Such filing materials will include an application under the IRS Voluntary Compliance Program for correcting a plan amendment failure, if necessary. TFFR will be responsible for reviewing the materials and procuring required signatures and payment, and then transmitting the package to the IRS. We will be available to assist with any requested response to the IRS regarding the determination letter filing.

Project Team

Segal 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

While not within the period of this proposal, we want to include information about the next scheduled experience study. A five-year experience study will be performed beginning with the completion of the July 1, 2019 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.

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,

Kim Nicholl

kn

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Attachment: Cost Proposal

COST PROPOSAL
ACTUARIAL AND CONSULTING SERVICES
ND TEACHERS' FUND FOR RETIREMENT
JULY 1, 2015 – JUNE 30, 2017

2 YEAR CONTRACT COST	**FIXED FEE**
2015 Actuarial Report	$42,000
2016 Actuarial Report	$42,000
Total Fixed Fees	$84,000

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 2015 and 2016 actuarial reports include the actuarial information and disclosures needed to comply with GASB 67.

2 YEAR CONTRACT TERM	**FIXED HOURLY FEE FOR SERVICES**
Legislative and General Consulting	$ 295 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 ensure 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.

MEMORANDUM

TO: **TFFR Board**
FROM: **Fay Kopp and Shelly Schumacher**
DATE: **March 19, 2015**
SUBJ: **GASB Update**

Here is a brief update on GASB related activities since the Board last met.

- **Employer Census Data Audits**

  CliftonLarsonAllen (CLA), external auditors, have conducted the onsite field work at 17 participating TFFR employers and have now completed their audit of member demographic and salary information which employers submit to TFFR that is subsequently included in TFFR's plan valuation file. Results of CLA's census data audit were very positive, with only two minor corrections made to member accounts. This work was part of CLA's audit of the TFFR's Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

- **Audit Report on GASB Schedules**

  CLA has now completed their audit of the GASB schedules, and are finalizing their Independent Audit Report on the Schedule of Employer Allocations and Schedule of Pension Amounts by Employer.

- **GASB Communication Materials**

  The TFFR website includes a great deal of GASB related information to inform employers, auditors, and the public about new GASB 67 and 68 pension reporting requirements. It includes a GASB overview, toolkit, implementation guides, AICPA white papers, TFFR/PERS/SAO training presentation and video, disclosure template, GASB report from actuary, GASB opinion from the auditor (new), and frequently asked questions.

  I have also drafted some GASB talking points (enclosed) to assist TFFR staff, employers, and others in communicating the new pension standards. Suggestions are welcome. I plan to send to school administrators this spring; it will also be posted to TFFR website.

This should generally conclude the GASB pension related actuarial and audit work required for the fiscal year ended June 30, 2014. Our actuary and auditor can take a short GASB breather before getting started on the 2015 GASB calculations and associated efforts this summer. However, TFFR staff will continue to work with employers and their auditors to assist them with incorporating the 2014 pension information into their 2015 annual financial statements.

Enclosures

GASB 68 Pension Standards

The Government Accounting Standards Board (GASB) recently approved two new statements that will change the way public retirement systems (i.e.TFFR) and employers (i.e. school districts, cities, counties, and the state) will account for and disclose pension information.

- GASB changes were designed to improve pension information and increase transparency, consistency, and comparability of pension information.

- New GASB requirements do not affect TFFR's funded ratio, or statutory contribution requirements. New requirements do not change the actual pension liability – only where and how pension costs are accounted for in financial statements.

- GASB 68 requires the entities that are actually making the pension contributions (i.e. school districts) to report their proportionate share of the collective net pension liability, regardless of whether the entities are legally required to fund the plan. The ND Legislature has the legal authority to set member and employer contribution rates, and employers are liable for paying those contributions required by law.

- Participating employers/school districts will need to include the new GASB 68 requirements in their June 30, 2015 financial statements.

- TFFR will provide most of the required GASB 68 information needed by school districts including actuarial and financial calculations, template footnote disclosures, and audited schedules. Allocation % and $ amounts are calculated based on annual covered payroll. School districts should work closely with their financial auditors on implementation.

- The presence of a large number on the school district's balance sheet which represents unfunded pension costs could give the incorrect impression that school districts have a large debt that must be paid immediately. That is not the case. Pension costs are paid off over long periods – much like home mortgages – through regular contributions paid to the retirement plan.

- It is unknown whether the new GASB statements will affect a school district's bond rating. Rating agencies have been aware of the funding status of governmental pension plans in the past, and have historically incorporated that information into their analysis of a government's ability to meet its debt obligations.

- Steps are being taken to reduce TFFR's net pension liability. Increased member and employer contributions, benefit changes, and solid investment performance is expected to show positive funding results. Due to legislative action, TFFR's long term funding outlook is positive, and benefits are secure for past, present and future ND educators.

- Additional GASB information is available on the TFFR website.

DRAFT

MEMORANDUM

TO: **Teachers' Fund for Retirement Board (TFFR)**

FROM: **Terra Miller Bowley, Supervisor of Audit Services**

DATE: **March 16, 2015**

SUBJECT: **Audit Services Activities Update**

This memorandum provides an update regarding audit activities which have occurred from July 1, 2014 – March 13, 2015.

Agency Update and Staff Relations

Terra Miller Bowley joined the Retirement and Investment Office (RIO) on October 13, 2014 as the Supervisor of Audit Services.

The Office of the State Auditor has completed the RFP process to select an external auditor, CliftonLarsonAllen, LLC has been awarded the contract for both RIO and PERS for the next three fiscal years.

Retirement Program Audit Activities

We examine school district reporting to TFFR to determine whether retirement salaries and contributions, service hours, and eligibility reported for members of TFFR are in compliance. The current status of school district audits is as follows:

- Twelve school district audits and two not in compliance reviews have been completed for a total of fourteen audits.
- Ten school district audits are in progress.
- Four school district audits are pending. Audit material has been received but not yet reviewed.
- One school district has been notified of an upcoming not in compliance review and five additional school districts will be notified of upcoming compliance audits in late March or early April 2015.

All school district audits with information requested via an audit notification prior to November 2014 are in progress or completed. All pending school district audits include information requested within the last 30 to 60 days. Audit Services is now current with regards to our school district audit inventory. Of special note the Williston Public School District not in compliance review has been completed.

During the third quarter of each fiscal year Retirement Services undertakes an effort to verify salaries reported to TFFR for prior years. Audit Services was asked to assist with this process. In January 2015 fifty member accounts representing forty one school districts for the fiscal years 2012-2013 and 2013-2014 were reviewed. Ultimately five member accounts required corrections.

Two quarterly TFFR File Maintenance audits have occurred in November 2014 and February 2015. No exceptions and/or recommendations were noted.

In October and November 2014 seventeen school districts were notified of GASB 68 Census Data Audits to be conducted by our external audit partners, CliftonLarsonAllen, as a part of the implementation of GASB 68. Fieldwork was completed by CliftonLarsonAllen in January 2015. All seventeen school districts received an on-site visit from our external audit partners and a total of 202 member accounts were reviewed. The GASB 68 Census Data Audits have completed and two corrections were required.

Administrative and Investment Audits

An Executive Limitations Audit for the calendar year beginning January 1, 2014 and ending December 31, 2014 was completed. Audit work commenced in November 2014 and concluded in February 2015. The final audit report was issued in February 2015. Audit Services concluded that the Executive Director/CIO is in compliance with the State Investment Board (SIB) Governance Manual Executive Limitation polices A-1 through A-11.

Audit Services facilitated two organization wide surveys of employees in December 2014 and January 2015. The purpose of the surveys was to provide employees the opportunity to evaluate the Executive Director/CIO, immediate supervisors, and other members of the management staff.

Professional Development Activities

Audit Services reinstated its membership with The Institute of Internal Auditors (IIA) in October 2014. Audit Services intends to pursue networking and professional development opportunities via local chapter participation (Central NoDak). A professional development plan has been approved for the Supervisor of Audit Services - a Certified Internal Auditor (CIA) designation will be pursued. The Supervisor of Audit Services attended Auditor-In-Charge training presented by the Central NoDak IIA Chapter. Audit Services also attended GASB 68 Employer Training presented by RIO Retirement Services as well as open records training presented by staff counsel.

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 19, 2015**

SUBJ: **Retirement Staffing Update**

We are pleased to inform the Board that we have hired Denise Osmond to fill the Retirement Program Specialist position which was recently vacated by Denise Weeks. Denise Osmond has a strong business background in human resources, payroll, and benefits administration, and has the personality and experience to provide excellent customer service to TFFR members. She started her new job duties on March 3. We are very excited to have her join the RIO team.

A special thanks to our dedicated and experienced Retirement Services staff for their extra efforts during the interim: Shelly Schumacher, Retirement Program Manager; Paula Brown, Retirement Program Specialist; and Estelle Kirchoffner, Membership Specialist. They continue to do a phenomenal job providing high quality service to active and retired TFFR plan participants.

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 19, 2015**

SUBJ: **Board Education Topics**

I am working on the 2015-16 Board calendar and Education plan, and am very interested in any suggestions from board members on agenda items, topics or information that would assist you in carrying out your board responsibilities. As examples, here are some board education topics from the past few years:

2012-13

- Actuarial valuation process
- Actuarial funding policy
- GASB actuarial, audit, and administrative implications
- Impact of oil industry on ND schools
- Social investing
- TFFR Board responsibilities

2013-14

- Actuarial valuation process
- GASB actuarial, audit, and administrative implications
- TFFR plan overview
- TFFR employer reporting
- Fiduciary Duties/Ethics
- Open Records/Open Meetings

2014-15

- Actuarial valuation process
- Defined benefit, defined contribution, and hybrid plan designs
- GASB actuarial, audit, and administrative implications
- ND education demographics (DPI)
- ND teacher shortage (ESPB)

2015-16 TFFR Meeting Schedule (approved by Board in January 2015)

July 23, 2015	January 21, 2016
September 24, 2015	March 17, 2016
October 22, 2015	April 21, 2016

NDTFFR : 2014 UPDATE

ND Association of School Administrators

Midwinter Conference

January 27, 2015

Fay Kopp, Chief Retirement Officer – Deputy Executive Director
Shelly Schumacher, Retirement Program Manager
ND Teachers' Fund for Retirement (TFFR)
ND Retirement & Investment Office (RIO)

TFFR Board of Trustees

TFFR benefits program is managed by a 7-member board of trustees who have a fiduciary responsibility to the fund's beneficiaries. The Board consists of 5 active and retired members appointed by the Governor and 2 state officials.

- Active School Teachers
  - Mike Gessner, Minot, President
  - Kim Franz, Mandan
- Active School Administrator
  - Rob Lech, Jamestown, Vice President
- Retired Members
  - Mel Olson, Fargo
  - Mike Burton, Fargo
- State Officials – Ex officio members
  - Kelly Schmidt, State Treasurer
  - Kirsten Baesler, State Superintendent

State Investment Board (SIB)

TFFR investment program is implemented by State Investment Board.

State Officials

- Lt. Governor
  Drew Wrigley, Chairman
- State Treasurer
  Kelly Schmidt
- State Insurance Comm.
  Adam Hamm
- State Land Comm.
  Lance Gaebe
- Workforce Safety & Insurance
  Cindy Ternes

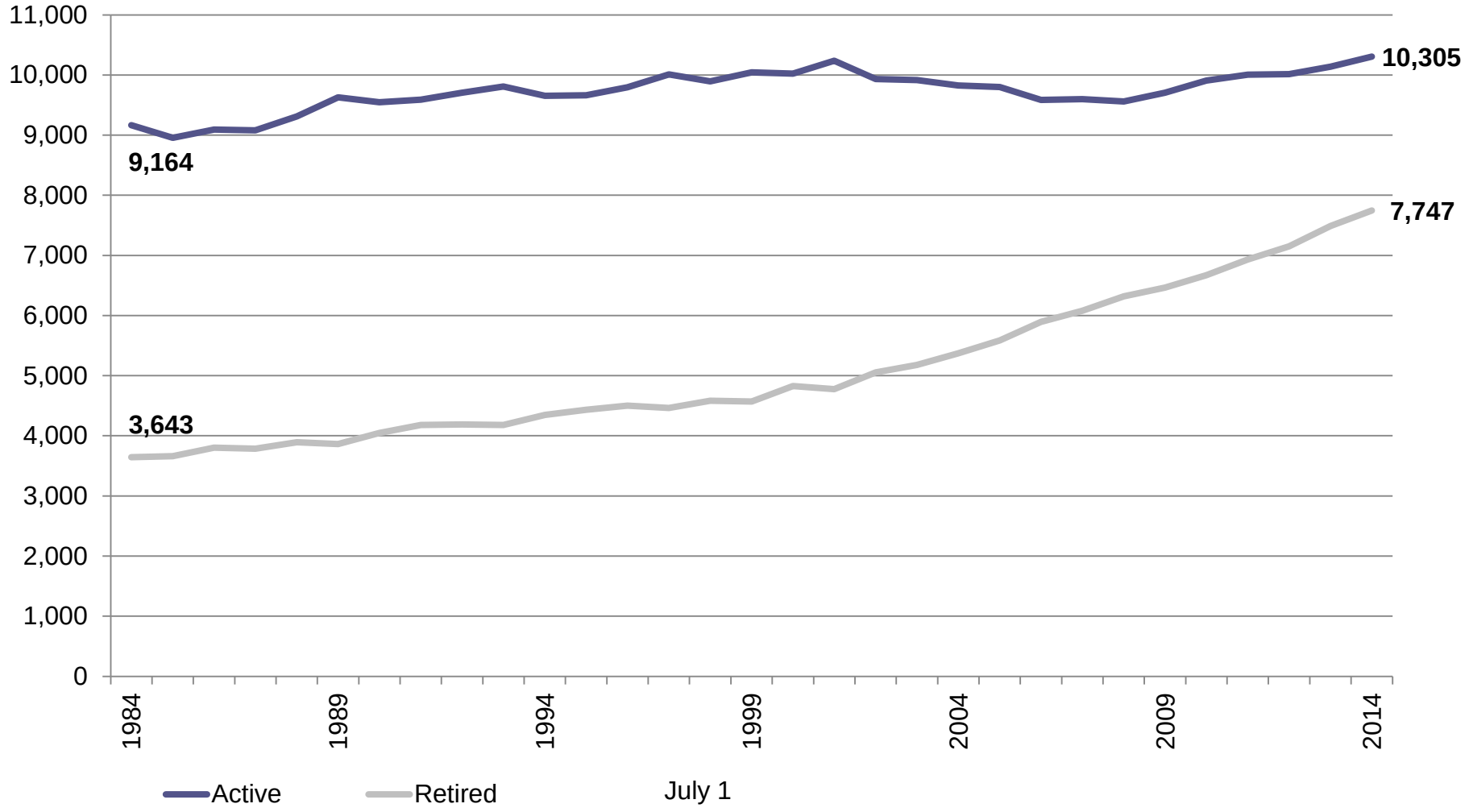
Pension Representatives

- Mike Gessner (TFFR)
- Rob Lech (TFFR)
- Mel Olson (TFFR)

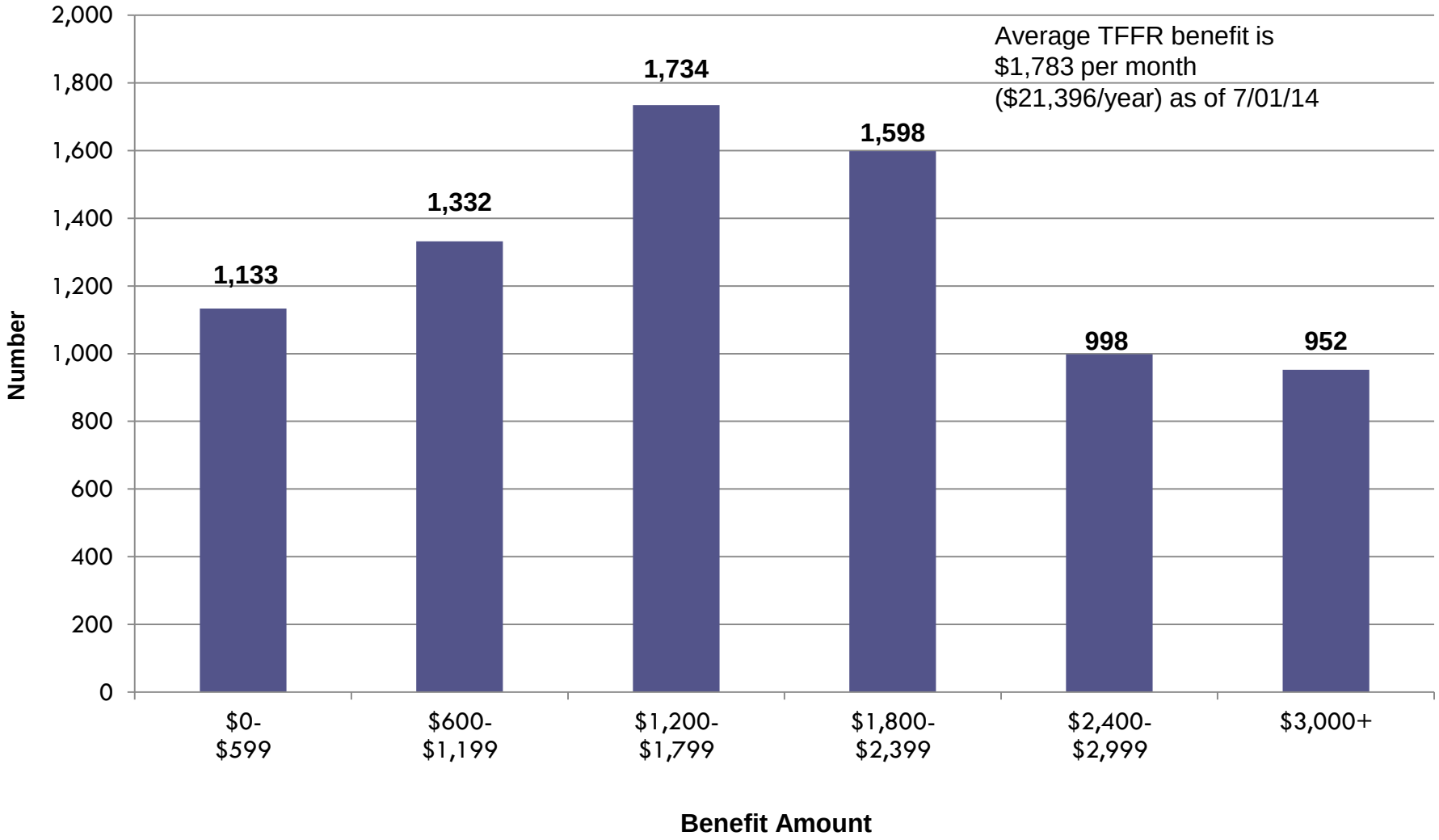
- Tom Trenbeath (PERS)
- Mike Sandal (PERS)
- Yvonne Smith (PERS)

TFFR Background

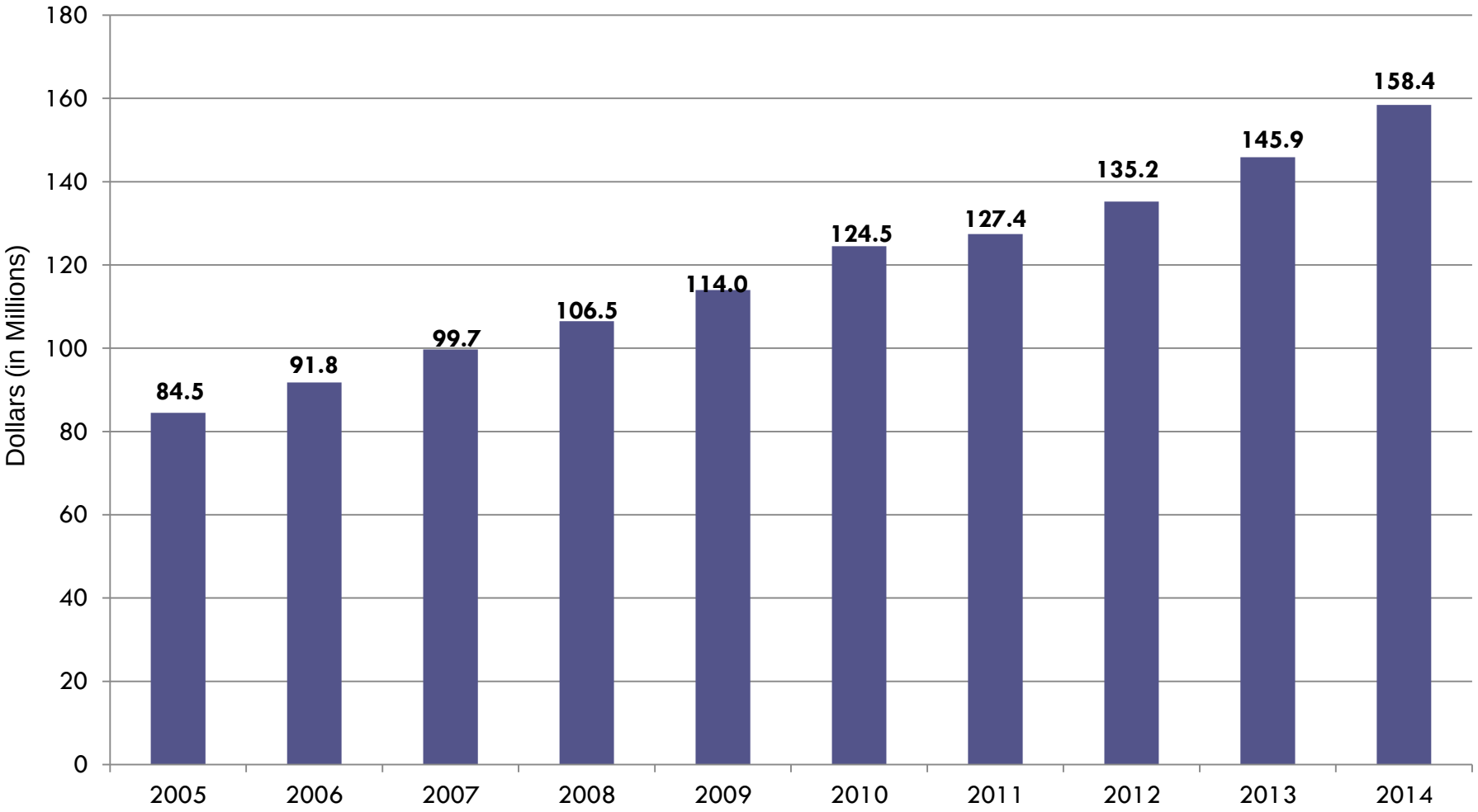
Active and Retired TFFR Members



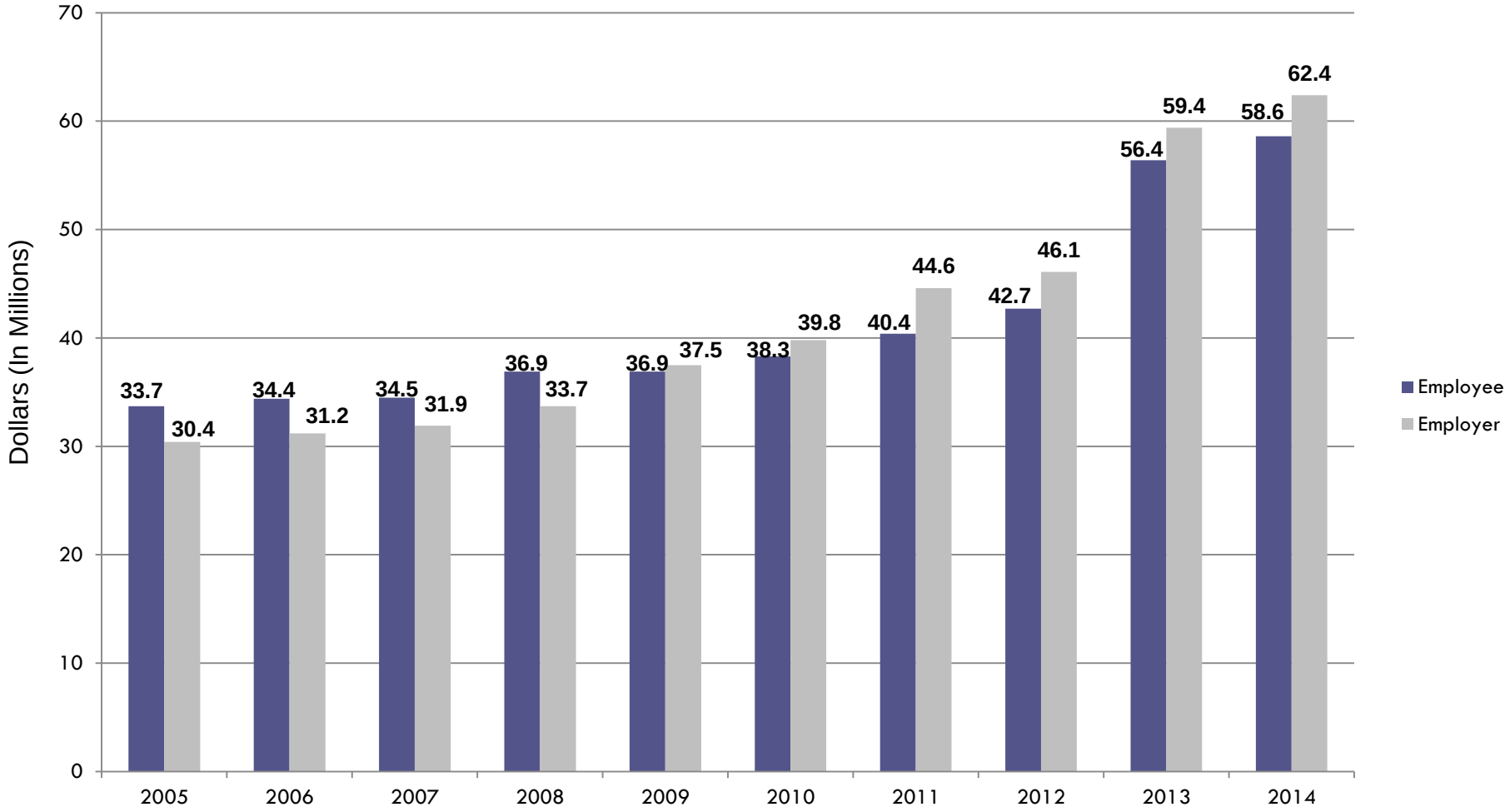
Monthly TFFR Benefits by Benefit Amount



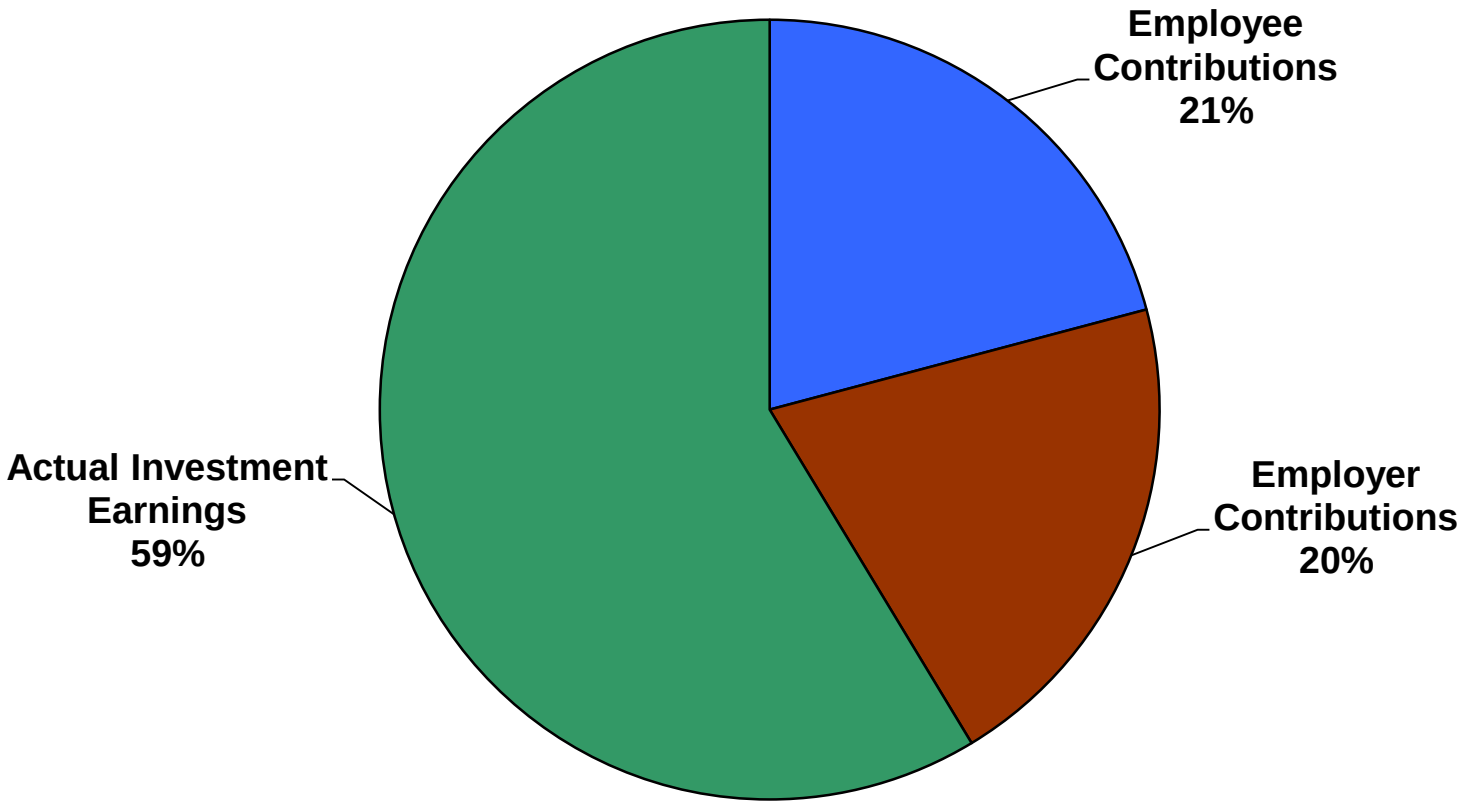
Annual TFFR Pension Benefits Paid



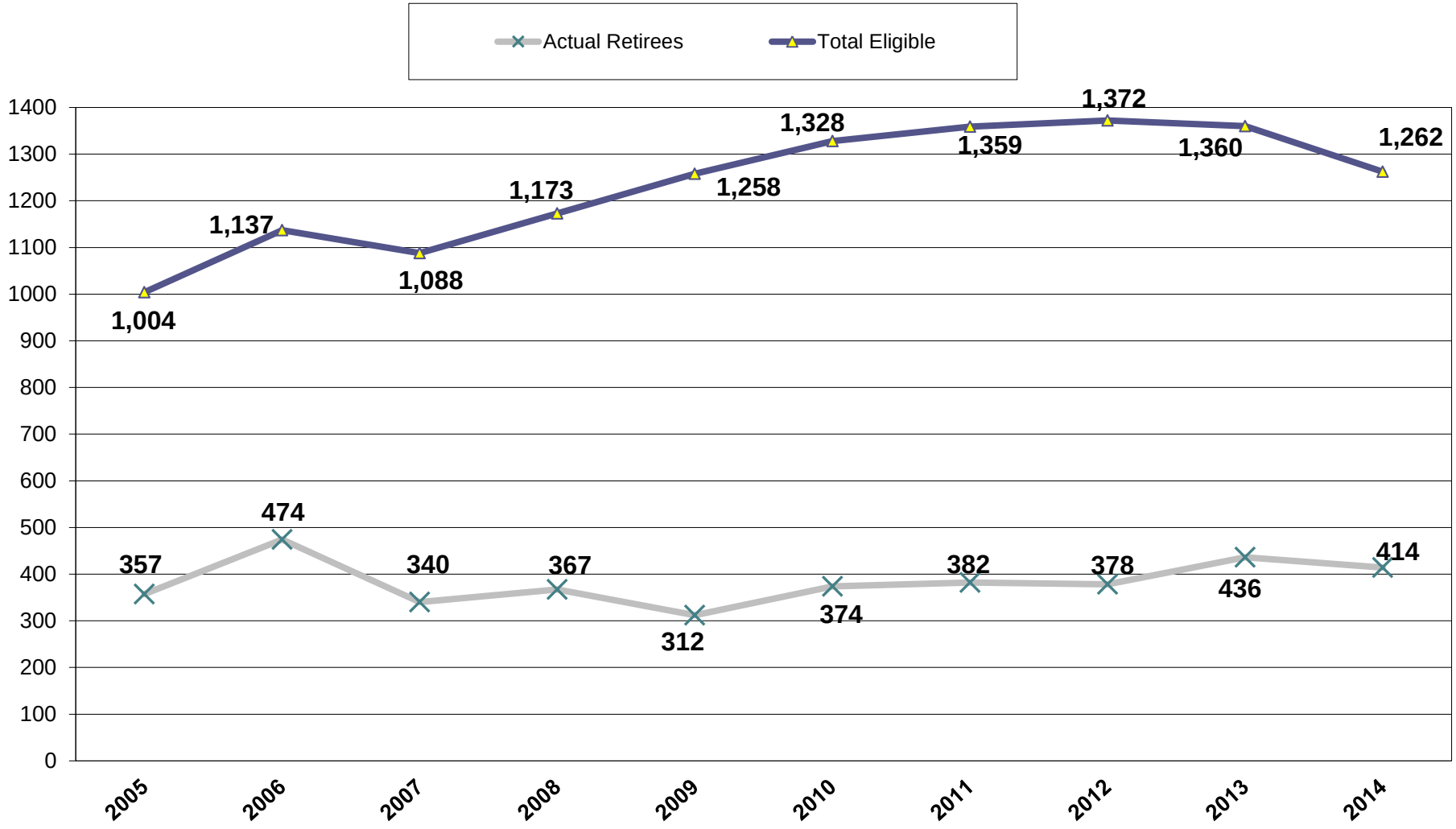
Employee/Employer Contributions Paid



Sources of TFFR Revenue FY 1990-2014



Actual New Retirees and Total Eligible



Summary Retirement Projections

Based on ratios of 30% and 40% of actual retirements to eligible retirements, approximately 3,400 to 3,700 active members are projected to retire in the next 10 years which averages about 370 per year.

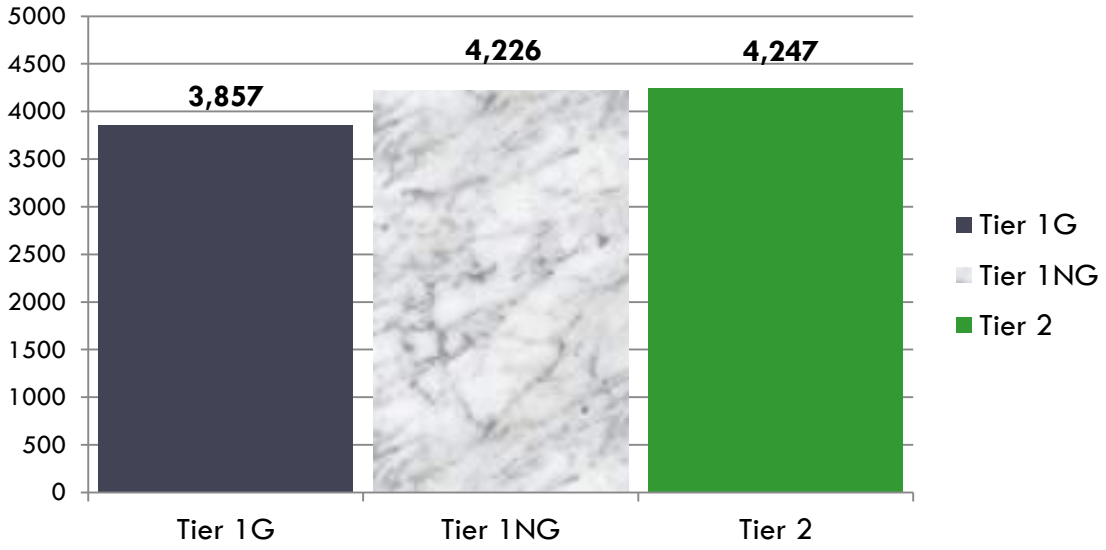
	Members	# Retire		Avg/Yr	
		30%	40%	30%	40%
Teachers and Special Teachers	9,980	3,085	3,383	309	338
Superintendents	134	89	95	9	10
Other Administrators	516	211	233	21	23
Total Active Members	10,630	3,385	3,711	339	371

Note: All retirement projections are estimates only, and based on January 2015 membership data

TFFR Plan Benefits

TFFR Membership Tiers

- **Tier 1- Members who have service credit prior to 7/1/08**
  - Grandfathered – Members who on 6/30/13 were within 10 years of retirement eligibility (age 55+ or Rule of 65+)
  - Non-grandfathered – Members who on 6/30/13 were more than 10 years away from retirement eligibility (less than Rule of 65).
- **Tier 2 – Members employed on or after 7/1/08**



2015

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
AND Rule	Rule of 85	Rule of 90	Rule of 90
OR 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 Final average salary (high salaries of career)	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
1997 – 2008	7.75%	7.75%	15.5%	--
7/1/08	8.25%	7.75%	16.0%	+0.5%
7/1/10	8.75%	7.75%	16.5%	+0.5%
7/1/12	10.75%	9.75%	20.5%	+4.0%
7/1/14	12.75%	11.75%	24.5%	+4.0%

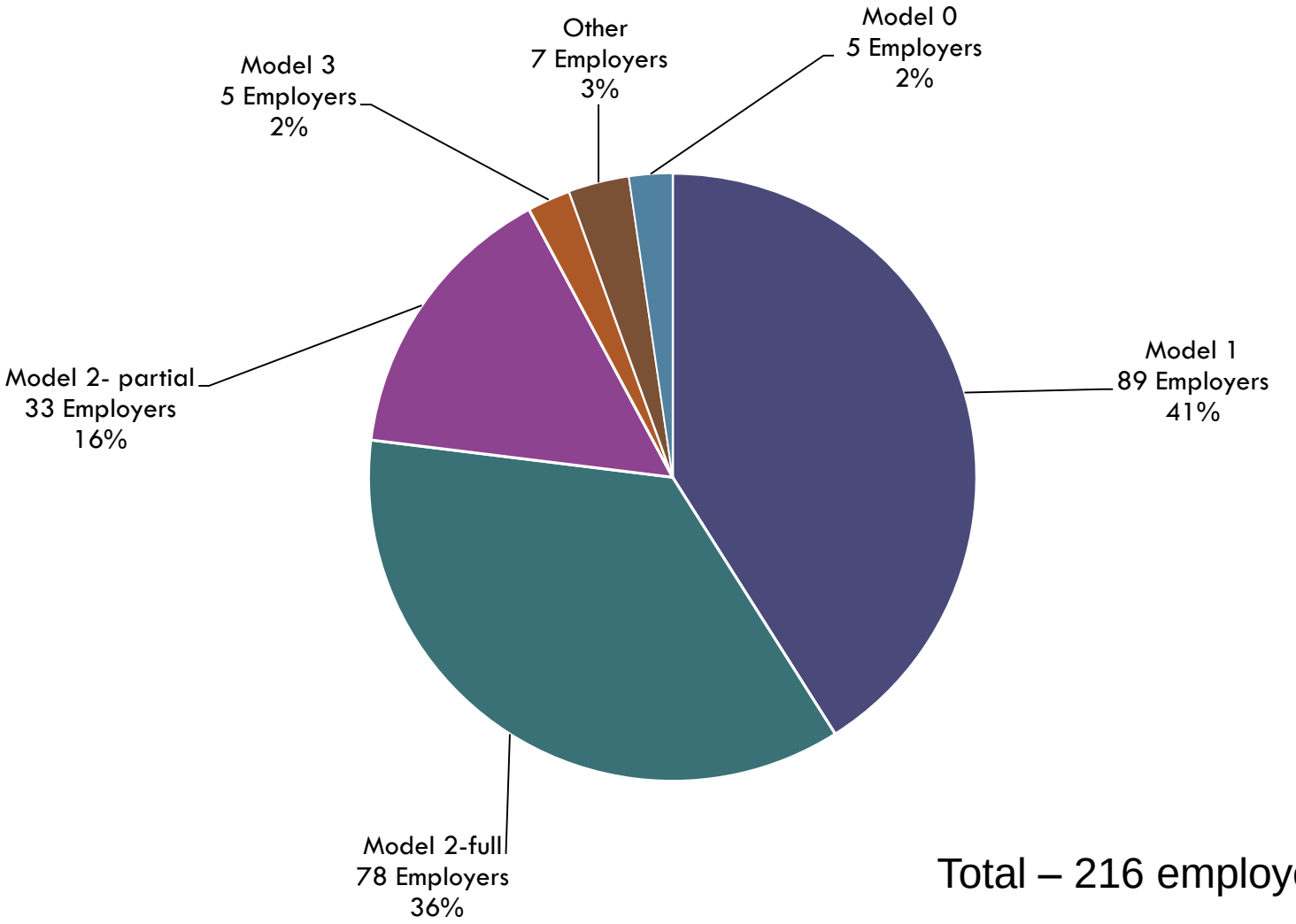
Note: Recent legislation increased contribution rates to improve TFFR funding. Increased rates will be in effect until TFFR reaches 100% funded ratio, then rates will be reduced to 7.75% each.

TFFR Employer Payment Plan (EPP) Models

Payment of member contributions on a tax deferred basis can be made by the employer 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 2014-15



Total – 216 employers

TFFR Investments

Asset Liability Study

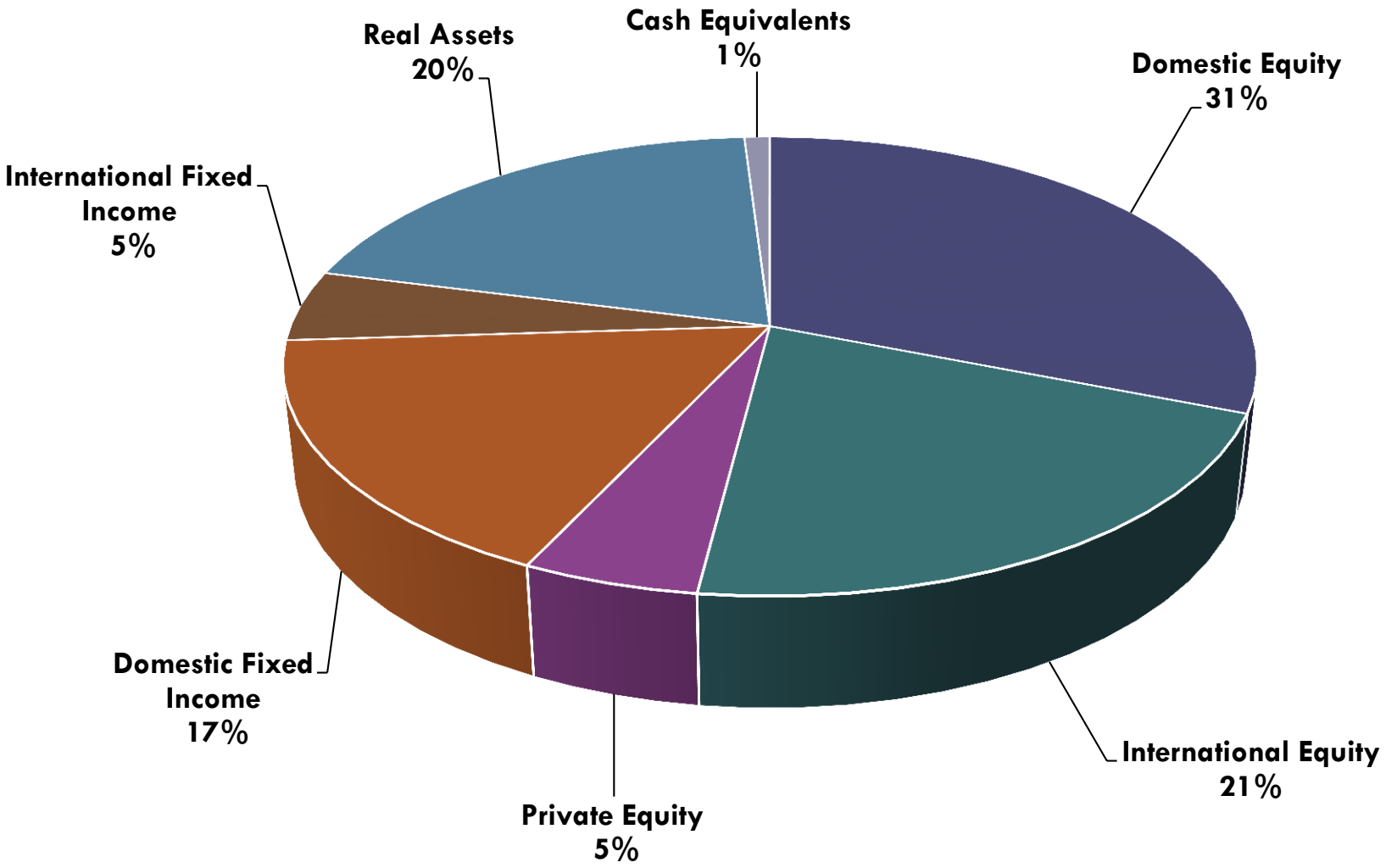
- Asset allocation and investment policy guidelines are determined by TFFR Board, with assistance from SIB Chief Investment Officer and investment consultants.

- Asset Liability study is conducted every 5 years to consider appropriate asset mix for funding TFFR pension liabilities. Most recent Study was completed in Fall 2011. Next one scheduled 2015-16.

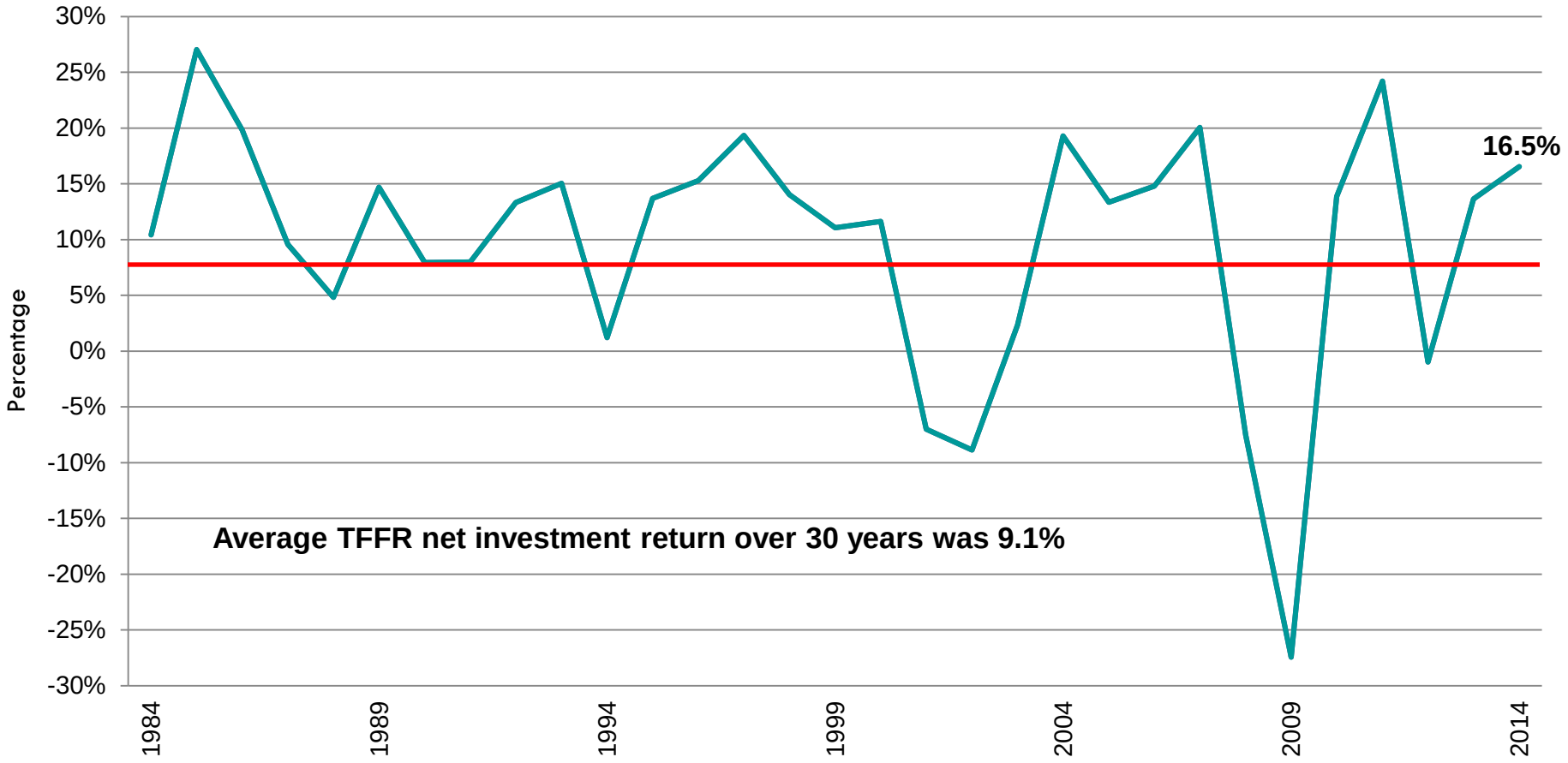
- TFFR's investment portfolio is divided into three basic categories, defined by their reactions to specific capital market factors:
  - Equity (growth and capital appreciation)
  - Fixed income (income, low risk, flight to quality, deflation)
  - Real assets (inflation, income, diversification)

- TFFR's long term investment return assumption is 8%.

TFFR Asset Allocation

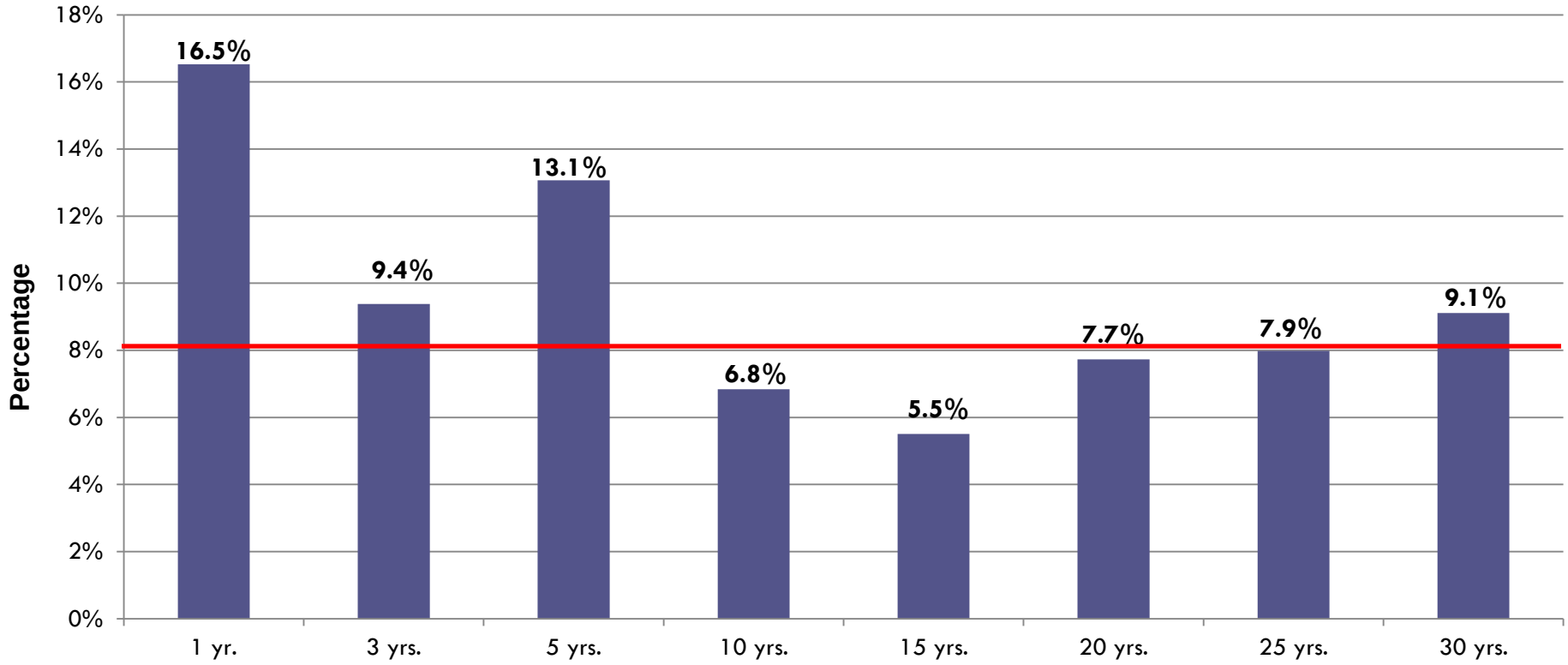


TFFR Net Investment Performance – Annual Fiscal Years Ended June 30, 1984-2014



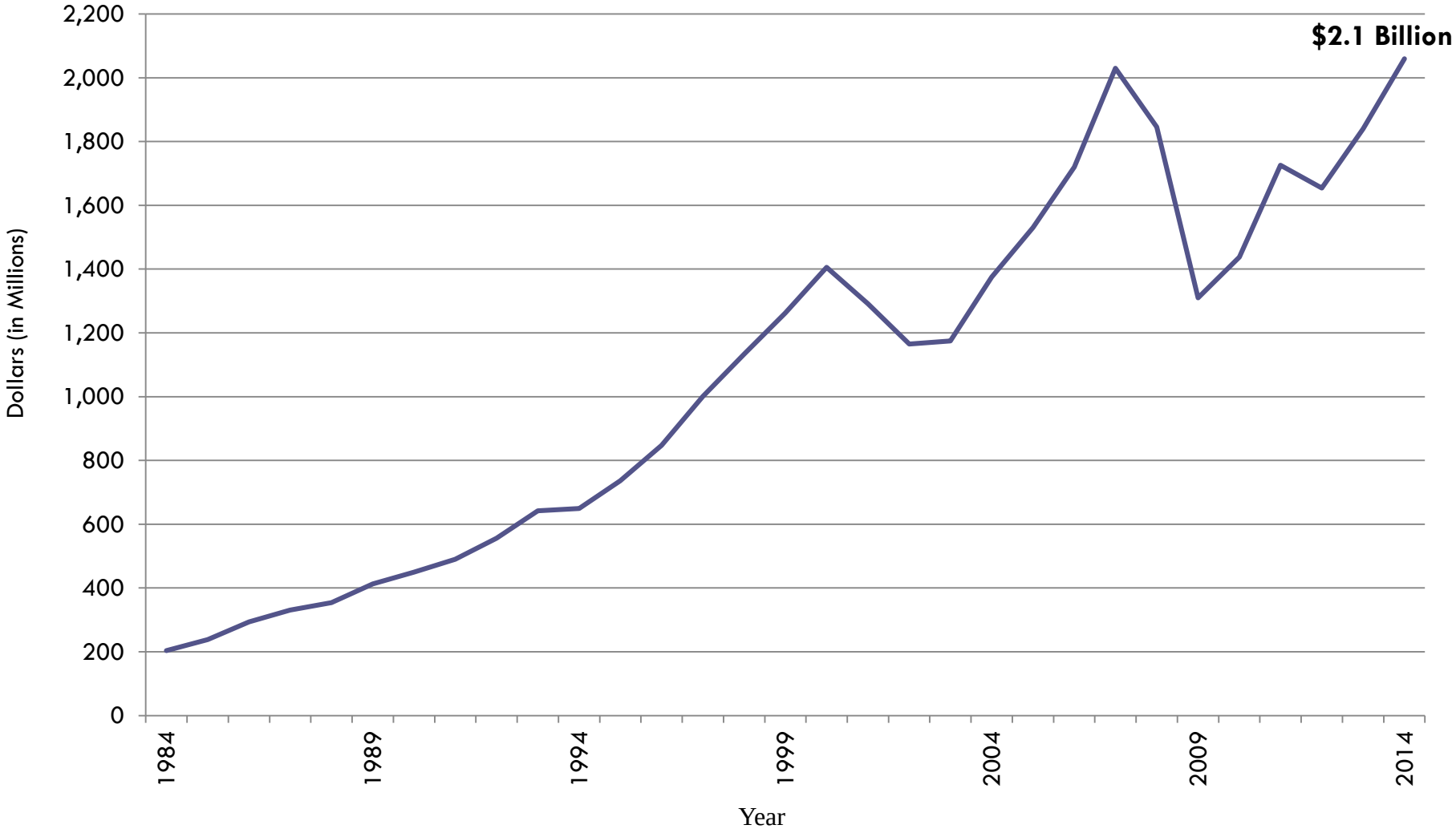
Note: The investment returns shown were calculated by the SIB investment consultant. This calculation uses daily time-weighted cash flows in compliance with Global Investment Performance Standards (GIPS). These returns differ from the returns calculated by the actuary. The actuary calculation uses a very simplified approach with annual income and valuation data obtained by the actuary at the end of each fiscal year.

TFFR Net Investment Performance – Average Fiscal Year Ended June 30, 2014



Note: The investment returns shown were calculated by the SIB investment consultant. This calculation uses daily time-weighted cash flows in compliance with Global Investment Performance Standards (GIPS). These returns differ from the returns calculated by the actuary. The actuary calculation uses a very simplified approach with annual income and valuation data obtained by the actuary at the end of each fiscal year.

Market Value of TFFR Assets
Fiscal Years Ended June 30, 1984 - 2014



TFFR Funding

Retirement Funding Equation

C + I = B + E

- Contributions + Investments = Benefits + Expenses
- Not just for today, but for the long term.

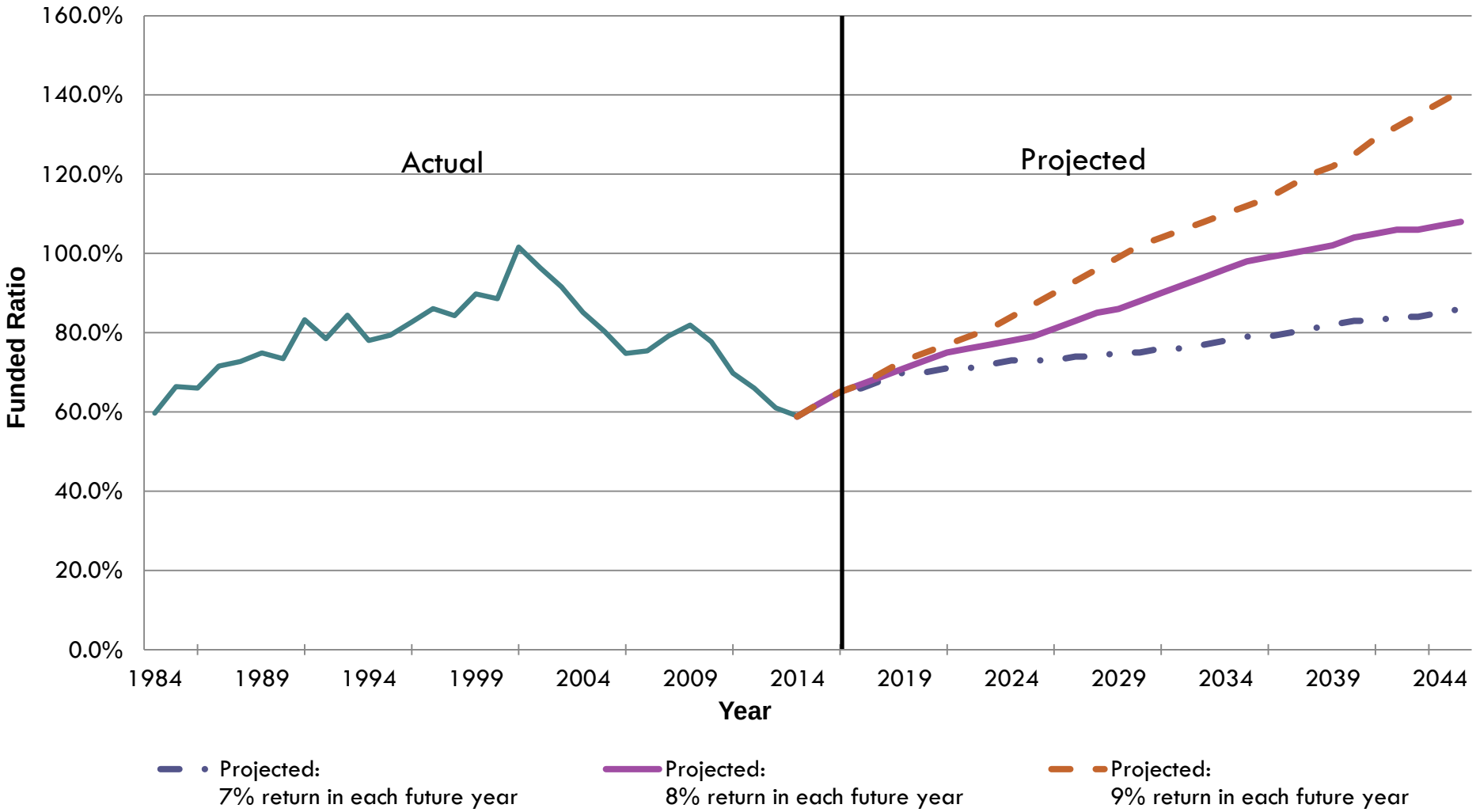
2014 Valuation Report Summary

Actuarial Accrued Liability	(AAL)	$3.14 billion
Actuarial Value of Assets	(AVA)	- 1.94 billion
Unfunded AAL	(UAAL)	$1.20 billion
AVA Funded Ratio		**62%**
Market Value of Assets (MVA)		$2.09 billion
MVA Funded Ratio		**67%**

TFFR Funding Improvement Expected

- **With the approved 2011 legislative changes, funding recovery is expected to occur gradually over time.**
  - The significant investment losses experienced in 2008-09 have now been smoothed into actuarial calculations.
  - Final phase of contribution increases began flowing into the plan effective 7/1/14.
- **Time is needed for the changes made to show positive funding results. It will be a long, slow process.**
  - Actuarial projections show it will likely take 20-30 years before TFFR reaches 80% - 100% funding levels, if the plan meets all actuarial assumptions, including the 8% investment return assumption.
  - If investment returns are greater than 8% over the long term and if TFFR reaches 100% funded level, employee and employer contribution rates will be reduced to 7.75% sooner than expected.
  - If investment returns are less than 8% over the long term, higher contribution rates will remain in effect, and funding progress will take longer.
  - While 2014 fiscal year was a very good year in the financial markets, the ongoing global market volatility make a long-term focus particularly important for pension plans like TFFR.

TFFR Funded Ratio (AVA) Actual and Projected (based on 2014 valuation)



New GASB Accounting Standards

New GASB Standards

- Governmental Accounting Standards Board (GASB) recently approved two new standards that will change the accounting and financial reporting of public employee pensions by state and local governments.
- Statement #67 provides for accounting with respect to governmental pension plans (NDTFFR).
  - Effective for plan year beginning 7/1/13 – 6/30/14

    (June 30, 2014 financial statements)
- Statement #68 establishes new accounting and financial reporting requirements for state and local governments (participating employers, school districts).
  - Effective for plan year beginning 7/1/14 – 6/30/15

    (June 30, 2015 financial statements)

GASB Objectives

- **Financial Reporting Focus**
  - GASB establishes accounting and financial reporting, not funding policies
  - Focus is on pension obligation, changes in obligation, and attribution of expense
- **Employer-Employee Exchange**
  - Employer incurs an obligation to its employees for pension benefits
  - Transaction is in context of a career-long relationship

New GASB Standards

- Funding/contribution reporting requirements will be different than accounting/financial reporting requirements.
- Net pension liability (NPL) will be placed in footnotes of TFFR financial statements AND the employer's (school district) balance sheet. This will add a large and unstable element to an employer's net financial position.
- Each employer (school district) must disclose in their financial statements, their proportionate share of:
  - Net Pension Liability (NPL) - total pension liability minus market value of assets, calculated using a specific formula
  - Pension Expense – change in NPL each year with certain deferrals
  - Deferred outflows and deferred inflows of resources related to pensions – difference between expected and actual demographic and investment experience
- Each employer must also include other required supplementary information and expanded note disclosures, including plan assumptions and methods.

New GASB Standards

- TFFR, PERS, and the State Auditor's Office have been working on a joint implementation and training plan with plan actuaries, auditors, and staff. Earlier this year we formed a working group of TFFR and PERS participating employers and auditors to assist in this effort, and received valuable feedback from them.
- We hosted a GASB 68 Employer and Auditor Training Session on December 11, 2014 in Bismarck for representatives of TFFR and PERS participating employers, auditors, and other interested stakeholders. Information was presented describing the new standards, timing of implementation, actuarial/financial information to be provided by the plans, sample template note disclosure, audit issues, and Q & A forum with TFFR, PERS, and State Auditor's Office representatives. The training materials and a video of the training session are available on the TFFR website.
- Other GASB resources and information for TFFR employers, including Frequently Asked Questions, are also available on the TFFR website . http://www.nd.gov/rio/TFFR/Employers/default.htm

Net Pension Liability – Employer Proportionate Share

- Actuary calculated the Net Pension Liability (NPL) for TFFR which is $1.05 billion as of 6/30/14.
- Proportionate share of NPL for each employer will be allocated based on total TFFR covered payroll for active members.
  - Total TFFR covered payroll for FY 14 was $580 million.
- Proportionate share of covered payroll for each school district ranges from 0.000687% to 10.894306%.
  - Largest 5 school districts range from 6% to 11% (43% of total)
  - Next 8 school districts range from 1% to 3% (15% of total)
  - Majority of school districts have less than 1% (42% of total)

Employer Specific GASB Information

- TFFR's actuary has also calculated GASB 68 information needed for employer's 2015 financial statements. This information will be audited by TFFR's external auditor.
- TFFR has developed a sample template note disclosure to assist employers incorporate the GASB 68 information into their financial statements.
- TFFR plan auditors are also testing the payroll and employee census data at the employer level. Onsite audit fieldwork is underway. An audit opinion on the GASB schedules should be available in February.

New GASB Standards

- **Each employer (school district) is responsible for implementing the new pension reporting requirements in GASB 68. School districts will need to work with their accounting, financial, and audit specialists for assistance. This is a MAJOR change from previous financial reporting requirements, although there have been NO fundamental changes to plan funding requirements.**

- Note: The liability illustrated on school district financial statements is projected to decrease over future years due to the contribution and benefit changes that are now in place.

- We will all need to work together to understand and implement these new financial reporting requirements for pension plans.

2015 Legislation

2015 Legislative Proposals

- **HB 1064,** submitted by the TFFR Board. Includes technical updates relating to Internal Revenue Code compliance. The changes have no financial effect on the plan.

  Status: House approved bill 90-3 on 1/19/15.

- **SB 2022** Retirement & Investment Office agency budget bill.

  Status: Senate Appropriations hearing on 1/14/15.

- Other bills being monitored for potential TFFR implications include:
  - HB 1329 - Adds 2 legislators to SIB
  - HB 1339 - Provides state income tax exclusion for government pensions
  - SB 2013 - DPI Budget
  - SB 2031 - School District Foundation Aid

2015 Legislative Proposals cont.

- Other PERS related bills being monitored include:
  - HB1080 - PERS funding improvement and contribution increases
  - SB2038 - Closes PERS DB plan and requires all new state employees to participate in PERS DC plan
  - SB2039 - Creates Public Employee Retirement Stabilization Fund, and transfers funds from Foundation Aid Stabilization Fund. Contingent upon passage of SCR 4003, and approval in June 2016 primary election.
  - SCR 4003 - Amends ND Constitution. Provides for the transfer of certain funds from Foundation Aid Stabilization Fund for the purpose of making low-interest loans for school construction projects, addressing existing or anticipated unfunded benefit obligations of state retirement funds, or other education-related purposes.

TFFR Information

TFFR website: www.nd.gov/rio

- Legislation
  - Links to ND Legislative website, bill drafts, actuarial analysis, testimony
- GASB Information
  - Links to GASB implementation guides, FAQs, GASB 68 report for employers, audit opinions, etc.
- Presentations
  - Presentations made to member and employer groups
- Publications and Reports
  - Newsletters, handbook, brochures
  - Actuarial and audit reports
- Contact Information
  - Phone: 701-328-9885 or 1-800-952-2970
  - Email: fkopp@nd.gov or sschumacher@nd.gov

NASRA Issue Brief:
State and Local Government Spending on Public Employee Retirement Systems

Updated February 2015

State and local government pension benefits are paid not from general operating revenues, but from trust funds to which public retirees and their employers contributed while they were working. On a nationwide basis, pension contributions made by state and local governments account for 3.9 percent of direct general spending (see Figure 1)[i]. Current pension spending levels, however, vary widely among states and are sufficient for some pension plans and insufficient for others.

In the wake of the 2008-09 market decline, nearly every state and many cities have taken steps to improve the financial condition of their retirement plans and to reduce costs[ii]. Although some lawmakers have considered closing existing pension plans to new hires, most determined that this would increase—rather than reduce—costs,[iii] particularly in the near-term. Instead, states and cities have made changes to the pension plan by adjusting employee and employer contribution levels, restructuring benefits, or both. Generally, adjustments to pension plans have been proportionate to the plan's funding condition and the degree of change needed.[iv]

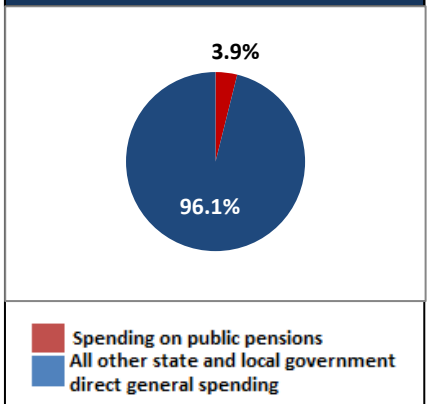
This update provides figures for public pension contributions as a percentage of state and local government direct general spending for FY 2012, and projects a rate of spending on pensions for FY 13.

Nationwide Spending on Public Pensions

Based on the most recent information provided by the U.S. Census Bureau, 3.9 percent of all state and local government spending is used to fund pension benefits for employees of state and local government. As shown in Figure 2, pension costs have remained within a narrow range over a 30-year period, declining from a high point of 5 percent to a low of 2.3 percent in FY02, and reaching 3.9 percent in FY12. State and local governments contributed, in aggregate, an estimated $109 billion to pension funds in FY13, a figure that is projected to equal 3.9 percent of projected state and local direct general spending for that year, as displayed in Figure 2[v].

Although pensions on average do not comprise a significant portion of state and local spending, as shown in Table 1, spending levels for states and political subdivisions do vary widely, from 1.44 percent to more than seven percent. Some municipalities have reported higher pension costs as a percentage of their budget. One study estimates that total required spending on pensions could consume as much as 13 percent of one state's budget,[vi] due mostly to past failures to adequately fund pension costs and assuming a relatively low five percent investment return. The chronic failure by some pension plan sponsors to pay required contributions results in greater future contributions to make up the difference.

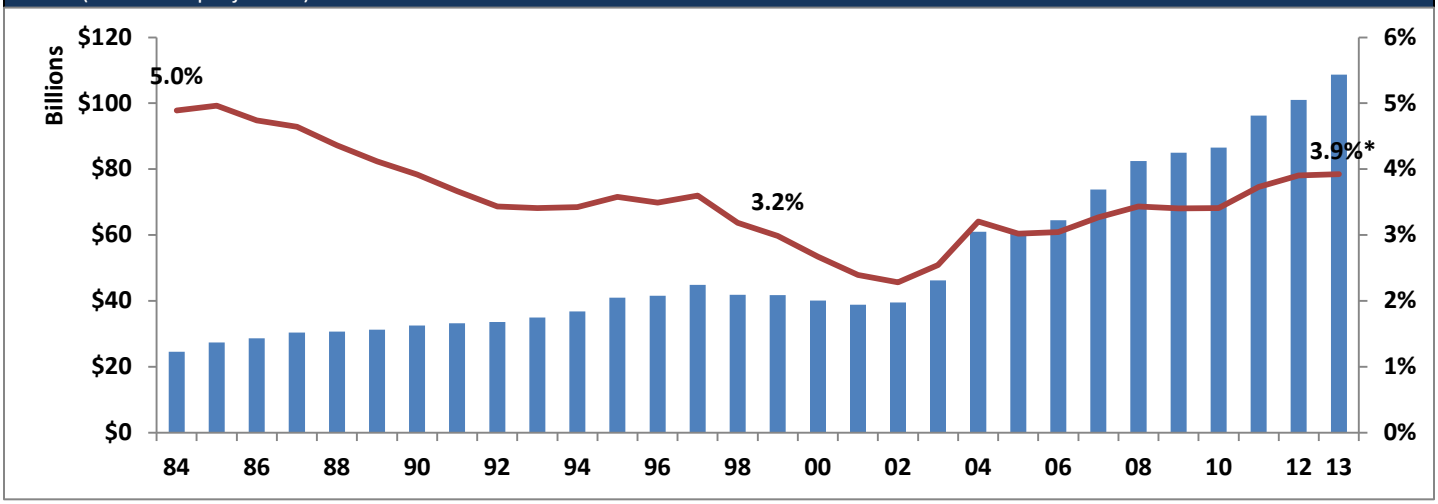
Figure 1: State and local spending on public pensions as percentage of total government direct general spending, 2012



Compiled by NASRA based on U.S. Census Bureau data

Most of the variation in pension spending levels among states is attributable to two factors: differences in benefit levels, and variations in the size of unfunded pension liabilities. As a percentage of total spending, pension costs for cities are higher than states by about 33 percent over the 30-year period spanning 1984-2013[vii]. This is likely due in part to the types of services delivered at the local level and the resulting larger share of municipal budgets that is committed to salaries.

Figure 2: State and local pension contributions, in dollars, and as a percentage of state and local direct general expenditures, 1984-2012 (with 2013 projection)



Compiled by NASRA based on U.S. Census Bureau data
**Projected, based on estimated state and local government spending from National Association of State Budget Officers (NASBO) and U.S. Census Bureau data*

Comparisons of local pension spending can, however, be difficult as the fiscal relationship between a state and its political subdivisions is unique with respect to revenue and spending structure and taxing authority, and varies widely. For example, funding responsibility for K-12 education budgets ranges from primarily a state duty to primarily a local responsibility. Likewise, revenue-sharing arrangements and the authority for local governments to tax and raise revenue also run a wide range. As with states, pension costs for municipalities can vary widely.

Cost and Financing Factors

Public pensions are financed through a combination of contributions from public employers (state and local agencies) and public employees, and the investment earnings on those contributions.[viii] Since 1984, investment earnings have accounted for 62 percent of all public pension revenue; employer contributions, 26 percent; and employee contributions, 12 percent.

Employee Contributions

Because nearly all public employees are required both to participate in the employer-sponsored retirement plan and to contribute toward the cost of their pension benefit—typically four to eight percent of pay—most state and local government retirement plans are, in fact, mandatory savings programs. In recent years, many states have increased rates of required employee contributions. On a national basis, in fiscal year 2013, employee contributions accounted for 29 percent of all public pension plan contributions, with employer contributions making up the remaining 71 percent (see *NASRA Issue Brief: Employee Contributions to Public Pension Funds*, February 2015).

Employer Contributions

A variety of state and local laws and policies guide governmental pension funding practices. Most require employers to contribute what is known as the Annual Required Contribution (ARC), which is the amount needed to finance benefits

accrued each year, plus the annual cost to amortize unfunded liabilities from past years, minus required employee contributions.

On a weighted basis, the average ARC paid in recent years has been around 84 percent. Beneath this average ARC experience lies diversity: approximately 60 percent of plans in the Public Fund Survey consistently receive 90 percent or more of their ARC.[ix] This means that although a majority of plans have been receiving their required funding, many plans have not been adequately funded, which will result in higher future costs.

Leading national public sector associations established a Pension Funding Task Force, which in 2013 released its report *Pension Funding: A Guide for Elected Officials* urging policymakers to follow recommended guidelines for an actuarially determined contribution to government retirement systems.

Social Security Coverage

Twenty-five to thirty percent of state and local governments and their employees make contributions to their retirement plan instead of to Social Security. This is the case for most to substantially all of the state and local government workforce in seven states, 40 percent of the nation's public school teachers, and a majority of firefighters and police officers. Pension benefits—and costs—for those who do not participate in Social Security are usually higher than for those who do participate, in order to compensate for the absence of Social Security benefits. This higher cost should be considered in the context of the 12.4 percent of payroll, or an estimated $31.2 billion annually,[x] these employers and employees would otherwise be paying into Social Security.

Investments and Other Parts of the Financing Equation

The largest portion of public pension funding comes from investment earnings, which illustrates the major role this revenue source plays in determining pension costs (see *NASRA Issue Brief: Public Pension Plan Investment Return Assumptions*, October 2014). Other factors that affect pension costs include expectations for wage and general inflation, rates of worker retirement and attrition, and rates of mortality. Expectations for these and other economic and actuarial events typically are based on long timeframes, such as 20 to 50 years.

In addition to the performance of pension fund investments, macro-economic and demographic events also affect the cost of the plan. These events include such changes as retirement rates, attrition and rates of hiring, and wage growth, which is affected by salary cuts and layoffs. Additionally, legislatures in nearly every state have made changes to pension benefits and/or financing structures, in some cases reducing plan costs and long-term obligations.

Conclusion

On average, retirement programs remain a relatively small part of state and local government spending, although required costs, benefit levels, funding levels, and funding adequacy vary widely. Over $240 billion is distributed annually from these trusts to retirees and their beneficiaries, which reaches virtually every city and town in the nation.[xi]

Changes to benefit levels and required employee contributions adopted by states and cities have been diverse, dependent in part on such factors as the legal authority to make changes to benefits or required employee contribution rates, and the plan's financial condition prior to the 2008-09 market decline. Generally, states and cities with a history of paying their required pension contributions are in better condition and have needed more minor adjustments to benefits or financing arrangements compared to those with a history of not adequately making their contributions.

Table 1: State and local government contributions to pensions as a percentage of all state and local government direct general spending, by state, 2012					
Alabama	2.87	*Louisiana*	5.25	Oklahoma	4.32
Alaska	4.19	*Maine*	2.45	Oregon[2]	4.43
Arizona	3.42	Maryland	3.99	Pennsylvania	2.65
Arkansas	3.59	*Massachusetts*	4.48	Rhode Island	5.55
California	5.27	Michigan	3.64	South Carolina	2.82
Colorado	2.86	Minnesota	2.00	South Dakota	1.81
Connecticut	5.32	Mississippi	3.32	Tennessee	2.95
Delaware	2.60	Missouri	3.94	*Texas*	2.15
District of Columbia	1.94	Montana	2.77	Utah	3.59
Florida	2.06	Nebraska	2.38	Vermont	1.53
Georgia	2.92	*Nevada* [1]	7.19	Virginia	3.40
Hawaii	4.45	New Hampshire	2.97	Washington	2.18
Idaho	2.67	New Jersey	2.81	West Virginia	5.08
Illinois	7.09	New Mexico	2.94	Wisconsin	1.67
Indiana	3.56	New York	6.52	Wyoming	1.78
Iowa	2.30	North Carolina	1.59	U. S. weighted avg.	3.87
Kansas	2.80	North Dakota	1.44	*Compiled by NASRA based on U.S. Census Bureau data*	
Kentucky	3.68	*Ohio*	3.70		

Percent-of-spending as of publication date. Figures are subject to periodic revisions by the U.S. Census Bureau. States where more than one-half of public employee payrolls are estimated to be outside of Social Security are italicized.

[1] In addition to being a non-Social Security state, one-half of Nevada PERS employers' contribution is attributable to a non-refundable pre-tax salary reduction to fund the employees' portion of the contribution.

[2] Contributions include an annual amount required to amortize the balance of employer side accounts

See also

National Governors Association, National Conference of State Legislatures, The Council of State Governments, National Association of Counties, National League of Cities, The U.S. Conference of Mayors, International City/County Management Association, National Council on Teacher Retirement, National Association of State Auditors, Comptrollers and Treasurers, Government Finance Officers Association, and National Association of State Retirement Administrators, "Pension Funding: A Guide for Elected Officials," 2013, http://www.nasra.org/files/JointPublications/PensionFundingGuide.pdf

Center for Retirement Research at Boston College, "The Impact of Public Pensions on State and Local Budgets," October 2010, http://crr.bc.edu/briefs/impact-of-public-pensions-on-state-and-local-budgets/

Center on Budget Priorities and Policies, "Misunderstandings Regarding State Debt, Pensions, and Retiree Health Costs Create Unnecessary Alarm," January 2011, http://www.cbpp.org/cms/index.cfm?fa=view&id=3372

National Association of State Retirement Administrators, Issue Brief: Public Pension Plan Investment Return Assumptions, Updated October 2014, http://www.nasra.org/returnassumptionsbrief

National Association of State Retirement Administrators, Issue Brief: Employee Contributions to Public Pension Funds, February 2015, http://nasra.org/contributionsbrief

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National Association of State Retirement Administrators, www.nasra.org

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[i] Prior published versions of this brief calculated pension spending by state and local governments as a percentage of total state and local spending; this brief reflects a revised methodology which substitutes direct general spending for total spending. Direct general expenditures represent all government spending excluding intergovernmental transfers. Included in this category are payments to current and retired employees, as well as government operations and capital outlays. Some state and local government spending is non-discretionary, and therefore not in competition for funds with other programs and services. Including non-discretionary spending would make the effect of pension spending appear smaller. In addition, some states and cities do not contribute the amount determined actuarially to adequately fund the plan.

[ii] Selected Approved Changes to State Public Pensions to Restore or Preserve Plan Sustainability, http://www.nasra.org/files/Compiled%20Resources/nasrasustainabilitychanges.pdf, (updated December 2014)

[iii] NASRA.org, "Costs of Switching from a DB to a DC Plan," http://www.nasra.org/plansdesignchange

[iv] Center for Retirement Research at Boston College, "State and Local Pension Costs: Pre-Crisis, Post-Crisis, and Post-Reform," February 2013

[v] Projected spending for 2013 derived from actual state expenditures as reported by the National Association of State Budget Officers in the 2012-2014 State Expenditure Report (https://www.nasbo.org/sites/default/files/State%20Expenditure%20Report%20%28Fiscal%202012-2014%29S.pdf) p. 8 and projected increase in local government direct general spending from 2011-2012, as provided by the U.S. Census Bureau http://www.census.gov/govs/local/

[vi] Center for Retirement Research at Boston College, "The Impact of Public Pensions on State & Local Budgets," supra

[vii] Author's calculations using public pension and state and local government finance data provided by the U.S. Census Bureau

[viii] U.S. Census Bureau, http://www.census.gov/govs/retire/ - Table 2a. Revenues of State and Local Public Employee Retirement Systems by State and Level of Government, Fiscal Year 2012-2013

[ix] Public Fund Survey, http://www.publicfundsurvey.org/

[x] Author's calculation based on 30 percent of state and local government employees not participating in Social Security

[xi] U.S. Census Bureau, http://www.census.gov/gos/retire/ - Table 3a. Expenditures of State and Local Public Employee Retirement Systems ; see also "Economic Effects of Public Pensions," http://www.nasra.org/economiceffects

NASRA Issue Brief:
Employee Contributions to Public Pension Plans

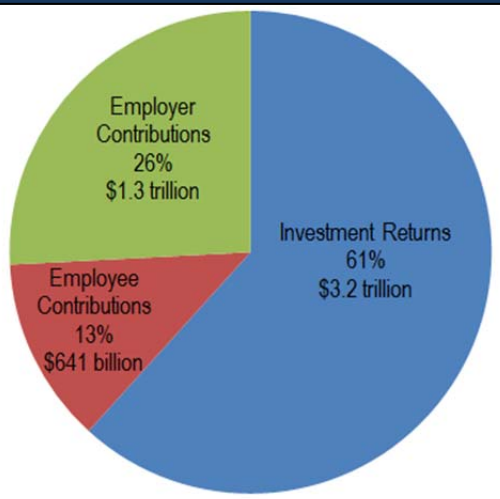
February 2015

Unlike in the private sector, nearly all employees of state and local government are required to share in the cost of their retirement benefit. Employee contributions typically are 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), by providing a consistent and predictable stream of revenue to public pension funds, contributions from employees fill a vital role in financing pension benefits.[i] 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, both participation in a public pension plan and contributing toward the cost of the pension are mandatory terms of employment. Requiring employees to contribute distributes 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 the design of the plan.[ii]

Figure 1: Public pension sources of revenue, 1984-2013



Source: Compiled by NASRA based on U.S. Census Bureau data

The prevailing model for employees to contribute to their pension plan is for state and local governments to collect contributions as a 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 contribution rates typically are between four and eight percent of pay, but are outside these levels for some plans. In some cases, required employee contributions are subject to change depending on the condition of the plan and other factors. In some plans, the employee contribution is actually paid by the employer in lieu of a negotiated salary increase or other fiscal offset.

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 both than the typical benefit and the required contribution for those who do participate in Social Security. Appendix A identifies whether or not most plan members participate in Social Security.

Trends in Employee Contributions

Many states in recent years have made changes requiring employees to contribute more toward their retirement benefits: since 2009, more than 35 states (including Puerto Rico) have increased required employee contribution rates (see Figure 2). Appendix A lists employee contribution requirements for state plans in the Public Fund Survey.

New Contributions

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

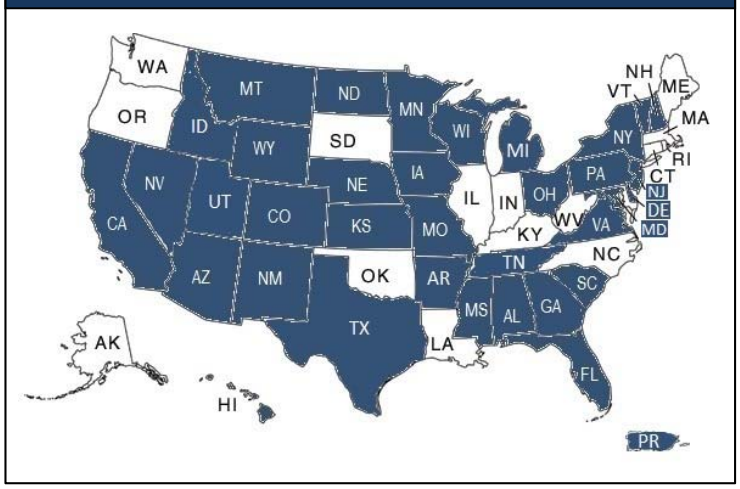
Variable Contributions

Pennsylvania 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. Changes approved in **California** require many workers to pay one-half of the normal cost of the benefit, which can result in a variable contribution rate. And the **Utah** plan affecting new hires requires employees to contribute the full cost of the benefit above 10 percent of pay, which could become variable.

Increased Contributions for Current Plan Participants

States such as **New Mexico** 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.

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



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** created a new cash balance plan (effective 1/1/15) and **Tennessee** in 2013 created a new combination defined benefit-defined contribution plan, for newly-hired workers in both cases. Some employees in other states, including **Georgia**, Indiana, **Nebraska, Oregon, Texas**, and Virginia already participate in hybrid plans, which distribute a greater share of risk to the employee.[iii]

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. A 2012 ruling in **Arizona** found that legislative efforts to increase contributions on existing workers are a violation of the state constitution. 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 Hampshire** and **New Mexico**).

Conclusion

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

Many employees also are being required to contribute more toward the cost of their retirement benefit. 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 cost of the employee's benefit.

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

See Also

Information is available on public pension contributions at

- Contributions @NASRA.org
- Pension Reform @NASRA.org
- Contribution Rates and Funding Issues @NASRA.org
- Public Fund Survey Summary of Findings for FY 2013, NASRA

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National Association of State Retirement Administrators, www.nasra.org

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[i] NASRA Issue Brief: Public Pension Plan Investment Return Assumptions (October 2014)
[ii] NASRA Issue Brief:: Shared Risk in Public Retirement Systems (June 2014)
[iii] NASRA Issue Brief: State Hybrid Retirement Plans, December 2013

Appendix A: Employee contribution rates for statewide plans

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	6.0% to 7.5% depending on date of hire; state police contribute 10.0%; other law enforcement officers, correctional officers, and firefighters contribute 7.0% to 8.5% depending on date of hire	Yes
AL	Alabama Teachers	6.0% to 7.5%, depending on date of hire	Yes
AR	Arkansas PERS	5.0% for those hired since 7/1/05	Yes
AR	Arkansas Teachers	Most teachers contribute 6.0%; non-contributory for some hired before 7/1/99	Yes
AZ	Arizona Public Safety Personnel	11.05%, rising to 11.65% on 7/1/15	Yes
AZ	Arizona SRS	11.48%	Yes
CA	California PERF	Most state employees contribute 8.0%; state safety, firefighters, and police contribute 9% to 11% depending on the benefits offered; school employees contribute 7.0%; most local agency miscellaneous, firefighters and police officers contribute between 7% and 9% depending on the benefits offered. Members hired since 1/1/13 contribute between 6.0% and 12.0%, depending on the employee classification and benefits offered.	Both
CA	California Teachers	For members first hired on or before 12/31/12, 8.15%, rising gradually to 10.25% in FY 2016–17. For members first hired on or after 1/1/13, 8.15%, rising gradually to 9.205% in FY 2016–17 (assuming no change in the normal cost.)	No
CO	Colorado Affiliated Local	Varies by plan; most employees contribute between 5% and 10% of pay	No
CO	Colorado Fire & Police Statewide	8.5%, rising by 0.5% annually until reaching 12.0% in 2022. This increase was approved by employee members via a 2014 election.	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%, plus 1.25% for retiree health care benefits	No

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
DC	DC Police & Fire	8.0%	No
DC	DC Teachers	8.0%	No
DE	Delaware State Employees	3.0% of pay above $6,000; employees hired since 1/1/12 pay 5.0% of pay above $6,000	Yes
FL	Florida RS	3.0%	Yes
GA	Georgia ERS	1.25% to the DB plan. Workers hired since 2009 participate in a hybrid plan. The default employee contribution to the DC component of the hybrid plan for those hired from 2009 until 6/30/14 is 1.0%, and 5.0% for those hired since 7/1/14. All hybrid plan participants may increase or decrease their level of contribution, including to zero.	Yes
GA	Georgia Teachers	6.0%	Yes
HI	Hawaii ERS	7.8% for general employees and teachers; 12.2% for public safety officers; those hired after 6/30/12 pay 9.8% and 14.2%, respectively	Yes
IA	Iowa PERS	5.95% for regular employees; 6.76% for protection occupations; 9.88% for sheriffs. These rates are in effect from 7/1/13-6/30/15. The IPERS board has authority to adjust rates up to one percent in a given year.	Yes
ID	Idaho PERS	6.79% in FY14, 7.34% in FY15, 8.19% in FY16; 8.36% for public safety personnel, rising to 10.04% in FY16	Yes
IL	Illinois Municipal	3.75% for general employees; 6.75% for law enforcement personnel. All members contribute an additional 0.75% for survivor's pension, for total contribution rates of 4.50% and 7.50%, respectively	Yes
IL	Illinois SERS	3.5% for those covered by Social Security, plus 0.5% for survivor's pension benefit, 7.0% for those not covered, plus 1.0% for survivor's pension benefit; public safety members contribute 8.5%	Yes
IL	Illinois Teachers	9.4%, allocated as follows: 7.5% for retirement; 0.5% for post-retirement increases; 1% for death benefits; and 0.4% to help cover the cost of Early Retirement Option (ERO), which is refundable if the member does not retire using ERO or if the ERO program is terminated	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 of benefit level; for cash balance participants, who are those hired since 1/1/15, 6.0%	Yes

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
KY	Kentucky County	5.0%, and 8.0% for public safety workers; those hired since 9/1/08 must contribute an additional 1.0% for retiree health care	Yes
KY	Kentucky ERS	5.0%, and 8.0% for public safety workers; those hired since 9/1/08 must contribute an additional 1.0% for retiree health care	Yes
KY	Kentucky Teachers	Non-university members contribute 11.355% (increasing to 12.855% in 2015-16); University members contribute 7.16% (increasing to 8.185% in 2015-16)	No
LA	Louisiana Parochial Employees	9.5% for members covered by Social Security; 3.0% for members not covered by Social Security	No, for approximately 85% of members
LA	Louisiana SERS	8.0% for regular employees; hazardous duty members contribute 9.5%	No
LA	Louisiana Teachers	8.0%	No
MA	Massachusetts SERS	5% - 9% of annual compensation depending on date of membership. For those whose membership began after 1/1/79, an additional 2% of any compensation above $30,000. State police contribute 12%.	No
MA	Massachusetts Teachers	5% to 11%, depending on member's date of entry; those hired after June 30, 2001 and participants in Retirement Plus benefit tier pay 11.0%; average rate is 10.0%.	No
MD	Maryland PERS	7.0%	Yes
MD	Maryland Teachers	7.0%	Yes
ME	Maine Local	3.5% to 8.5%, rising 0.5% in FY 16 and FY 17, until reaching 4.5% to 9.5%	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 20%, depending on employer election	Both; varies by plan
MI	Michigan Public Schools	Employees hired since 7/1/10 choose between a hybrid plan with a graded contribution structure (3% of first $5,000, 3.6% of next $10,000, and 6.4% over $15,000) for the DB component and a zero to 2.0% optional contribution to the DC component (employees may contribute more, but receive only a 1:2 employer match on the first 2%), or a DC plan with a zero to 6.0% optional contribution (employees may contribute more, but are matched only 1:2 on the first 6%). Active DB members hired prior to 7/1/10 contribute based on their designated plan type, ranging from zero to 7.0%.	Yes
MI	Michigan SERS	Employees hired since 1997 are enrolled in a DC plan with an optional contribution rate of zero to 3.0%; (active DB plan members contribute 4%)	Yes

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
MN	Minnesota PERA	6.5%; 10.8% for police and fire	Yes (except police and fire)
MN	Minnesota State Employees	5.5%; 9.1% for correctional officers	Yes
MN	Minnesota Teachers	7.5%	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
MS	Mississippi PERS	9.0%; Highway Patrol Officers contribute 7.25%	Yes
MT	Montana PERS	7.90%	Yes
MT	Montana Teachers	7.15%; those hired since 7/1/13 contribute 8.15%, which can be increased by the board by up to 1.0% based on designated triggers	Yes
NC	North Carolina Local Government	6.0%	Yes
NC	North Carolina Teachers and State Employees	6.0%	Yes
ND	North Dakota PERS	7.0%	Yes
ND	North Dakota Teachers	11.75%	Yes
NE	Nebraska County	4.5%	Yes
NE	Nebraska Schools	9.78%	Yes
NE	Nebraska State	4.8%	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	6.78%, rising gradually to 7.50% by 2019	Yes
NJ	New Jersey Police & Fire	10.0%	Yes
NJ	New Jersey Teachers	6.78%, rising gradually to 7.50% by 2019	Yes
NM	New Mexico PERA	8.92% for state general members; rates vary for other groups, including public safety officers	Yes

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
NM	New Mexico Teachers	7.9% for those with a salary of $20,000 or less; 10.7% for those with a salary above $20,000	Yes
NV	Nevada Police Officer and Firefighter	20.43%	No
NV	Nevada Regular Employees	14.43%	No
NY	New York State Teachers	Those hired before 1/1/10 contribute 3.0% if <10 years of service, 0% if 10+ years of service; those hired on or after 1/1/10 but before 4/1/12 contribute 3.5%; those hired on or after 4/1/12 contribute 3.0% to 6.0% depending on date of hire and salary	Yes
NY	NY State & Local ERS	Those hired before 1/1/10 contribute 3.0% if <10 years of service, 0% if 10+ years of service; Those hired on or after 1/1/10 but before 4/1/12 contribute 3.5%; Those hired on or after 4/1/12 contribute 3.0% to 6.0% depending on date of hire and salary	Yes
NY	NY State & Local Police & Fire	Those hired between 7/1/09 through 1/8/10 contribute 3.0%; Those hired since 1/9/10 contribute 3%-6% based on annual salary for most participants	Yes
OH	Ohio PERS	10% for general members; public safety division members contribute 12% and law enforcement members contribute 13%	No
OH	Ohio Police & Fire	11.50%; rising to 12.25% on 7/1/15	No
OH	Ohio School Employees	10.0%	No
OH	Ohio Teachers	12.0%; rising by 1% annually until reaching 14.0% on 7/1/16	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	Effective 1/1/04, non-contributory for the DB plan for all employees except Judges; 6.0% for individual accounts, which is the defined contribution component of the hybrid plan. For Judges only, employee contribution to the DB plan is 7.0%.	Yes
PA	Pennsylvania School Employees	Between 7.5% and 12.3%, depending on date of hire and plan selection. Rates for participants hired since 7/1/11 are subject to a limited graduating scale (200 bps) based on investment performance and the plan's funding level	Yes
PA	Pennsylvania State ERS	Between 6.25% and 9.3%, depending on date of hire and plan selection. Rates for those hired since 1/1/11 are subject to a limited graduating scale based on investment performance and the plan's funding level	Yes (except state police officers)

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
PR	Puerto Rico Government Employees	10% (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	9.0%	No
RI	Rhode Island ERS	State employees and teachers contribute 3.75% to the DB plan plus 5% to the DC plan; teachers who do not participate in Social Security contribute 7% to the DC plan (approximately one-half of teachers do not participate in Social Security)	Yes
RI	Rhode Island Municipal	1.0 to 2.0% for general employees; 7.0% to 10.0% 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	8.0%	Yes
SC	South Carolina RS	8.0%	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%; Newly hired local government employees of employers that have selected hybrid plan contribute 5% to the DB plan and 2% to the DC plan; participants may opt out of DC plan contributions.	Yes
TN	TN State and Teachers	Non-contributory for most state and higher education employees; 5% for teachers. Employees hired since 7/1/14 participate in a hybrid plan with mandatory contribution rates of 5% to the DB plan and 2% to the DC plan; participants may opt out of DC plan contributions.	Yes
TX	Texas County & District	Employers set the employee contribution rate in a range from 4.0% to 7.0%	Both; varies by plan
TX	Texas ERS	6.9%, rising to 7.5% in FY 17 and thereafter	Yes
TX	Texas LECOS	LECOS is a supplementary plan to the Texas ERS; participants contribute 0.5% plus the ERS contribution.	Yes
TX	Texas Municipal	5%, 6%, or 7%, depending on ER election	Both; varies by plan
TX	Texas Teachers	6.7%, rising to 7.7% in FY 17 and thereafter	No
UT	Utah Noncontributory	Non-contributory for employees hired before 7/1/11; Employees hired after that date may elect participate in a hybrid plan or a DC plan. Employee contributions in the hybrid plan are required when the costs of the DB portion of the plan exceed 10% (12% for public safety). DC plan contributions are optional.	Yes

Appendix A: Employee contribution rates for statewide plans

State	Plan	Employee Contribution Rate (Percent of Pay)	Social Security Coverage
VA	Virginia Retirement System	5.0% for participants other than judges who were first appointed prior to 7/1/10; employees hired since 1/1/14 participate in a hybrid plan with mandatory contributions of 4% to the DB plan and 1% to the DC plan.	Yes
VT	Vermont State Employees	6.40% through 6/30/16 (rate is lowered to 5% if plan funding is 100% before 6/30/16)	Yes
VT	Vermont Teachers	5.0%	Yes
WA	Washington LEOFF Plan 1	0%	Yes
WA	Washington LEOFF Plan 2	8.41%	Yes
WA	Washington PERS 1	6.0%	Yes
WA	Washington PERS 2/3	4.92%; Plan 3 members contribute only to their defined contribution plan at between 5% and 15%	Yes
WA	Washington School Employees Plan 2/3	4.64% 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	4.96% for Plan 2 members; Plan 3 members contribute only to their defined contribution plan at between 5% and 15%	Yes
WA	Washington Public Safety Employees Plan	6.36%	Yes
WI	Wisconsin Retirement System	6.8% for general employees, teachers, and public safety personnel	Yes
WV	West Virginia PERS	4.50%	Yes
WV	West Virginia Teachers	6.0%	Yes
WY	Wyoming Public Employees	7.5%; law enforcement personnel contribute 8.6%	Yes

Center for State & Local Government Excellence

SUCCESS STRATEGIES

for Well-Funded Pension Plans

February 2015

Why are some pension plans better funded than others? While some plans are more than 100 percent advance-funded, the average funded ratio of the largest 150 plans in 2012 was 72 percent, according to our 2014 issue brief, *The Funding of State and Local Pensions: 2013-2017*. http://slge.org/publications/the-funding-of-state-and-local-pensions-2013-2017

The Center for State and Local Government Excellence examined four defined benefit pension systems that have a long tradition of being well-funded: Delaware Public Employees' Retirement System, Illinois Municipal Retirement Fund, Iowa Public Employees' Retirement System, and North Carolina Retirement Systems.

While each pension plan has a unique history, there are certain characteristics common to all five plans, particularly the employer's commitment to fund the annual required contribution. The systems have all lowered their annual investment assumption to 7.5 percent or less in recent years and have adjusted employer and employee contributions as needed to meet funding requirements.

Even as the public focuses on the new accounting standards issued by the Governmental Accounting Standards Board, the most important issue for taxpayers, employees, and employers alike is that there is a clear plan to fund the government's pension obligations. In 2013, 11 national associations issued *Pension Funding: A Guide for Elected Officials."* http://slge.org/publications/pension-funding-a-guide-for-elected-officials

The *Guide* stresses the importance of basing a government's pension funding policy on an actuarially determined contribution, being disciplined about making required contributions, and clearly reporting how and when pension plans will be funded.

These case studies illustrate how those principles have been applied and underscore the importance of fiscally responsible solutions that provide retirement security for public workers.

For more research and information about promising benefit and compensation practices, pension funding, and workforce trends and issues, visit slge.org.

Elizabeth K. Kellar

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Center for State and Local Government Excellence

Center for State & Local Government Excellence

DELAWARE

Public Employees' Retirement System

2015

The Plan

The Delaware Public Employees' Retirement System (DPERS) administers retirement benefits for nearly all public employees in the state. Today, DPERS administers nine different pension plans covering 72,600 state and local employees, including 43,061 contributing members, 26,180 retired members, and 3,359 inactive vested members. It has net assets of $8.1 billion restricted for pension benefits.[1]

Commitment to Funding

DPERS has been well funded throughout its 44-year history, driven by full funding of the state's annual required contribution (ARC) and an investment philosophy that focuses on controlling downside risks. Funding for the plan comes from a combination of investment returns (80 percent in fiscal year 2014), employer contributions (15 percent in fiscal year 2014), and employee contributions (3.7 percent in fiscal year 2014).[2]

Challenges

- Continuing to increase funded ratio of assets to liabilities following stock market losses in 2008 and 2009.

Changes to Plan Design

Bipartisan legislation signed into law in May 2011 made adjustments to the state pension plan that were designed to reduce the cost of funding pension and health benefits for future state and local employees covered by DPERS. The law made three changes to the plan for employees hired after January 1, 2012:

1. Increased the employee contribution from 3 percent to 6 percent of salary over $6,000;
2. Increased the normal retirement age from 62 with five years of service or 60 with 15 years of service to a new normal retirement age of 65 with 10 years of service or 60 with 20 years of service; and
3. Increased the vesting period from five years to 10 years of service.[3]

Strategies for Success

Following four years of improved investment returns and adjustments to the benefits structure going forward, pension officials have reaffirmed the strategies for success that have guided the plan since its creation:

- Sustained commitment to fully funding the annual required contribution in good and bad financial times.
- Ad-hoc cost-of-living adjustment (COLA) increases that are not embedded in the pension statute are considered annually by the legislature based on fund performance, and are funded over five years when granted. (Employees have received two cost-of-living adjustments recently – 2 percent in July 2011 and 1 percent in January 2012.)
- A continuing partnership between the executive and legislative branches on pension issues.
- A generally good understanding of pension

Funded Ratios for the Delaware Public Employees' Retirement System

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
101.6	101.7	103.7	103.1	98.8	96.0	94.0	91.5	91.1	95.8

Sources: DPERS Forty-Third Comprehensive Annual Financial Report

issues in the General Assembly, supplemented by regular outreach to new legislators to increase understanding of issues, roles, responsibilities, and challenges.[4]

More

- The Board of Pension Trustees adopts the new annual required contribution (ARC) in October for the new budget cycle based on the annual actuarial valuation.
- The director of the state Office of Management and Budget is an ex-officio member of the Board of Pension Trustees, which ensures a close connection between pension funding requirements and the state budget process.[5]
- Assuming the plan earns 7.5 percent on its invested assets, the state contribution is projected to decrease gradually over the next 10 years.[6]
- Pension officials credit the recovery from the 2008-2009 recession, in part due to a solid and consistent investment strategy that does not change when markets are volatile. No additional changes in plan policies or employee benefits are anticipated in the near future.[7]

Endnotes

1 Delaware Public Employees' Retirement System, Forty-Third Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014, pages 27 and 29.

2 Author's calculation from Forty-Third Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014, page 22.

3 DPERS Annual Valuation Report as of June 30, 2013, pages 47-49 and interview with David C. Craik, State Pension Administrator, January 17, 2014.

4 Interview with David C. Craik, January 17, 2014.

5 Ibid.

6 Delaware State Pension Plan, Actuarial Valuation as of June 30, 2013, page 4.

7 Interview with David C. Craik, January 17, 2014.

Center for State & Local Government Excellence

ILLINOIS
Municipal Retirement Fund
2015

The Plan

The Illinois Municipal Retirement Fund (IMRF) is an agent, multiple-employer defined benefit pension plan which covers 2,977 local government and public school district employers. It has 173,826 contributing active members, 107,732 current benefit recipients, and 12,717 inactive vested members. Today, it manages nearly $28 billion in assets.[1]

Commitment to Funding

IMRF is committed to being 100 percent funded and has a strong track record in moving toward that formally-adopted strategic goal. Funding for the plan comes from a combination of investment income (81 percent in 2013), employer contributions (14 percent in 2013), and employee contributions (5 percent in 2013).[2]

Challenges

- Implementing the new Governmental Accounting Standards Board (GASB) reporting standards for pensions and ensuring public understanding of the new accounting data regarding IMRF's financial status; and
- Managing any political changes and actions related to funding of other pension plans in the state and their impact on IMRF.[3]

Changes to Plan Design

In April 2010, the Governor signed a bill that changed the benefit packages for nearly all the state's pension programs, including IMRF. The changes, which apply to employees who enroll in IMRF from January 1, 2011, forward included:

- Lengthening the vesting period from eight to 10 years;
- Increasing the normal retirement age for full pension benefits from 60 to 67 years with 10 years of service;
- Increasing the earliest retirement age for a reduced pension from 55 to 62 years with 10 years of service;
- Increasing the number of years used to calculate the final average salary from four to eight;
- Increasing the early retirement pension reduction from 0.25 percent for each month under the normal retirement age (60) to 0.5 percent for each month under the new normal retirement age (67);
- Capping eligible wages for retirement benefits at $106,800 adjusted for inflation ($109,971 in 2013); and
- Setting the non-compounding cost-of-living increase at one-half of the Consumer Price Index (CPI) or three percent, whichever is less.[4]

Strategies for Success

The IMRF board has authority to enforce collection of the annual required contribution (ARC) from all participating units of government, including the ability to sue participating governments for failure to pay or asking the state to withhold other funding to that government until its ARC is paid. This, along with its formal commitment to achieve

Funded Ratios for the Illinois Municipal Retirement Fund

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
94.3	94.6	95.3	96.1	84.3	83.2	83.3	83.0	84.3	87.6

Sources: Illinois Municipal Retirement Fund, Comprehensive Annual Financial Report for the years ended December 31, 2013 and December 31, 2012

100 percent funding of pension benefits, is the key factor in its continuing financial success.[5] Other factors that contribute to the fund's success include:

- A conservative, consistent, long-term approach to estimating investment returns that does not change with market swings and achieves the greatest return with an acceptable amount of risk;
- Annual required contribution rates (ARC) that float based on current demographic and investment returns;
- Annual review of the annuitant financial reserve to ensure that the fund has 100 percent of the assets needed to pay benefits for those specific retirees; and
- Maintaining fully funded reserves for employees and retirees.[6]

More

- Each of IMRF's member jurisdictions has a unique employer contribution rate and is responsible for funding benefits only for its employees.
- The IMRF Board of Trustees sets the annual contribution rates for each local government based on current actuarial assumptions with the 100 percent funded goal in mind.[7]

Endnotes

1 Illinois Municipal Retirement Fund Comprehensive Annual Financial Report for the year ending December 31, 2013, and *Pension Plan Health: What Accounts for Differences*, presentation by Louis W. Kosiba to the Center for State and Local Government Excellence's Future of Retirement Summit, April 2013.

2 Author calculation from the Illinois Municipal Retirement Fund Comprehensive Annual Financial Report for the year ending December 31, 2013, page 13.

3 Interview with IMRF Executive Director Louis W. Kosiba, January 5, 2011.

4 Interview with IMRF Executive Director Louis W. Kosiba, January 20, 2014, and *Pension Plan Health: What Accounts for Differences*, presentation by Louis W. Kosiba to the Center for State and Local Government Excellence's Future of Retirement Summit, April 2013.

5 *100% Funding at a glance…*, Illinois Municipal Retirement Fund fact sheet, January 2012.

6 Interview with IMRF Executive Director Louis W. Kosiba, January 5, 2011.

7 Illinois Municipal Retirement Fund Annual Actuarial Valuation Report, December 31, 2012, page A-8.

Center for State & Local Government Excellence

IOWA
Public Employees' Retirement System
2015

The Plan

The Iowa Public Employees' Retirement System (IPERS) is a contributory defined benefit plan that uses years of service, a multi-year average covered wage, and a multiplier to determine annual pensions. IPERS covers 346,413 members who work for public schools, state agencies, counties, cities, townships, and other public entities. At the end of fiscal year 2014, IPERS had 165,913 active contributing members, 108,233 retired members, 72,267 inactive members, and managed nearly $28 billion in net assets restricted for pension benefits.[1]

IPERS has three membership classes with different contribution requirements and benefits - regular members who make up about 95 percent of the participants and two special service member classes made up of sheriffs, deputies, and other law enforcement and protection occupations.

Commitment to Funding

Pension plans are funded by a combination of investment gains and government employer and employee contributions. IPERS has maintained a fairly solid ratio of assets to liabilities despite more than ten years of underfunding the annual required contribution for regular members. In fiscal year 2014, for example, IPERS gained $4.99 billion in the fund, of which 78 percent came from investment income, 13 percent from employer contributions, and 8.6 percent from employee contributions.[2]

Challenges

- Historically, IPERS has relied heavily on investment returns to maintain financial stability. IPERS suffered significant investment losses in the 2001-2002 and 2008-2009 recessions.[3]
- IPERS' combined government employer-employee contribution rate had been fixed at 9.45 percent of payroll by state statute. That fixed rate was frequently lower than the annual required contribution (ARC). Over the years, this failure to pay the ARC was a major factor in the plan's growing unfunded actuarial liability (UAL).
- Between 2008 and 2012, the IPERS unfunded actuarial liability grew from 43.5 percent of covered payroll to 87.2 percent.[4]

Changes to Plan Design

- In 2010, the General Assembly increased the combined required employer-employee contribution to 13.45 percent as part of a comprehensive plan to improve IPERS' fiscal health. This rate was still below the ARC for that year.
- Legislation, which became effective July 1, 2012, authorized IPERS to adjust the contribution rates up or down each year by up to one percentage point to bring them closer to the ARC beginning in fiscal year 2013. Pension officials say this transition from a "hardwired" statutory contribution rate to an annually adjusted rate with a cap moves the plan toward long-term financial stability and reduces the unfunded liability.[5]
- The 2010 legislation also made the following

Funded Ratios for the Iowa Public Employees' Retirement System

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
88.7	88.4	90.2	89.1	81.2	81.4	79.9	79.9	81.0	82.7

Source: Iowa Public Employees' Retirement System Comprehensive Annual Financial Report, Fiscal Year 2014.

changes to IPERS member benefits:

1. increased the vesting period from four to seven years for nonvested employees;
2. increased the early retirement reduction in benefits for all IPERS members from three percent to six percent for each year before reaching the normal retirement age; and
3. increased the number of years used in calculating the average salary for benefits for all employees from three to five years.[6]

Strategies for Success

- Recognizing that investment performance alone will not guarantee financial security;
- Regularly adjusting the employer-employee contribution rates to meet actuarially required levels;
- Sustaining the annual required contribution and benefit adjustments even if the financial picture looks better in the short-run; and
- Taking incremental actions to reduce the unfunded liability to maintain the plan's long-term fiscal health.[7]

More

- Even factoring in investment losses in the 2001-2002 and 2008-2009 recessions, investment earnings contributed more than 65 percent of benefits paid over the past several decades.[8]
- In fiscal year 2014, investments gained 15.88 percent. This was a substantial increase from the previous year's investment returns of 10.12 percent.[9]
- IPERS officials continue to explore the benefits, opportunities, and challenges of adding a defined contribution option for its members. Historically, there has been a lack of support for action, particularly because of the burden it places on employees to manage their retirement investments and concerns that employees lack disposable income to contribute to a new plan.[10]

Endnotes

1 Iowa Public Employees' Retirement System Comprehensive Annual Financial Report, Fiscal Year 2014, pages ii, 4, and 33.

2 Author calculations from IPERS Comprehensive Annual Financial Report, Fiscal Year 2014, page 22.

3 FY 2012 Annual Summary, Iowa Public Employees' Retirement System, page 3.

4 IPERS Comprehensive Annual Financial Report, Fiscal Year 2013, pages 5 and 36.

5 IPERS Comprehensive Annual Financial Report, Fiscal Year 2013, page 6, and interview with IPERS CEO Donna Mueller, January 17, 2014.

6 Summary of 2010-2012 IPERS Changes, Iowa Public Employees' Retirement System, pages 2-3.

7 Interview with IPERS CEO Donna Mueller, January 17, 2014.

8 FY 2012 Annual Summary, Iowa Public Employees' Retirement System, page 3.

9 IPERS Comprehensive Annual Financial Report, Fiscal Year 2014, page 5.

10 Interview with IPERS CEO Donna Mueller, January 17, 2014.

Center for State & Local Government Excellence

NORTH CAROLINA

Retirement Systems

2015

The Plan

The North Carolina Retirement Systems (NCRS) serves 875,000 current and former state and local employees and manages $74.5 billion in total assets. NCRS administers seven defined benefit pension plans, the largest of which are the Teachers' and State Employees' Retirement System (TSERS), which provides benefits to all state employees and full-time teachers; and the Local Governmental Employees' Retirement System (LGERS), which provides benefits for employees of cities, towns, counties, boards, commissions, and local government entities.[1]

Commitment to Funding

NCRS has a long history of being well funded. Its aggregate ratio of assets to liabilities across all plans is 93.9 percent. The pension plans are funded by a combination of investment gains and employer and employee contributions.[2]

Challenges

- The interest rate environment for investment returns and the prospect for national economic growth could affect the plan, since it depends on investment income and economic growth for fiscal stability.
- The inability of national leaders to work out a long-term debt reduction policy and agree on good fiscal policy is the biggest challenge to long-term growth of the pension plan.[3]

Changes to Plan Design

- In 2010, the General Assembly increased the vesting period for employees hired after August 1, 2011, from five years to ten years. This change was repealed in 2014, and the vesting period for all employees was returned to five years.[4]
- In 2012, the legislature authorized a 1 percent increase in benefits to retirees who were on the roll as of July 1, 2011, and a prorated portion of a 1 percent increase for employees who retired after July 1, 2011, but before June 30, 2012. The cost of the amendment was .33 percent of payroll, which was reflected in the annual required contribution beginning in 2013.[5]

Strategies for Success

- Consistent use of conservative actuarial assumptions. The fund assumes a 7.25 percent return on investments to minimize risk and recognizes all promised benefits in actuarial liabilities;
- Full funding of the annual required contribution to meet the plan's financial needs; and
- Prudent financing, such as requiring a full

Funded Ratios for the North Carolina Retirement Systems

Teachers' and State Employees' Retirement System

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
106.5	106.1	104.7	99.3	95.9	95.4	94.0	94.0	94.2	94.8

Local Governmental Employees' Retirement System

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
99.4	99.5	99.5	99.6	99.5	99.6	99.8	99.8	99.8	99.8

Sources: 2011-2012 North Carolina State Treasurer's Annual Report and State of North Carolina Comprehensive Annual Financial Reports for the years ending June 30, 2014 and June 30, 2013

actuarial analysis to assess the long-term price tag of any proposal that will affect benefits or costs.[6]

More

- Participating local governments are required to pay 100 percent of the ARC to fund LGERS. Employees contribute six percent of their salaries.
- Pension officials forecast that funded ratios for both TSERS and LGERS will remain flat for the next two years before inching back upward.[7]
- The fund offers only ad-hoc cost-of-living adjustment (COLA) increases that are tied to investment performance.[8]
- North Carolina offers two centrally operated supplemental defined contribution plans - the NC 401(k) and NC 457 - as well as a new 403(b) option for public school employees that was authorized by the General Assembly in 2012 and implemented in 2014. These plans are designed to provide easy access to savings/investment options to supplement members' retirement income.[9]

Endnotes

1 The North Carolina State Treasurer's Annual Report, FY 2011-2012, page 24.

2 *The State of State Pension Plans 2013: A Deep Dive into Shortfalls and Surpluses*, Morningstar, September 2013, page 2.

3 Input from Schorr Johnson, Communications Manager, Office of the North Carolina State Treasurer, February 10, 2014.

4 North Carolina General Assembly, Session Law 2014-88 – House Bill 1195, adopted July 30, 2014.

5 TSERS Actuarial Valuation Report prepared as of December 31, 2011, transmittal letter and page 1.

6 The State Treasurer's Annual Report, Fiscal Year 2011-2012, and interview with Schorr Johnson, February 10, 2014.

7 Input from Schorr Johnson, February 10, 2014.

8 The State Treasurer's Annual Report, Fiscal Year 2011-2012, and interview with Schorr Johnson, February 10, 2014.

9 Input from Schorr Johnson, February 10, 2014, and interview with Dr. Robert Clark, Chair, North Carolina Future of Retirement Study Commission, January 13, 2014; and *Pathways: A Newsletter for Active Government Employees in North Carolina*, Fall 2013.

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PUBLIC PENSION RESOURCE GUIDE

Case Studies of State Pension Plans that Switched to Defined Contribution Plans

The "Public Pension Resource Guide" provides readers with facts and data on the important role that public pensions play in the economy—for employees and retirees, public employers, and taxpayers alike.

A misperception persists among some that defined contribution (DC) plans "save money" when compared with traditional pensions. However, several states that switched to DC plans have experienced a much different reality over time. Indeed, a recent NIRS analysis of the economic efficiencies of defined benefit (DB) plans reconfirmed that pensions deliver the same amount of lifetime income for about half of the cost of providing the lifetime income from a typical DC plan.

"Case Studies of State Pension Plans that Switched to Defined Contribution Plans" presents summaries of past changes in three state retirement systems that made the switch to a DC plan from a traditional DB pension. Case studies cover the following states: West Virginia, Michigan, and Alaska. Rather than save states money, these DB to DC switch exacerbated funding problems and drove up pension debt.

Overall, certain trends appear common to all three states, such as:

- Changing from a DB plan to a DC plan did not help an existing underfunding problem, and, in fact, increased pension plan costs.
- Workers under the DC plan face increased levels of retirement insecurity.
- The best way to address a pension underfunding problem is to implement a responsible funding policy of making the full annual required contribution each year and to evaluate and adjust assumptions as well as funding over time.

Each analysis examines the key issues and the impact of the plan change over time. Specific areas include: the impact on the overall demographics of the system membership; changes in the cost of providing benefits under the plan; the percent of the actuarial required contribution made by the state and other public employers each year from 2003-2013; the effect on the retirement security of workers impacted by the change; and the impact on the overall funding level of the plan over time. To the extent possible, the case studies also examine subsequent action taken by policymakers to address the results of the plan changes.

PUBLIC PENSION RESOURCE GUIDE

Look Before You Leap: West Virginia Reopens DB Plan Within 15 Years of Closing; Commits to Improve Funding After DC Plan Benefits Prove Inadequate

Recently, there has been a misperception that defined contribution (DC) plans such as 401k plans "save money" as compared with traditional defined benefit (DB) plans. In light of this misperception, and in the wake of the financial crisis of 2008-2009 that caused underfunding in many public pension plans, many public employers have faced pressures to move from DB plans to DC accounts.

However, changing from DB to DC does not solve the underlying funding problem a state may be experiencing. One interesting case study that experienced this is that of the West Virginia Teachers Retirement System (TRS).

TRS, a traditional DB plan, was historically underfunded, due to lack of contributions from the state. While teachers had always made their contributions (6% of their pay out of every paycheck), the state and many county school boards failed to make their full contributions for many years. In fact, for some years from 1979 onward, the state and many school boards failed to match even employee contributions to the fund. To address the problem, in 1991, the state closed the TRS and moved newly hired teachers into a DC plan. Teachers in the DB plan were given a one-time choice to move to the DC plan as well.

The state later found, however, that this "funding solution" had overlooked some important considerations. Specifically, new members, by definition, do not start with any unfunded obligation. At the same time, unfunded obligations for existing members are not reduced when new members instead go into a DC plan. As a result, the loss of new members makes it more difficult to finance the unfunded obligations of the DB plan.

In other words, with the plan closed, TRS demographics shifted quickly. By 2005, TRS paid pension benefits to nearly 27,000 retired teachers, while less than 18,000 active teachers still contributed to the fund. The plan's funding level stood at just 25%.

Meanwhile, the DC plan was fairing poorly as well. The members who had opted to transfer from the DB to the DC plan in 1991 found it hard to retire after the 2000–2002 bear market reduced the values of teachers' accounts. While the state contributed 7.5% of salary to members' DC accounts—supplemented by a mandatory 4.5% employee contribution—account balances were too low to provide an adequate retirement income. As of April 30, 2005, the average account balance was just $41,478, and only 105 of the 1,767 teachers over age 60 had balances

over $100,000. This was largely due to the fact that DC member accounts had achieved much lower investment returns than TRS. Between 2001 and 2010, for example, the average West Virginia DB return was 1.6% higher than the average DC return.

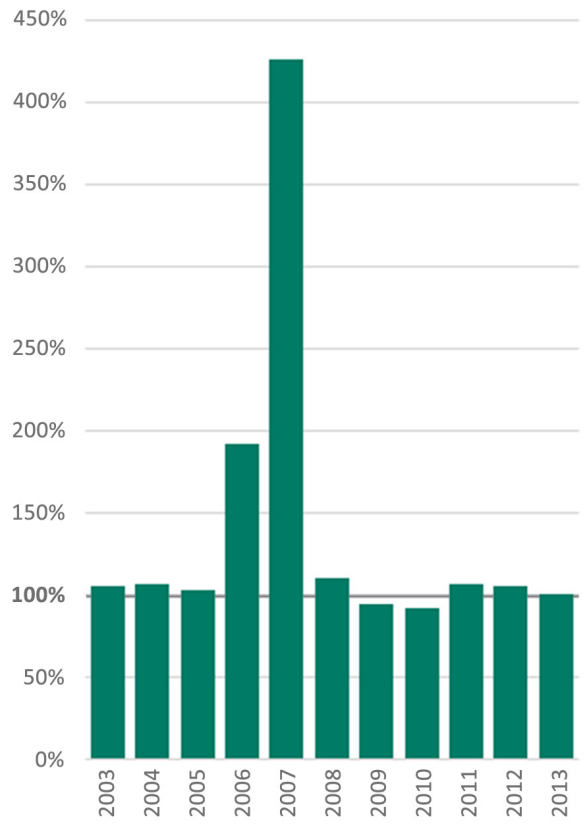
By 2003, the state began reexamining the switch. After studying the issue extensively, it found that the "normal cost" for TRS (the cost of benefits accrued in a single year) was roughly half of the required employer contribution to the DC plan. In other words, providing equivalent benefits would be far less expensive under the DB structure than in the DC plan. As a result, the state decided that, starting in 2005, all new hires would go back into the DB plan.

At the same time, the state became much more disciplined in funding the plan in order to make up for those years when the plan was deliberately underfunded. Extra contributions of $290.1 million and $313.8 million were made in 2006 and 2007, respectively. In addition, West Virginia completed a tobacco bond securitization in 2007 and deposited $807.5 million of those proceeds into TRS as a special appropriation. All these amounts were in addition to the regular required contributions.

After TRS was reopened to new hires, in June 2008, the state allowed teachers who had been hired into the DC plan to choose whether they wanted to remain in that plan, or switch over to TRS. A full 78.6% of teachers (nearly 15,000 members) chose to switch, including 76% of teachers under 40 years old.

Surprisingly, the switch, which was expected to cost the state up to $78 million before the elections were made, was now expected to save the state about $22 million, because more young DC members than expected transferred. Specifically, 50% of those over age 70 transferred; 69% of those age 65 to 69 transferred; 81% of those age 45 to 64 transferred; and 76% of members under age 40 transferred.

Table 1. **Percentage of ARC Made to West Virginia Teachers, 2003-2013**



Ultimately, West Virginia projected $1.2 billion in savings in the first 30 years by moving new entrants from the DC to the DB plan.

Today, the West Virginia TRS pension plan continues to improve. As of July 1, 2013, the plan's funded level stood at 58%. That means that in the eight years since reopening the TRS pension, the state narrowed its historically sizeable funding gap by more than half. In addition, its recommended contribution has stabilized dramatically; in fact, in 2013, the recommended contribution was less than it was in 2010. The plan is expected to reach full funding by 2034.

Other states have watched and learned from the West Virginia experience, which showed that ultimately, moving from a DB plan to a DC plan can have dire consequence for employees,

employers, and taxpayers—even when a large unfunded liability exists. Indeed, all states have made significant changes to their retirement plans in the wake of the financial crisis. As states and municipalities have considered switching from the DB pension to a DC plan, those that have conducted a cost analysis have found that the move would save little to no money in the long term, and could actually substantially increase retirement plan costs in the near term. Not surprisingly, virtually no state that has conducted such a study has made the switch. Only one state (Oklahoma) ultimately opted in favor of moving to DC, but it did so as part of an overhaul of the total compensation package, without conducting a separate cost study for the switch.

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PUBLIC PENSION RESOURCE GUIDE

Look Before You Leap to DC: Michigan's Switch Increases Pension Costs, Reduces Retirement Security

Recently, there has been a misperception that switching from a traditional defined benefit (DB) pension plan to a defined contribution (DC) plan such as 401k plan will save taxpayer money and solve pension debt problems. In light of this misperception, and in the wake of the financial crisis of 2008-2009 that caused underfunding in many public pension plans, many public employers have faced pressures to move from DB plans to DC accounts.

However, changing from DB to DC does not decrease retirement plan costs, can drive up pension debt, and will almost certainly increase retirement insecurity. One interesting case study is that of the Michigan State Employees' Retirement System (MSERS).

In 1997, MSERS, a traditional DB pension plan, was closed to new hires, who were placed in a DC plan. Current employees were given a one-time choice to opt into the DC as well. In the DC plan, the state provides an automatic contribution of 4% of each employee's pay, with an additional match of 100% up to 3% of pay that the employee contributes.

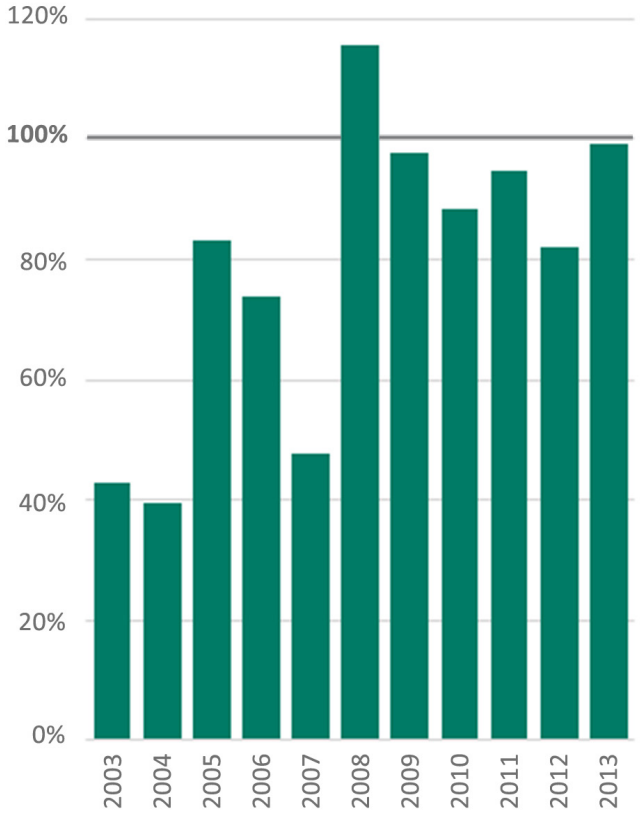
At the time, the normal cost of the DB plan (the cost of benefits accrued in a single year) was approximately 9.1% of pay. So, it seemed as though the state would be "saving money" because the employer contribution to the DC plan would be capped at 7%, but any cost savings found by Michigan in the DC plan was produced by providing a lower income benefit in the DC plan.

Generally speaking, when a DB plan is frozen, plan costs will increase. This is because the plan's demographics tend to change rapidly. First, the active population will continue to age, and will amass a higher average liability as their wages grow. At the same time, the number of active members will steadily fall, as individuals retire, meaning an ever-smaller payroll base over which to spread payments on any unfunded liability.

When MSERS closed in 1997, the plan was actually overfunded; it had 109% of assets on hand to cover all liabilities. But by 2012—15 years after freezing new hires out—the plan had become severely underfunded, with an unfunded level of just 60.3%. In other words, while the plan had excess assets on hand of some $734 million in 1997, by 2012, the plan amassed a significant unfunded liability of $6.2 billion. Of course, between 1997 and 2012, other factors had come into play as well—two large financial market downturns, for example, as well as several years in which the state contributed less than its required payment.

More recently, however, the state has been making larger payments to MSERS, and financial markets have rebounded since the last downturn. Yet the state's unfunded liability continues to grow. As demographics continue to worsen, the burden increases. In 1997, the annual required contribution was about $230 million, or $4,140 per active member. By 2013, the required contribution had grown to $611 million, or nearly $37,100 per active employee.

Table 1. **Percentage of ARC Made to Michigan SERS, 2003-2013**



In just the one year from 2012 to 2013, the required payment on the unfunded liability grew by $71.6 million to nearly $567 million, despite an impressive 12.5% investment return in that year.

Meanwhile, in 2013, about two-thirds of current workers (33,000) were in the DC plan, and their retirement prospects seem dim. According to a 2011 report, the average balance was about $50,000 in that year; for those close to retirement (age 60 or older), it was $123,000. At current annuity rates, that balance would provide a benefit of about $8,200 per year. Meanwhile, the average DB benefit for people currently retiring is over $20,000 per year.

Even in a "best case" DC scenario—in which employees contribute enough of their own pay to receive the maximum employer contribution—a simple benefit projection shows that the DB benefit is worth much more. For example, an employee at a starting wage of $40,000 per year, assuming 2% wage increases and 6% net investment returns each year, would accumulate a nest egg of approximately $288,000 after 25 years of service; this can currently purchase an annuity of about $1,600 per month. By contrast, an employee in the DB plan would see a monthly benefit of about $2,050. Thus, the DB benefit is worth about 22% more, but actually costs less: The normal cost of the DB plan is roughly 8% of pay, while total contributions to the DC plan in this example are 10% of pay (7% employer and 3% employee).

This perhaps should not be surprising, as research shows that DB pensions are much more cost-efficient than DC plans, because they are able to achieve economies of scale by pooling employees. Specifically, they save money due to longevity risk pooling, maintaining a more balanced portfolio over a longer time, and achieving higher investment returns due to professional management and lower fees. NIRS has found that for a given level of retirement income, a typical DC plan costs 91% more than a typical DB plan.

Other states have watched and learned from the Michigan experience, which shows that ultimately, moving from a DB plan to a DC plan can have dire consequence for employees, employers, and taxpayers. The move can increase an unfunded liability, while simultaneously decimating the retirement prospects for workers. Indeed, all states have made significant changes to their retirement

plans in the wake of the financial crisis. As states and municipalities have considered switching from the DB pension to a DC plan, those that have conducted a cost analysis have found that the move would save little to no money in the long term, and could actually substantially increase retirement plan costs in the near term. Not surprisingly, virtually no state that has conducted such a study has made the switch. Only one state (Oklahoma) ultimately opted in favor of moving to DC, but it did so as part of an overhaul of the total compensation package, without conducting a separate cost study for the switch.

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PUBLIC PENSION RESOURCE GUIDE

Look Before You Leap to DC: Alaska Compounds Its Unfunded Pension Liability

"Going to a defined contribution system didn't solve the problem"

In 2005, Alaska adopted a mandatory 401K-style defined contribution (DC) retirement program for all state employees hired after July 1, 2006 as a way to address its unfunded liabilities for retiree benefits. At the time, the state was facing a combined $5.7 billion unfunded liability for its Public Employees Retirement System (PERS), Teachers Retirement System (TRS) and retiree medical plan. However, far from solving the pension funding problems, the switch to DC only exacerbated them. In 2006, underfunding increased by 20 percent; eventually, it more than doubled, as the combined unfunded liability reached $12.4 billion in 2013.

Alaska's Public Pensions in 2005

To examine the current state of public pensions in Alaska, it's important to look back at how the state amassed a $5.7 billion debt in 2005. A 2014 article in the *Alaska Dispatch* faults funding decisions for the two defined benefit (DB) pensions by the Alaska legislatures and governors, together with sizeable stock market declines and devastating actuarial errors.

Mercer Inc., the state's actuary, made bad actuarial projections and attempted to hide them. A review by the state found that the firm did not recommend the appropriate contribution increases needed to keep the plans on a sound financial basis. This error, according to officials, amounted to some $2.5 billion of the unfunded liability. Subsequently, the Alaska Department of Law sued Mercer, and won an unprecedented $500 million settlement—even as Mercer claimed that accurate information would not have changed the state's action to underfund its pension liabilities.

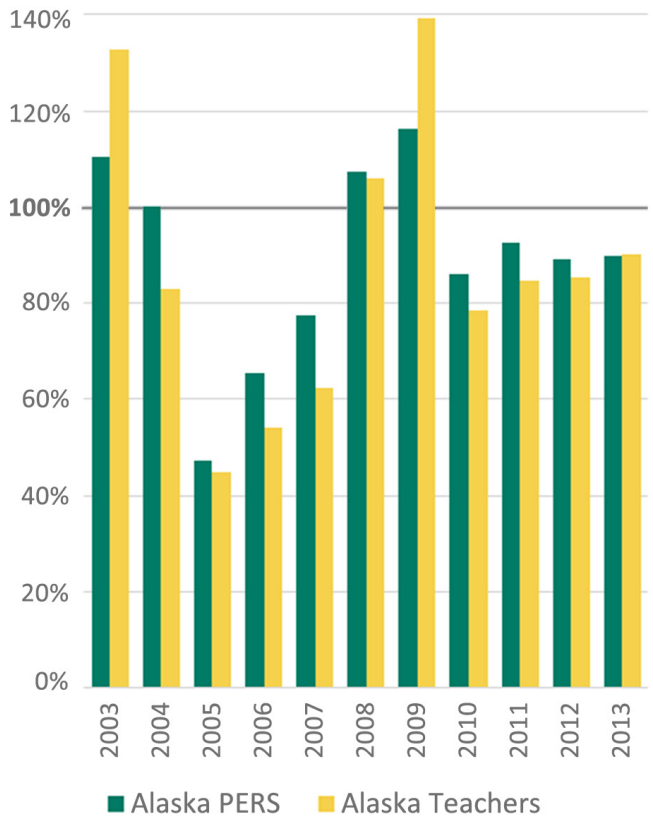
Governor Frank Murkowski used the $5.7 billion funding shortfall to push the dramatic change from a DB pension to DC accounts, and he signed a bill (SB14) that made the switch into law after a special legislative session in 2005. Speaking at the press conference on the bill, the governor claimed that moving new employees into a DC plan "will stop the 'so-called' bleeding, so we can slow down the state's increasing liability."

SB 141 Did Not Address the Underfunding of PERS and TRS

Unfortunately, as many experts understand, the change did nothing to reduce the pension funding shortfalls. Instead, Alaska continued the same underfunding practice of paying less than the full cost. The state and public employees

contributed just 47% of the annual required contribution (ARC) to PERS and 45% of the ARC to TRS in 2005. As a result, the total unfunded liability reached $6.9 billion in 2006.

Table 1. **Percentage of ARC Made to Alaska PERS and Teachers, 2003-2013**



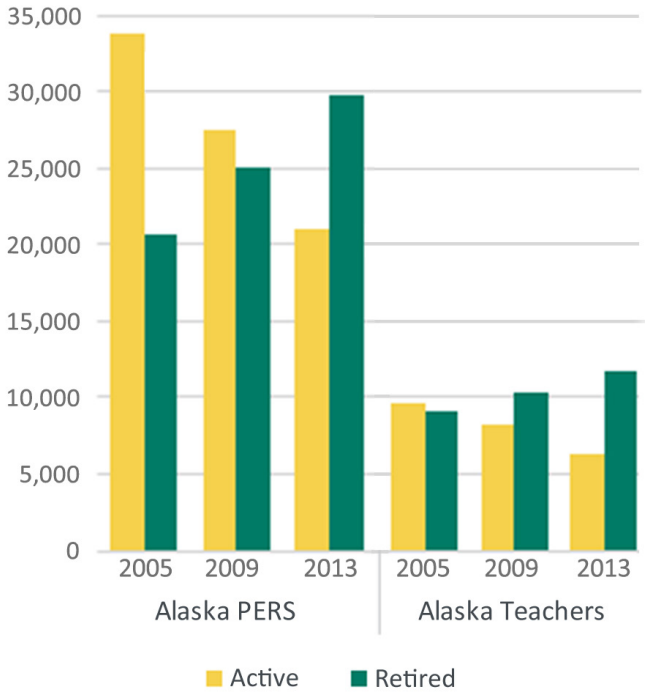
In fact, Alaska failed to make the full ARC payments to both of the state's DB pensions not only in 2005, but in in six of the eight years from 2006 through 2013. This fairly consistent underfunding further increased the prior service costs for PERS and TRS in these years. Specifically, PERS past service cost as a percent of payroll was 12.4% in 2006, and grew to 24.2% in 2014 as the unpaid required contributions we added to outstanding liabilities each year they were not made. For TRS, its prior service cost as a percent of payroll rose from 24.6% in 2006 to 43.5% in 2014.

In all, the PERS and TRS total unfunded liabilities increased to $7.8 billion and $4.6 billion, respectively, by 2013—for a total of some $12.4 billion. In other words, the unfunded pension liability more than doubled since making the DC switch in 2005.

Meanwhile, with all new employees now covered by the DC plan, the demographics of the pensions changed quickly, which can worsen an underfunding problem. The loss of new employees' contributions and corresponding employer contributions makes it more difficult to finance the pensions' unfunded obligations. An issue paper published by gubernatorial candidate Sarah Palin in 2006 acknowledged that "employee contributions were the only constant source that continued coming into the system."

In 2005, PERS made payments to nearly 21,000 retired employees and beneficiaries, and collected contributions from 33,730 active employees. In 2013, the plan was paying benefits to nearly 30,000 retired employees and beneficiaries, but collected contributions from less than 21,000 active members.

Table 2. **Alaska Retirement System Membership Status**



TRS also took a negative demographic turn. In 2005, TRS made payments to about 9,000 retired teachers and beneficiaries and collected contributions from nearly 9,700 teachers. By 2013, TRS had 11,705 retired teachers and beneficiaries but just 6,352 active teachers. Since July 2006, roughly 17,500 new public employees hired by Alaska began contributing to the DC plan. New members of a DB pension, by definition, do not start with any unfunded obligation for benefits. So, if Alaska kept open the DB pensions instead, these new employees would have resulted in the DB pensions getting a net funding contribution from a stable or growing group of employees rather than an ever smaller payroll base over which to spread the payments to meet the unfunded liabilities.

As early as 2007, legislation was introduced to reopen the DB pensions to new employees, in order to restore the demographic balance and to ensure retirement security with a predictable lifetime benefit for public sector workers. While these pension bills have received hearings and some votes in the legislature, they have not passed. New employees covered by the DC plan have planning and advice tools to help individuals estimate benefits, but the state has not published an analysis to assess how adequate such benefits will be when these employees retire.

Meanwhile, as the demographics of the pensions got worse, the underfunding increased. In 2005, PERS was 65.7% funded, as compared to 60.8% in 2013. The funding for TRS dropped from 60.9% in 2005 to 51.9% in 2013.

Calls for Cash Infusions

Like most public pension plans, the largest potential source of revenue to PERS and TRS is investment earnings. Specifically, between 2006 and 2013—even after adjusting for the stock market losses in 2008-2009—investment income added over $3 billion to PERS plan assets on a net basis. Had the needed, full ARC payments been made since 2005, the state could have taken better advantage of the growth in financial markets since 2009.

However, this did not occur, and by 2013, the unfunded liability had grown to $12.4 billion. Considering the impact of closing the pension to new employees, Representative Mike Hawker (Anchorage) commented in 2014 that "I very much was concerned when we closed our retirement systems and went to a defined contribution that by closing those systems we were going to find ourselves in the position we are in today, which was ultimately having to step in with a significant financial bailout."

Reaching dire straits by 2014, Governor Sean Parnell proposed that Alaska add $2 billion to its $1 billion regular payment to reduce the underfunding. Eventually, the state made $3 billion in contributions to PERS and TRS, per HB 385. After much legislative posturing, wrangling, and rewriting, the bill was rushed through in the final days of the legislative session. HB 385 also included a longer amortization period of 30 years, and shifted more of the pension cost to municipalities. This longer amortization allows for lower payments each year, but adds $2.5 billion more to the funding cost over time—in the same way that the total cost of a 30-year mortgage is higher than that of a 15-year mortgage, due to compound interest on the outstanding unfunded balance.

Key Takeaways from the Alaska Experience

Alaska presents a real-world example that switching to a DC plan does nothing to reduce DB plan costs, and can actually increase them. Losing a significant percent of employees to the DC plan reduced the one steady source of pension funding in Alaska. The false promise of the DC switch may have led policymakers to continue to underfund the pension plans, which only worsened the problem. As a result, the state's unfunded liabilities

doubled in less than ten years.
Ultimately, Alaska saw increased pension costs for PERS and TRS after it switched to a DC plan for new hires.

Indeed, all states have made significant changes to their retirement plans in the wake of the financial crisis. Perhaps, it is based on the Alaska experience that as states and municipalities have considered switching from the DB pension to a DC plan, those that have conducted a cost analysis have found that the move would save little to no money in the long term, and could actually substantially increase retirement plan costs in the near term. Not surprisingly, virtually no state that has conducted such a study has made the switch. Only one state (Oklahoma) ultimately opted in favor of moving to DC, but it did so as part of an overhaul of the total compensation package, without conducting a separate cost study for the switch. Indeed, in the same year that Alaska decided to switch to a DC plan West Virginia was making a very different choice to "unscramble the egg," reopening their traditional DB pensions to new employees, after having closed the plan many years ago.

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The National Institute on Retirement Security says three states' switch from a defined benefit pension to a defined contribution plan exacerbated pension underfunding.

A report from the National Institute on Retirement Security suggests that states that shifted retirement plans from defined benefit (DB) pension plans to defined contribution (DC) plans experienced higher costs.

"Case Studies of State Pension Plans that Switched to Defined Contribution Plans" presents summaries of changes in three states—Alaska, Michigan, and West Virginia—that made the switch from a DB pension to DC accounts. The case studies examine key issues that impact pension plans, including demographic changes, the cost of providing benefits, actuarially required contributions (ARC), plan funding levels and retirement security for employees.

The case studies indicate that the best way for a state to address any pension underfunding issue is to implement a responsible funding policy with full annual required contributions—and for states to evaluate assumptions and funding policies over time, making any appropriate adjustments, the Institute says.

According to the report, in Alaska, legislation was enacted in 2005 that moved all employees hired after July 1, 2006, into DC accounts. At the time, the state faced a combined unfunded liability of $5.7 billion for its two DB pension plans and a retiree health care trust. The unfunded liability was the result of the state's failure to adequately fund pensions over time, stock market declines and actuarial errors. Although the DC switch was sold as a way to slow down the increasing unfunded liability, the total unfunded liability more than doubled, ballooning to $12.4 billion by 2014. In 2014, the state made a $3 billion contribution to reduce the underfunding. Legislation has been introduced to move back to a DB pension plan.

In Michigan, the DB pension plan was overfunded at 109% in 1997. The state then closed the pension plan to new state employees who were offered DC accounts. The state thought it would save money with the switch, but the pension plan amassed a significant unfunded liability following the closure of the pension plan. By 2012, the funded status dropped to about 60% with $6.2 billion in unfunded liabilities. In recent years, the state has been more disciplined about funding the pension plan, making nearly 80% of the ARC from 2008 to 2013.

In West Virginia, the state closed the teacher retirement system in 1991 to new employees in the hopes it would address underfunding caused by the failure of the state and school boards to make adequate contributions to the pension. As the pension's funded status continued to deteriorate, retirement insecurity increased for teachers with the new DC accounts. Legislation was enacted to move back to the DB plan after a study found that providing equivalent benefits would be less expensive in the DB than in the DC plan. By 2008, new teachers were again covered by the pension, and most teachers who were moved to the DC plan opted to return to the pension. After reopening the DB pension, the state was disciplined about catching up on past contributions, and the plan funding level has increased by more than 100% since 2005. The teacher pension plan is expected to achieve full funding by 2034.

NASRA Releases Public Fund Survey Findings for FY 2013

On January 28, 2015, the National Association of State Retirement Administrators (NASRA) released its *Public Fund Survey Summary of Findings for FY 2013.* The survey presents key data from 99 public defined benefit (DB) retirement systems with 126 plans, covering 12.6 million active members, 8.2 million retirees and other annuitants, and holding $2.86 trillion in assets. Overall, the retirement systems surveyed represent approximately 85% of state and local DB plan membership and assets as of fiscal year (FY) 2013. The *Summary of Findings* presents information regarding plan funding, membership, benefits, contribution rates, cash flows, and actuarial assumptions. According to the report:

• The average actuarial funded ratio for the surveyed plans was 71.8% in FY 2013, down from 73.5% in FY 2012. Between FY 2012 and FY 2013, the aggregate actuarial value of assets increased 3.4%, while the aggregate actuarial value of liabilities increased 5.9%, leading to the decline in the aggregate funded ratio. However, many state and local plans smooth investment gains and losses into the actuarial value of assets over time (typically five years and sometimes longer). Moreover, most plans have nearly completed recognizing their 2008-2009 investment losses, which have been partially offset by investment gains since 2008. As a result, funding ratios may rise in FY 2014.

• Growth in pension liabilities has trended downward over the decade, from an annual rate of about 8% in FY 2002 to about 4% in FY 2010. For four consecutive years, the median rate of pension liability growth has remained below 4.5%, as a result of low salary growth and benefit reductions due to pension reforms.

• The combined allocation of plan assets to public equities and fixed income securities declined from 75.0% in FY 2012 to 73.9% in FY 2013. At the same time, allocations to real estate continued to increase and allocations to alternative investments (such as private equity and hedge funds) have remained steady. Reaching its lowest level in FY 2013, the allocation to fixed income securities decreased to 23.7%.

• The median annual investment return was 12.0% for plans with fiscal years ending 6/30/2013 (approximately 75% of the plans in the survey) and 16.1% for plans with fiscal years ending 12/31/2013. Investment returns for longer periods are mostly strong except the five-year returns which include the sharp decline in 2008-2009. However, for longer periods (i.e., 20 years and more), the median actual investment returns are closer to the assumed returns used by most plans.

• For most of the Public Fund Survey's measurement period, the median investment return assumption used by public pension plans was 8.0%. However, in FY 2013, the median actuarial assumption for investment return was 7.75% and the median assumption for the real rate of return was 4.5%. Notably, since 2009, many plans have reduced their investment return assumptions. Also, rates above 8.5% have been eliminated and four plans have adopted rates below 7.0%.

• The number of plans receiving at least 90% of their Annual Required Contribution (ARC) has been increasing since FY 2011, reaching about 65% of plans in FY 2013. However, effective in FY 2014, public pension plans are no longer required by the Governmental Accounting Standards Board (GASB) to calculate and report an ARC. Instead, under GASB Statement No. 67, public plans (except for agent plans) are required to report their "actuarially determined contribution" (ADC)1 which should be included in the retirement system's financial reports.

The survey data are available online for each individual retirement system and plan. The data include: plan membership, actuarial assumptions and methods, plan assets and liabilities, contribution rates, and system asset allocations, among other information. Selected data can also be viewed via comparative tables that allow sorting on selected items and provide graphs of selected data (e.g., inflation and investment return assumptions).

Florida weighs big changes to pension system

By Lloyd Dunkelberger , Herald-Tribune
/ Friday, February 20, 2015

State lawmakers, Cabinet members, judges, school board members, county commissioners, sheriffs and property appraisers may not be able to join the traditional state pension plan if they are newly elected after July 2016.

That proposal is far from a reality but it is a distinct possibility as the House moves forward on a study aimed at evaluating potential changes in the $160 billion Florida Retirement System. The move to eliminate the option for a traditional pension for elected officials in the FRS is one of the proposals under review by House Speaker Steve Crisafulli, R-Merritt Island.

Crisafulli has called for a pension study that will be delivered in the first week of the 2015 session. Among the potential changes up for review:

• Ending the traditional pension benefits for the "elected officer class," which includes elected officials in state government, county governments and school systems. The newly elected officials would receive their retirement coverage through a 401(k)-type investment that is now optional for them.

• Traditional pension benefits would also end for the FRS "senior management service class," which includes upper-echelon state administrators as well as university and community college presidents and appointed school superintendents. Again they would receive their retirement benefits through the investment plan.

• If new public workers don't opt to join the traditional pension plan, they would automatically be placed in the 401(k)-type investment plan. The current default for newly hired state, county and school employees is the traditional pension plan.

• Increasing the time that public workers would have to be employed before they qualify – or vest – in the traditional pension plan from eight years to 10.

Those proposals were outlined in the House State Affairs Committee this week. Rep. Matthew Caldwell, R-Lehigh Acres, who chairs the panel, said the study that will evaluate the financial impact of the changes will provide the basis for a potential bill from his committee.

The measures are similar to state pension changes advanced previously in the House. They would not impact current public workers. They are aimed at encouraging more newly hired employees to choose a 401(k)-type plan rather than the more costly traditional pension plan.

But whatever form a House pension bill takes, its passage remains in doubt in the Florida Senate, which rejected a similar measure last year and the Senate votes don't appear to have changed.

Nonetheless, House leaders will likely continue to press their case, arguing that while Florida's pension fund is among the most financially healthy state funds in the country – with the ability to pay 86.6 percent of its future benefits – it is still underfunded by $21.5 billion as of July 14.

State officials are obligated to set aside annual funding for that $21.5 billion “unfunded actuarial liability,” which amounted to $782 million this year. House leaders argue a less expensive retirement system would allow the state to use that money elsewhere, such as for schools or economic development programs.

Democrats remain skeptical about changing the state pension plan. Rep. Clovis Watson, D-Gainesville, said he wants to protect the ability of public workers to qualify for full pension benefits and would oppose any move to increase the contributions that workers must make for their retirement plans. Lawmakers changed the pension law in 2011, requiring public workers to contribute 3 percent of their salaries to the pension fund.

Watson said he might support a plan that would “save the state dollars” and reduce the actuarial liability, if it kept the pension benefits and did not increase the contribution rate.

Taxpayer, business groups call for conversation on pension reform

Jason Noble, jnoble2@dmreg.com 11:53 a.m. CST February 25, 2015

A coalition of reformers is pressing Iowa leaders to create a special task force on public-employee retirement reforms and, ultimately, to turn away from the guaranteed pensions currently provided to government workers.

State and local governments in Iowa are on the hook for hundreds of millions of dollars every year to replace shortfalls in the state's public-employee retirement systems caused by inadequate returns on investments, Taxpayers Association of Central Iowa President Gretchen Tegeler told Des Moines Register reporters and editors during a meeting on Wednesday.

Those debt payments – representing a roughly $400 million annual cost to the state – siphon money from other priorities and will continue to eat into government revenues for years to come, Tegeler said.

While those costs are essentially fixed, Tegeler's group and others argue that the state should move away from its traditional defined-benefit pension plans and embrace some kind of system that shields government – and taxpayers – from spiraling costs in the event of a stock market collapse like the one that accompanied the 2008-09 recession.

Such a "hybrid" proposal might include 401K-style private investments – a defined-contribution approach that minimizes additional costs for the government – along with benefits paid out as an annuity for as long as a worker is retired and centralized management of investments – features of a traditional pension plan.

Pension reform was the subject of a symposium held Wednesday in Des Moines and sponsored by the Taxpayers Association of Central Iowa and several other business and community groups.

Headlining that event was Dan Liljenquist, a former state senator from Utah who oversaw that state's shift away from a traditional pension toward a system that combined elements of a pension and a 401K investment program.

Tegeler, Liljenquist and other national experts on the issue who attended the symposium acknowledged the tricky politics of pension reform, and said the best step for Iowa at this point would be to convene a "blue ribbon" panel with members representing employers, employees, taxpayers and policymakers to discuss changes that might reduce the state's risk in future economic downturns.

"Iowa's in a good spot (because we're) not having to make decisions in a crisis," she said. "We don't want to be in a crisis when we're making decisions, but the flip side of that is the urgency. How do we get people to understand the long-term (need for reform)?"

N.J. municipalities group warns Christie's pension changes could trigger 'mass exodus' of workers

TRENTON — Stopping short of staking out a position on Gov. Chris Christie's proposed pension reforms, the New Jersey State League of Municipalities is saying the changes could disenfranchise workers and trigger a mass exodus of local workers.

Executive Director Bill Dressel shared the league's concerns in a letter to the governor late last week, saying it had concerns about some of the recommendations and wants a seat at the table.

"There are questions being raised by municipal officials both in a capacity as an employer, because we're the ones responsible for paying the bills, and from the workforce perspective," Dressel said today.

A special commission appointed by Christie released a **long-awaited report** last week recommending drastic changes to the state's pension and heath plans, including freezing the existing pension system and moving active employees onto a hybrid of a traditional defined-benefit pension plan and a 401(k)-like defined-contribution plan.

Dressel said his group has not taken a formal position on the proposal and changes are necessary, but noted that "these are major white knuckle issues that have got to be discussed."

Employees' health care coverage would also be reduced and they would have to pay more out of pocket toward their health care. In exchange, the state would constitutionally protect pension payments after decades of shortchanging them.

"The proposal to freeze existing pensions, without qualification, could inspire the mass exodus of key local administrators and professionals, giving them no time to train and mentor their successors," Dressel said. "This loss of experience and expertise would have a deleterious impact on the efficiency and effectiveness of local programs and services."

There was evidence of that as the state overhauled the pension system in 2011, forcing employees to contribute more for their pension and health benefits, raising the retirement age and suspending cost-of-living increases.

More than 20,100 public employees retired during the build up to those changes in 2010, a 59 percent increase over the year before. The next year, another 19,500 retired. **Retirements began picking up again last year** as Christie made renewed calls for reform.

Commission Chairman Tom Healey noted that the **report** mentioned possibilities for smoothing the transition for those mid-career employees, who may receive lower benefits under the proposed "cash balance" pension plan.

An Urban Institute study of a similar plan created last year in Kentucky found that employees with fewer years of service would receive higher benefits than under their traditional defined-benefit plan, and employees with "many years of service would receive less."

"What is quite clear is that younger workers, especially under the agreement reached in 2011, get very little. No one would join the state today for the pension plan, so a new pension plan will be much better from that point of view," Healey said.

Also under the commission's plan, unions that are willing and able could take over management of their pension funds.

Dressel said that recommendation overlooks the many members of the Public Employee Retirement System who are not represented by unions, and that "this 'reform' would deny them any say on their retirement benefits."

Christie's commission noted in its report that aspects of the plan would likely be unpopular, but that its members "believe in time they will be viewed as the best way to move forward."

The commission stressed that with $83 billion in unfunded pension liabilities, $53 billion in unfunded health care liabilities and soaring annual pension payments, New Jersey can little afford to drag its feet on making these changes.

"The need for urgency in adopting a solution cannot be overstressed. The already narrow window for a reasonable solution is closing fast," they wrote.

Dressel told the governor that while his organization was left out of the commission's work developing those proposals, he hoped it would be involved in implementing them.

The pension commission has suggested it hand the baton to an implementation committee, and Dressel said his group wants a seat at that table.

"We think that first and foremost, as they proceed with putting more meat on the bones of these proposals, developing their final plan, that it's important that we have a representative of municipal government," he added.

Healey said he intends to meet with the league.

House Plan Would Plug Hole in Pension Fund

Jim Malewitz, March 10, 2015

House lawmakers unveiled a plan Tuesday to shore up Texas' chronically underfunded retirement system for state employees.

The roughly $440 million proposal would increase how much the state and its workers contribute to the Employees Retirement System pension fund, which currently holds just 76 cents for every dollar it promises retired workers.

Employees — who gave the plan mixed reviews — would get across-the-board pay raises to ease the strain.

"This is a balanced proposal to assure that neither the state employees nor our taxpayers are expected to fix the problem on their own," said Rep. Dan Flynn, R-Van, who chairs the House Pensions Committee.

Under the plan, employees and the state would each boost their contributions to the fund to 9.5 percent of payroll by 2017 – 2 percent more than what each would chip in otherwise. Meanwhile, workers would see a 2.5 percent pay boost.

The Employees Retirement System benefits about 230,000 active and retired state employees, elected officials, police and custodial officers and judges. Its pension fund is short about $7.2 billion, a liability projected to grow by $500 million each year if left unaddressed.

Lawmakers have failed to fully fund the system in 19 of the past 20 years.

"The magnitude of the issue is real," said Rep. Sylvester Turner, D-Houston. "I think everyone wants to stop this fund from spiraling out of control."

If not fixed, some officials fear Texas' unfunded pension liabilities could weigh down the state's credit rating — as has been the case in Illinois, Pennsylvania and New Jersey. Moody's Investors Service, a major credit rating agency, highlighted that long-term possibility in a recent report.

"One of the things Wall Street is always looking at is, do you have a plan," Flynn said. "And this is certainly a plan."

The Texas Public Employees Association, the state's biggest advocacy group for state employees, welcomed the announcement.

“This proposal shows a true commitment to state employees on the part of House leadership,” Gary Anderson, executive director, said in a statement.

But the Texas State Employees Union said the proposal fell short of what state workers need and would do little – if anything – to prevent them from fleeing to private sector jobs with comfortable pay.

“It’s not nearly enough,” Seth Hutchinson, the group’s vice president, said. “State employees can’t afford to work for the state anymore.”

His group wants lawmakers to plug the pension liability without raising worker contributions and give workers all workers a $6,000 raise.

The House proposal is one of two major efforts on retirement benefits. Last month, its leaders pitched a plan to patch a $768 million shortfall in the state’s health care fund for retired teachers. That plan has gained support in the Senate.

"I'm very pleased with what House Appropriations has accomplished to date,” said Rep. John Otto, R-Dayton, chairman of the chamber’s budget-writing committee. “We have taken on what I consider two of the largest items that face this state going forward.”

Fiscal note: Nevada PERS reform bill would cost $800 million a year

By SEAN WHALE, LAS VEGAS REVIEW-JOURNAL CAPITAL BUREAU

CARSON CITY — A bill seeking to change Nevada’s public employees retirement system for future hires by switching to a mostly defined-contribution plan has a hefty price tag in the neighborhood of $800 million a year, according to a fiscal note submitted for the measure.

The Nevada Public Employees Retirement System estimates that Assembly Bill 190 would cost $790 million in increased contribution rates in the first year of the budget, plus another $18 million to implement the proposed hybrid system for new public employee hires beginning on July 1, 2016.

The cost is estimated at $790 million in the second year and $750 million in future years. The contribution rates would be shared by public employees and their public employers, including the state of Nevada, Clark County, the Clark County School District and the many other participating local governments.

If proved accurate, the costs of implementing the proposal could make it tough for Assemblyman Randy Kirner, R-Reno, to win approval of his measure. The bill is up for consideration Wednesday in the Assembly Government Affairs Committee. It is likely to be referred to the Ways and Means Committee for a review of the fiscal implications of the measure.

Kirner said Tuesday he is not convinced that the fiscal note from PERS is realistic.

“I think there is a substantial difference of view in terms of whether there is or isn’t a fiscal impact, and if how much, and that will all be debated before Ways and Means,” he said.

PERS Executive Officer Tina Leiss said the fiscal note was prepared by the system's independent actuary, and reflects the fact that the existing defined benefit plan would begin to contract as workers retired and new hires came in under the hybrid plan.

Because the unfunded liability of the existing plan would still have to be paid off, contributions would have to increase to cover that cost, she said. The estimate is that for regular state and local employees, the 28 percent contribution rate needed for the coming two-year budget under the existing system would have to be increased to 43 percent total, she said.

Half the 15 percentage point increase would be borne by public employers, including the state. The other half would be paid by employees. State agencies would see increased costs not reflected in their proposed budgets for the coming two years, Leiss said.

"There may well be savings, but they would come well into the future," she said.

Kirner has said his plan, which would maintain a smaller defined benefit element along with a defined contribution plan that would be similar to a 401(k) type plan used in the private sector, would help move the state away from the long-term liability implications of defined benefit plans.

PERS has a long-term unfunded liability in the existing plan of more than $12.5 billion. Nevada's plan is currently 71 percent fully funded.

Kirner said whatever the true fiscal cost of the change, it will likely continue to grow if no action is taken. A similar measure he introduced last session had a fiscal note from PERS of $700 million.

"I think our counties and cities and school districts today are dying the death of a thousand cuts," he said. "Because maintenance is being deferred because they have to pay for PERS. Books are not being bought because they have to pay for PERS. I think it's time to address it."

PERS system officials testified against the bill at a recent hearing, along with many of the public sector employee groups that participate in the system. At the hearing, it was noted that 35 other states have rejected similar changes to public retirement plans as has been proposed by Kirner.

Nevada PERS a model for nation; don't change it

By TERESA GHILARDUCCI; SPECIAL TO THE LAS VEGAS REVIEW-JOURNAL

Imagine that your bank advised you to refinance your mortgage. Except that instead of enjoying lower monthly payments and reducing the debt on your home, your mortgage payments will increase and your overall debt will skyrocket.

That's a bit like the conversation that lawmakers in Carson City are having over the future of the Nevada Public Employees Retirement System, the mechanism by which the Silver State's teachers, firefighters, police officers and other employees earn a modest, but secure retirement benefit.

The Nevada pension plan for state and local workers is among the best-governed and well-designed plans in the nation. Like many funds, PERS suffered after the Great Recession. But thanks to changes made in 2010 and an overall commitment by the Legislature to make annually required pension contributions, PERS today is funded at 71 percent — and is on the road toward 100 percent funding over the next 30 years.

Yet Nevada lawmakers are considering closing Nevada PERS in favor of a “stacked hybrid” retirement plan that has the potential to increase—rather than reduce— overall costs and liabilities.A hybrid plan works like this: Up to a certain salary, an employee’s retirement will be covered by a traditional defined benefit pension plan. Anything above that salary threshold will be covered by a defined contribution plan, similar to a 401(k)-style plan.

It seems simple, but freezing the current pension plan and moving to any kind of system with a 401(k) component introduces a host of problems.

First, 401(k) plans are more expensive for taxpayers than a defined benefit pension. That’s because a large pool of money invested by financial experts yields far greater returns than small, separate accounts managed by individuals with no professional financial training.Further, opening a 401(k) system drains contributions from the traditional pension system, increasing overall debt. Think of it like a credit card. Just because you open a new credit card doesn’t mean that the debt on the old card goes away. And if you fail to make payments on the old card, interest will cause your debt to spiral out of control. Not surprisingly, a recent fiscal analysis estimates transition to a hybrid system in Nevada could cost more than $800 million.

Second, 401(k) plans do a poor job of managing Nevada’s most important resource — its workers. Pension plans attract and retain valuable, loyal employees. On the other hand, 401(k) plans encourage high rates of turnover, an extraordinary financial burden for state and local governments.

Finally, a 401(k) plan will devastate the retirement security of public workers. The Nevada hybrid proposal has the potential to cut retirement earnings by more than 50 percent. Given that Nevada public employees do not earn Social Security, this move could force future retirees into social welfare programs — another unforeseen cost.

These aren’t theoretical arguments. States that have experimented with a transition to 401(k)-style systems have exacerbated rather than solved their debt problems. Michigan started enrolling all new state employees in a 401(k)-type plan in 1997. The system’s unfunded liabilities increased from $697 million in 1997 to $4.1 billion 13 years later. Alaska’s story is similar. Its 401(k)-type plan for new state and public school employees began in 2006. By 2013, the lawmakers’ changes doubled Alaska’s pension debt to $12.4 billion.In West Virginia, the situation was so bad that lawmakers chose to reopen its defined benefit pension system. The switch back vastly improved the health of the system. It is now funded at 59 percent rather than 18 percent.

Given the mounting evidence, Nevada should think twice before making a foolhardy switch away from its traditional retirement system. Instead, the Legislature should build on the practices that make PERS a model for the nation, preserving retirement security for generations