North Dakota Teachers' Fund For Retirement

NDTFFR Board Meeting
AGENDA

Thursday, March 21, 2019 - 1:00 pm
NDRIO Conference Room
3442 E. Century Avenue, Bismarck, ND

1. **Call to Order and Approval of Agenda** – Pres. Lech (Board Action)
2. **Approval of Minutes of January 24, 2019 Board Meeting** – Pres. Lech (Board Action) 5 min.
3. **2019 Legislative Update -** Fay Kopp (Information) 15 min.
4. **Quarterly Investment Update –** Dave Hunter (Information) 15 min.
5. **Annual Pension Plan Comparison Report** – Fay Kopp (Board Action) 30 min.
6. **Annual Retirement Trends Report -** Shelly Schumacher (Board Action) 30 min.
7. **Board Policy Amendments – 1st Reading -** Fay Kopp (Board Action) 30 min.
   - Disclosure to Membership
   - Membership Data and Contributions
   - Account Claims
8. **Board Education: TFFR Employer Reporting** – Shelly Schumacher and Tami Volkert (Information) 30 min.
9. **2019-20 Board Calendar** – Fay Kopp (Board Action) 15 min.
10. **Other Business**
11. **Adjournment**

Next Board Meeting: April 25, 2019

Any individual requiring an auxiliary aid or service should contact the Retirement and Investment Office (RIO) at 701-328-9885 at least three (3) days prior to the scheduled meeting.

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
MINUTES OF THE
JANUARY 24, 2019, BOARD MEETING

BOARD MEMBERS PRESENT:	Rob Lech, President Mike Burton, Vice President (TLCF) Kirsten Baesler, State Supt. (TLCF) Toni Gumeringer, Trustee Cody Mickelson, Trustee (TLCF) Mel Olson, Trustee Kelly Schmidt, State Treasurer (TLCF)
STAFF PRESENT:	David Hunter, ED/CIO Fay Kopp, Deputy ED/CRO Missy Kopp, Retirement Assistant Sara Sauter, Audit Services Supvr Shelly Schumacher, Retirement Program Mgr
OTHERS PRESENT:	Kathy Kindschi, NDU-Retired Kim Nicholl, Segal (VDCF) Anders Odegaard, Attorney General's Office Matt Strom, Segal (VDCF)

CALL TO ORDER:

Dr. Rob Lech, President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the meeting to order at 1:00 p.m. on Thursday, January 24, 2019, at the Retirement and Investment Office (RIO), Bismarck, ND.

THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: SUPT. BAESLER, MR. BURTON, MRS. GUMERINGER, PRES. LECH, MR. MICKELSON AND MR. OLSON.

ACCEPTANCE OF AGENDA:

The Board considered the agenda for the January 24, 2019 meeting.

IT WAS MOVED BY MRS. GUMERINGER AND SECONDED BY MR. OLSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE AGENDA AS DISTRIBUTED.

AYES: SUPT. BAESLER, MR. BURTON, MR. MICKELSON, MRS. GUMERINGER, MR. OLSON AND PRES. LECH
NAYS: NONE
MOTION CARRIED.
ABSENT: TREASURER SCHMIDT

MINUTES:

The Board considered the minutes of the October 25, 2018, meeting.

IT WAS MOVED BY MRS. GUMERINGER AND SECONDED BY MR. OLSON AND CARRIED BY A VOICE VOTE TO ACCEPT THE OCTOBER 25, 2018, MINUTES AS DISTRIBUTED.

AYES: MR. MICKELSON, MR. OLSON, MR. BURTON, SUPT. BAESLER, MRS. GUMERINGER, AND PRES. LECH
NAYS: NONE
MOTION CARRIED.
ABSENT: TREASURER SCHMIDT

Treasurer Schmidt joined the meeting at 1:04 p.m.

2018 GASB 67 & 68 REPORT:

Mr. Matt Strom, Segal Consulting, reviewed the Governmental Accounting Standards Board (GASB) 67 and 68 Report for the period ending on June 30, 2018. The GASB report is used by TFFR participating employers to fulfill certain accounting and disclosure requirements for their financials. The net pension liability decreased from the prior year as a result of strong investment performance. As of June 30, 2018 it was $1.33 billion compared to $1.37 billion in the prior year. The pension expense decreased from $131 million for fiscal 2017 to $117 million for fiscal 2018. Mr. Strom explained how the proportionate share of the net pension liability and pension expense is allocated over 214 participating employers.

IT WAS MOVED BY MR. OLSON AND SECONDED BY MRS. GUMERINGER AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE 2018 GASB 67 & 68 REPORT FROM SEGAL.

AYES: TREASURER SCHMIDT, SUPT. BAESLER, MRS. GUMERINGER, MR. OLSON, MR. BURTON, MR. MICKELSON, AND PRES. LECH.
NAYS: NONE
MOTION CARRIED.

2018 VALUATION UPDATE – ACTIVE MEMBER POPULATION GROWTH:

Mr. Strom presented Segal's analysis of the potential impact of active member population growth which was done at the request of the Legislative Employee Benefits Program Committee (LEBPC). The analysis was based on a 1% growth in active population for fiscal years 2019-2028 and 0% thereafter. This growth rate was provided by RIO staff after consultation with the Department of Public Instruction (DPI).

Based on this projection, TFFR's funded ratio is expected to reach 100% in 2041, two years earlier than without any increase in actives.

DEVELOPMENT OF STOCHASTIC PROJECTIONS AND PLAN MANAGEMENT POLICY:

Mr. Strom and Ms. Nicholl reviewed Segal's proposal to develop stochastic projections and plan management policy. They gave an overview of open group projection, explained deterministic vs. stochastic projections, and described the stochastic modeling process. They explained the steps to develop a plan management policy which would include a scoring system based on plan metrics established by the Board. A plan management policy would allow for a more robust evaluation of the ongoing financial health and sustainability of TFFR, provide a high level of transparency, and include a comprehensive assessment of risks.

ACTUARIAL CONTRACT PROPOSAL:

Ms. Kopp provided background information on actuarial costs and reviewed the January 8, 2019 proposal provided by Segal to extend their actuarial consulting contract for an additional two years. The Board is responsible for choosing an actuarial consultant, monitoring the quality of their work, and reviewing fees. For the fiscal year ending June 30, 2018, actuarial fees paid were less than .003% of the market value of TFFR assets.

Ms. Kopp noted Segal has been TFFR's actuarial consultant since 2011. In 2016, the Board hired Cavanaugh Macdonald Consulting to conduct an actuarial audit of the annual valuation conducted by Segal. The results were very positive with a few minor recommendations. In 2017, the Board requested competitive bids for the actuarial consulting contract and awarded the contract to Segal for July 1, 2017-June 30, 2019 with the option for additional two-year periods. The current proposal has an increase in cost of about 2%.

Board discussion followed.

IT WAS MOVED BY MR. OLSON AND SECONDED BY MRS. GUMERINGER AND CARRIED BY A ROLL CALL VOTE TO EXTEND SEGAL'S CONTRACT FOR 2019-2021 AS OUTLINED IN THE JANUARY 8, 2019 PROPOSAL.

AYES: MRS. GUMERINGER, MR. BURTON, MR. MICKELSON, SUPT. BAESLER, MR. OLSON, TREASURER SCHMIDT AND PRES. LECH.
NAYS: NONE
MOTION CARRIED.

STOCHASTIC PROJECTIONS AND PLAN MANAGEMENT POLICY PROPOSAL:

Ms. Kopp provided comments on the January 15, 2019 proposal provided by Segal to develop stochastic projections and a plan management policy. As outlined in the proposal, phase one would consist of an initial risk assessment and stochastic modeling.

In phase two, the results of the projections and modeling from phase one will be used for future monitoring. Segal will work with RIO staff and the Board to establish an approach to monitoring and scoring the policy. Results of Phase 1 and 2 will be presented to the Board for approval.

Board discussion followed.

IT WAS MOVED BY MR. BURTON AND SECONDED BY MR. MICKELSON AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE STOCHASTIC PROJECTION AND PLAN MANAGEMENT POLICY PROPOSAL FOR PHASE 1 AND PHASE 2 AS OUTLINED IN SEGAL'S JANUARY 15, 2019 PROPOSAL.

AYES: MR. OLSON, MR. MICKELSON, SUPT. BAESLER, MRS. GUMERINGER, TREASURER SCHMIDT, MR. BURTON AND PRES. LECH.
NAYS: NONE
MOTION CARRIED

The Board recessed at 2:32 p.m. and reconvened at 2:43 p.m.

LEGISLATIVE UPDATE:

Ms. Kopp provided an update on legislative bills being monitored which could impact the TFFR plan: HB 1044 updates TFFR plan language to maintain IRS compliance; HB 1500 relates to a new governance structure for the ND University System; HB 1499 changes duties of the Legislative Employee Benefits Programs Committee (LEBPC); and SB 2022 contains the 2019-21 RIO budget.

HB 1499 was introduced during the interim and received an unfavorable recommendation from the LEBPC. There are concerns of the potential actuarial impact on the TFFR fund if proposed legislation is not submitted to the LEBPC for review, including an actuarial study.

IT WAS MOVED BY MRS. GUMERINGER AND SECONDED BY SUPT. BAESLER AND CARRIED BY A ROLL CALL VOTE TO OPPOSE HB 1499.

AYES: MRS. GUMERINGER, MR. MICKELSON, TREASURER SCHMIDT, SUPT. BAESLER, MR. BURTON, MR. OLSON AND PRES. LECH.
NAYS: NONE
MOTION CARRIED.

Supt. Baesler left the meeting at 3:02 p.m.

INVESTMENT UPDATE:

Mr. Hunter provided an investment update for the periods ending on September 30, 2018. TFFR investments have averaged nearly $2.2 billion during the last five years and excess return has averaged over 0.50% per annum. TFFR's use of active management has enhanced net investment returns by $55 million for the five years ending on September 30, 2018 while adhering to prescribed risk limits.

TFFR earned a net return of 7.8% for the 5-years ending September 30, 2018. During the last five years, TFFR earned approximately $825 million of net investment income including $770 million (or 93%) from asset allocation decisions and $55 million (or 7%) from active management.

TFFR’s gross returns were ranked in the 34^{th} percentile for the five years ending on September 30, 2018, based on Callan’s Public Fund Sponsor Database.

TFFR assets declined to $2.43 billion at November 30, 2018, from $2.53 billion at June 30, 2018. TFFR estimated fiscal year to date returns as of December 31, 2018 are down about 5%. Board discussion followed.

EMPLOYER REPORTING REVIEWS UPDATE:

Ms. Kopp provided an update on TFFR Employer reporting reviews. Based on a recommendation from RIO’s legal counsel, Audit Services will no longer communicate its finding from employer audits to participating employers. Therefore, Retirement Services will now take over the communication and follow up functions for employer reporting reviews. Retirement Services plans to request that school boards and administrators acknowledge acceptance of the report and provide a written explanation of their plan to comply with findings and recommendations. Employer reporting review reports will be presented to the TFFR Board for acceptance. Board discussion followed.

AUDIT UPDATE:

Ms. Sauter provided an update of audit activities for the second quarter, September 1 – December 31, 2018. Audit Services has three employer audits completed and three employer audits in progress. They are working on a Cost Benefit Effective Benefit Payment Audit, which is close to completion. Audit Services and the Information Technology(IT) Division have been working with ND ITD to develop data analytics to help streamline the TFFR employer salary, service hours and eligibility review process. Audit Services provided support to the external auditor, CliftonLarsonAllen (CLA), during the GASB 68 census data audits.

The annual Executive Limitation Audit is in progress. Audit Services is working with Investment and Fiscal Services to work on the development of an Investment Due Diligence Audit. This audit includes reviewing the procedures and documentation that is being done on the investment managers by RIO staff.

Treasurer Schmidt left the meeting at 3:19 p.m.

RETIREMENT STATISTICS REPORT:

Ms. Schumacher reviewed the TFFR Ends and Retirement Statistics for the year ending June 30, 2018. The information provided indicates that the

TFFR Ends policies formally adopted by the TFFR Board and accepted by the SIB are being implemented. Board discussion followed.

IT WAS MOVED BY MR. OLSON AND SECONDED BY MRS. GUMERINGER AND CARRIED BY A VOICE VOTE TO APPROVE THE ANNUAL RETIREMENT STATISTICS REPORT.

AYES: MR. BURTON, MRS. GUMERINGER, MR. OLSON, MR. MICKELSON AND PRES. LECH.
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

CAFR AND PPCC AWARDS:

Ms. Kopp informed the Board that the 2018 RIO Comprehensive Annual Financial Report (CAFR) has been completed. RIO has been awarded a Certificate of Achievement for Excellence in Financial Reporting for the past 20 years from the Government Finance Officers Association (GFOA).

Ms. Kopp noted that TFFR has also received the Public Pension Coordinating Council (PPCC) 2018 Public Pension Standards Award for administration. TFFR has received the award for administration and/or funding from PPCC since 1992.

Ms. Kopp thanked Ms. Connie Flanagan, Ms. Schumacher and other staff, for their efforts.

CONSENT AGENDA:

IT WAS MOVED BY MRS. GUMERINGER AND SECONDED BY MR. OLSON AND CARRIED BY A ROLL CALL VOTE TO APPROVE THE CONSENT AGENDA (QDRO 2019-01 AND Disability 2019-1D).

AYES: MR. OLSON, MR. BURTON, MR. MICKELSON, MRS. GUMERINGER AND PRES. LECH
NAYS: NONE
MOTION CARRIED.
ABSENT: SUPT. BAESLER AND TREASURER SCHMIDT

ADJOURNMENT:

With no further business to come before the Board, President Lech adjourned the meeting at 3:49 p.m.

Respectfully Submitted:

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Dr. Rob Lech, President
Teachers' Fund for Retirement Board

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Missy Kopp
Reporting Secretary

North Dakota Teachers' Fund For Retirement

TFFR Legislative Update

March 15, 2019

BILL NO.	DESCRIPTION	SPONSORED/INTRODUCED BY	
HB 1044	TFFR Technical Corrections	TFFR Board	Support

HB 1044 updates TFFR plan language to maintain compliance with federal Internal Revenue Code requirements related to qualified governmental pension plans.

HB 1044 was assigned to House Government and Veterans Affairs Committee. The Committee gave the bill a do pass recommendation 14-0. **On 1.8.19 the House passed the bill 92 – 0.**

HB 1044 was referred to Senate GVA. Hearing was on 3.7.19; Fay presented testimony. The Committee gave a do pass recommendation, 7-0. **On 3.8.19, the Senate passed the bill, 42-0.** **On 3.13.19, bill was signed by President.**

SB 2022	RIO Budget	Appropriations Committee	Support

SB 2022 contains the 2019-21 budget authority and continuing appropriations for the Retirement and Investment Office to administer the TFFR retirement program and SIB investment program which is all special funds. RIO's budget request includes maintaining current staffing level (19 FTEs), addition of one new investment position, and approval to spend up to $9.13 million to upgrade or replace TFFR's outdated pension administration system.

SB 2022 was assigned to the Senate Appropriations Committee. On 2.15.19, the Senate Appropriations Committee amended the bill and gave a 14-0 do pass recommendation. The Senate amended budget includes a 2% pay raise on July 1, 2019, 3% pay raise on July 1, 2020, increased ongoing funding for health insurance, operating expenses, contingencies, one investment FTE, and up to $9 million of one-time funding for the TFFR Pension Administration System project. **On 2.18.19, the Senate approved the amended SB 2022, 46-1.**

Engrossed SB 2022 was assigned to House Appropriations – Government Operations Division. Hearing was on Wednesday, March 6. Fay, Darren, and Connie provided background information and responded to questions and concerns regarding the TFFR benefits program, SIB investment program, and RIO budget. As expected, there were many questions related to Legacy fund, investment fees and performance, prudent investor rule, and investment due diligence efforts. TFFR questions related to plan funding, and the $9 million pension administration system project. The tone of the meeting was positive, and we expect to be called back for a working session. **No further action has been taken on the bill.**

OTHER BILLS OF INTEREST TO TFFR:

HB 1368	SIB Membership	Rep. Kempenich, et al	Monitor

HB 1368 makes changes to the membership on the State Investment Board. The bill adds one member of the Legacy and Budget Stabilization Fund Advisory Committee to serve as a nonvoting member of the SIB.

HB 1368 was assigned to the House Government and Veterans Affairs Committee. The Committee gave the bill a 14-0 do pass recommendation. **On 1.31.19, the House approved the bill, 91-0.**

HB 1368 was referred to the Senate GVA Committee. A hearing has been scheduled for Friday, 03.22.19 at 9:15 am in the Sheyenne River Room.

HB 1419	PERS DC Plan for New Employees	Rep. Steiner, et al	Monitor

Original version of HB 1419 closes the PERS DB plan in 2025, requires new state employees to participate in the PERS DC plan, provides an option for current employees to transfer from PERS DB plan to DC plan, provides for annual transfer of $20 million from the SIFF, and provides for a Legislative Management Study during 2019-20.

HB 1419 was assigned to the House Government and Veterans Affairs Committee. The HGVA Committee amended the bill to only provide for a 2019-20 interim Legislative Management Study of the spectrum of public employee retirement fund options, including defined benefit, hybrid, and defined contribution plans. The study must include receipt of information from an unbiased, nonprofit third party regarding pension fund risk. The Committee gave the amended bill a 14-0 do pass recommendation. **On 2.01.19, the House approved the amended bill by a vote of 89-2.**

Engrossed HB 1419 was referred to the Senate GVA Committee. A hearing has been scheduled for Thursday, 03.21.19, at 2:30 pm in the Sheyenne River Room.

Legislative Links:

NDTFFR Website – 2019 Proposed Legislation

ND Legislative Branch Website – 66th (2019) Legislative Assembly

HB 1044

Senate Government and Veterans Affairs Committee
March 7, 2019

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

HB 1044 was submitted by the Teachers' Fund for Retirement (TFFR) Board. The bill includes specific statutory language which is required by federal tax law in order for TFFR to maintain its status as a qualified governmental pension plan. The bill generally clarifies existing statutory provisions to more accurately reflect actual operations of the TFFR.

On March 17, 2017, the IRS made a favorable determination on the NDTFFR plan on the condition that certain proposed amendments are adopted in the 2019 legislative session. HB 1044 contains these amendments and reflects specific language required by the IRS.

TFFR is currently operating in compliance with all IRS requirements, so there will be no change in administrative processes. Tax implications regarding refunds, lump sum payments, and certain death benefits are detailed in a Special Tax Notice which is provided to all members considering taking a distribution from TFFR.

HB 1044 does not make any benefit, contribution, or plan design changes. The changes do not have an actuarial impact on the plan, and are not being submitted for funding improvement purposes.

Section 1. NDCC 15-39.1-34. Internal Revenue Code compliance.

- Provides clarification and additional detail on direct rollover provisions that apply to the NDTFFR plan, namely the limitations on direct rollovers that apply to after-tax employee contributions, definitions for eligible rollover distributions, eligible retirement plan, and distributee.

TFFR's actuarial consultant, Segal, reviewed the bill draft and indicated it would have no actuarial cost impact. Since the IRS approved the language, the bill does not present any IRS compliance issues (Segal letter dated September 4, 2018).

The Legislative Employee Benefits Programs Committee gave HB 1044 a favorable recommendation, and the House approved the bill. On behalf of the TFFR Board, I respectfully request that the Senate GVA Committee give the bill a "do pass" recommendation.

Thank you.

Engrossed Senate Bill 2022

North Dakota Retirement and Investment Office (RIO)
Testimony to the House Appropriations Government Operations Committee
Fay Kopp, Deputy Executive Director/Chief Retirement Officer
Darren Schulz, Deputy Chief Investment Officer
Connie Flanagan, Chief Financial Officer

March 6, 2019

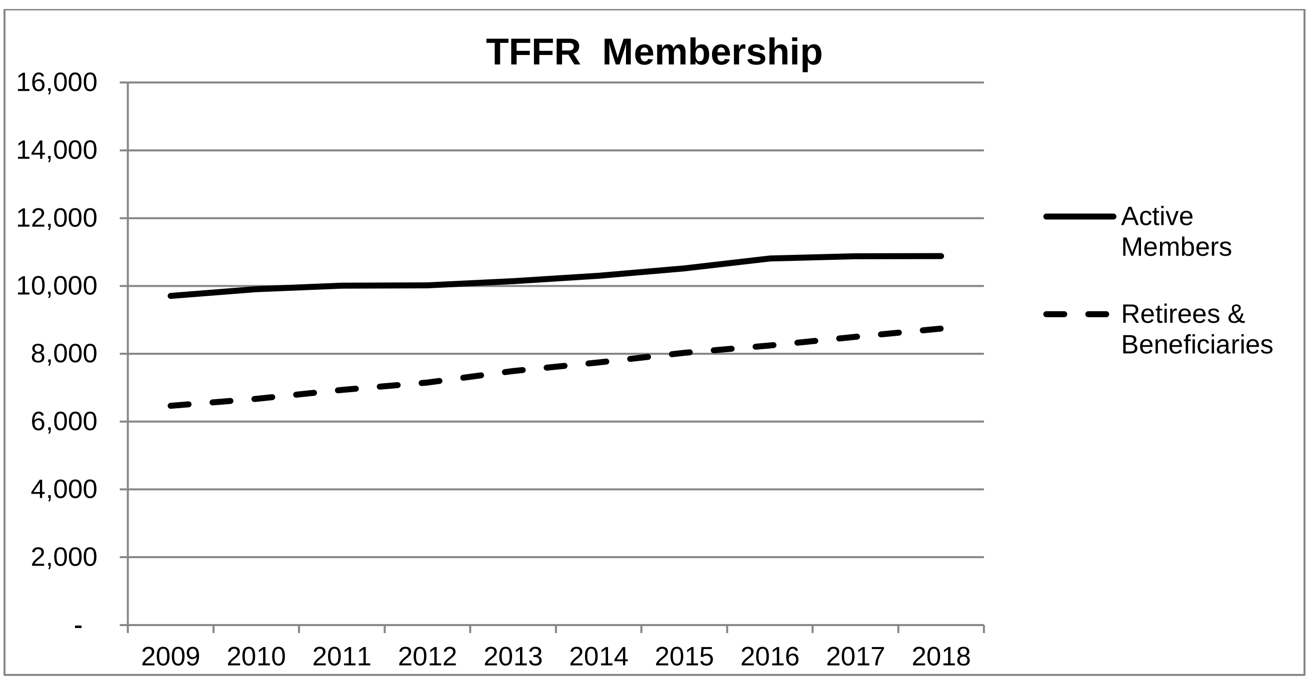
RIO Programs Overview

RIO was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of two important long-standing state programs – the retirement program of the Teachers' Fund for Retirement (TFFR) and the investment program of the State Investment Board (SIB). RIO is a Special Fund agency and receives no General Fund appropriation. All appropriated expenditures for the TFFR program are paid from contributions collected from members and employers and from invested assets/earnings. All appropriated expenditures for the SIB investment program are allocated directly to the client funds and paid out of their invested assets/earnings.

- **Teachers' Fund for Retirement (TFFR)**

TFFR is a qualified defined benefit public pension plan. The program is managed by a seven-member board of trustees which consists of the State Treasurer, State Superintendent, and five active and retired teachers and administrators appointed by the Governor.

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions and investment earnings. During the past decade, active membership has increased 12.1% from 9,700 to nearly 10,900 participants, while retirees and beneficiaries have increased 35.2% from less than 6,500 to over 8,700.



For Fiscal Year 2018 there were 214 participating TFFR employers comprised as follows:

School Districts	176
Special Ed Units	19
Vocational Centers	4
Counties	6
State Agencies/Institutions	5
Other	4
2017-18 Total Employers	**214**

The TFFR program appropriated expenses includes salaries, benefits and administrative overhead costs for the administration of the day-to-day operations of the fund and delivery of high quality services and outreach programs to members and employers. Examples of activities included in the administration of the TFFR program are detailed in the following table, based on the fiscal year ended June 30, 2018.

Activity	# of Members
Monthly collection of contributions from 214 Employers	10,881
Maintenance of Membership Records	22,218
New Retirement & Disability Claims Processed	401
Deaths Processed	226
Refunds/Rollovers Processed	228
Service Purchase Inquiries Processed	174
New Member Enrollments Processed	879
Monthly Benefit Payments Processed	8,743
Educational Outreach Programs Attended	1,047

Additional administrative activities include development of publications and educational materials for active and retired members and employers; maintenance of website, member and employer online services, and the pension administration software system that houses all TFFR member data; compliance reviews to verify accuracy of member records, contributions, and benefit payments; and staff training and education to ensure all necessary regulatory and financial reporting requirements are being met.

Benefit payments to retirees or their beneficiaries totaled $202.4 million in fiscal year 2018. Another $5.6 million was paid out in refunds of account values. These payments, in addition to amounts paid to actuarial, investment and other consultants, are included in a continuing appropriation under ND Century Code section 15-39.1-05.

- **State Investment Board (SIB)**

The SIB is responsible for the investment of over $14 billion in assets for seven pension funds and 18 other non-pension funds. The following table shows the most currently available fair value of assets by fund.

	Fair Value as of 1/31/19 (unaudited)
PENSION POOL PARTICIPANTS	
Teachers' Fund for Retirement	$2,433,650,826
Public Employees Retirement System	2,983,919,412
Bismarck City Employee Pension Fund	98,735,535
Bismarck City Police Pension Fund	39,508,018
City of Grand Forks Pension Fund	63,062,924
City of Grand Forks Park District Pension Fund	6,798,834
Subtotal Pension Pool Participants	5,625,675,549
INSURANCE POOL PARTICIPANTS	
Workforce Safety & Insurance Fund	1,961,612,988
State Fire and Tornado Fund	22,472,951
State Bonding Fund	3,482,292
Petroleum Tank Release Fund	6,290,800
Insurance Regulatory Trust Fund	1,645,192
State Risk Management Fund	4,624,706
State Risk Management Workers Comp	3,643,787
Cultural Endowment Fund	447,355
Budget Stabilization Fund	115,793,892
ND Association of Counties (NDACo) Fund	5,955,606
City of Bismarck Deferred Sick Leave	735,487
PERS Group Insurance	33,199,873
State Board of Medicine	2,273,511
City of Fargo FargoDome Permanent Fund	43,072,872
Lewis & Clark Interpretive Center Endowment	706,993
Subtotal Insurance Pool Participants	2,205,958,305
INDIVIDUAL INVESTMENT ACCOUNTS	
Legacy Fund	5,963,914,071
Retiree Health Insurance Credit Fund	126,231,136
Job Service of North Dakota Pension Fund	95,637,136
Tobacco Prevention and Control Trust Fund	28,518,317
TOTAL	$14,045,934,514

The 11-member State Investment Board includes the Lt. Governor, State Treasurer, State Insurance Commissioner, State Land Commissioner, Workforce Safety & Insurance designee, three PERS board members, and three TFFR board members. All the funds are invested in accordance with the “Prudent Investor Rule”.

Investment guidelines and asset allocations are determined by the governing bodies of the individual funds (with assistance from consultants and/or RIO staff) and then turned over to the SIB for implementation. The SIB selects investment managers to manage different types of portfolios within each asset class with the goal of maximizing return within the clients’ acceptable risk levels. Similar client funds are pooled together when possible to achieve efficiencies in staff monitoring and to receive lower fees from investment managers.

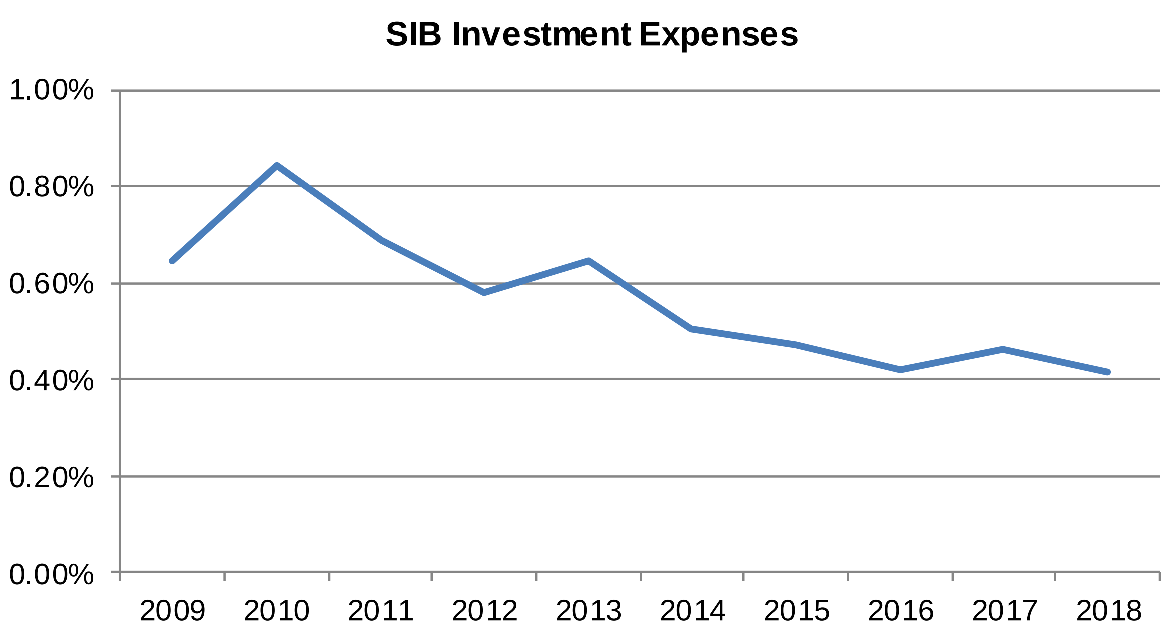
The SIB investment program appropriated expenses include salaries, benefits and administrative overhead for the management of the day-to-day operations of the program.

The staff of RIO administers the day-to-day operations of the investment program by assisting client funds with asset/liability studies; conducting investment manager searches; monitoring guidelines and asset allocations of each client fund; managing the consultant, custodian and investment manager relationships; conducting initial and continuing due diligence on the investment managers; researching new investment and risk management options; and maintaining separate monthly accounting and investment performance data for all 25 client funds. Statistics regarding the number of investment clients/managers/accounts, etc., are shown in the following table.

Client Funds	25
Asset Class Pools/Groups	34
Investment Manager Relationships	38
Investment Strategies	75
Investment Manager Accounts	113
Custodian Banks	2
Investment Consultants	3

The SIB has continuing appropriation authority under ND Century Code section 21-10-06.2 to pay for investment related costs of the program such as investment management fees, custodial fees, performance measurement fees, and fees associated with manager searches and onsite reviews of investment managers. These costs are allocated directly to the client funds affected by the expense and paid out of invested assets/earnings.

During the past 5 years, the SIB and RIO have re-intensified efforts to improve our overall return on investment management expenses. As a result, SIB client investment expenses have declined from 0.65% in fiscal 2013 to 0.42% in fiscal 2018. This 0.23% decrease in expenses on $10 billion in assets equates to an annual savings of approximately $23 million. The following chart shows the downward trend in investment expenses over most of the last decade.



Goals for SIB Client Investment Expenses:

The SIB and RIO work to keep investment expenses at or below 0.50% per year, while seeking to identify investment firms which beat their performance benchmarks by 0.50% or more (after all expenses) over the long-term. If we are successful in attaining both of the above goals, our SIB clients are effectively earning a minimum 2-for-1 return on our investment expense dollars. The following chart offers an example for the Legacy Fund:

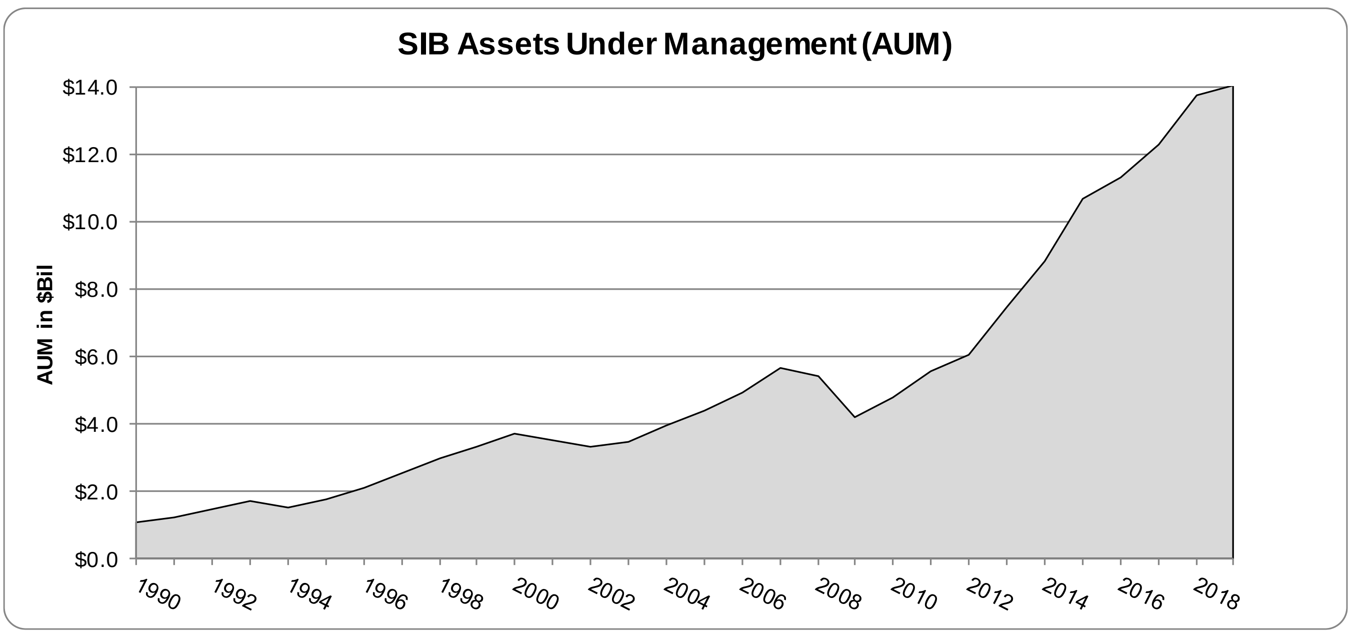
	FY 2018			FY 2017		
	Average Market Value	Fees in $	Fees in %	Average Market Value	Fees in $	Fees in %
Total investment manager expenses	2 5,291,348,530	15,909,882	0.30%	4,344,421,122	13,986,877	0.32%
Total investment expenses		1 **16,635,287**	**0.31%**		**14,564,731**	**0.34%**
Actual Investment Performance (Net of Fees)			**7.57%**			**12.03%**
Policy Benchmark			**6.51%**			**9.91%**
		Outperformance	3 **1.06%**		**Outperformance**	**2.12%**

Investment expenses declined to 0.31% in fiscal 2018 from 0.34% in fiscal 2017, while noting the use of active management paid significant returns for the Legacy Fund in Fiscal 2018 as the **SIB paid** 1 **$16.6 million in expenses to outperform the Policy Benchmarks by** 3 **1% or $50 million (**2 **$5 billion x** 3 **1% = $50 million).**

It is important to note that like-for-like comparisons between funds with different investment programs are rarely straightforward. Differences in asset allocation and strategies being pursued must be considered as part of a broader analysis of the costs incurred in relation to the results achieved.

Growth in Assets:

SIB client investments have grown from $6 billion in 2012 to over $14 billion as of 1/31/2019.



2017-19 Budget Status

The RIO 2017-19 approved budget is just over $5.3 million. Salaries and wages for RIO's current 19 FTEs make up nearly 83% of that total. After having three vacancies early in the biennium, RIO is now fully staffed. It is anticipated that we will have approximately $56,000 left in this line item at the end of the biennium due to those vacancies.

Operating expenses were approved at just over $862,000 for the 2017-19 biennium. This was a 13% decrease from the previous biennium's approved operating expenses. Due to this sharp decrease, staff brainstormed ideas for cost savings across the agency. The first area that was explored was board member and staff educational expenses under travel and professional development. Staff and board members were asked to limit their requests for out-of-state conferences and other educational opportunities to one for the biennium. Most chose to forego training in the first year of the biennium to ensure funding would be available. During this time, other longer-term cost-savings options were explored to guarantee that funds would be available for highly important education opportunities going forward.

The largest long-term cost saving idea that has been implemented relates to the printing and mailing of newsletters and other similar materials to active members of the TFFR retirement program. It was determined that TFFR employers can be utilized to assist in disseminating this information to active members through the use of emails and the RIO website. It is anticipated that RIO can save nearly $20,000 per biennium due to this process change.

Staff has been very frugal, not only during this biennium but historically, when requesting the expenditure of operating funds. Because of the limitations imposed on educational opportunities as well as the savings in postage and printing, RIO expects to have a balance of approximately $25,000 in the operating line at the end of the current biennium.

The contingency line item was also reduced in the 2017-19 biennium. The $30,000 reduction amounted to a 37% reduction. This line item is reserved for expenses that are outside of normal operations and are difficult to plan. In the past, this line item has been used for executive search firms to assist in filling the Executive Director/CIO position. Due to the nature of these types of expenses, the costs can be high. The average expenditures from this line in the past have been in the $75,000-$100,000 range, therefore making the reduction to this line concerning. We have not had the need to spend anything from this line during the 2017-19 biennium-to-date.

	2017-19 Approved Appropriation	Actual Expenses through 1/31/19	Estimated Remaining Expenses	Estimated Total 2017-19 Expenses	Estimated 2017-19 Ending Appropriation Balance
Salaries & Wages	$ 4,425,570	3,410,649	959,105	4,369,754	55,816
Operating Expenses	862,484	494,428	342,869	837,297	25,187
Contingency	52,000	-	-	-	52,000
	$ 5,340,054	3,905,077	1,301,974	5,207,051	133,003

2019-21 Budget Request

	2017-19 Base Level Appropriation	Requested Adjustment to Base	Additional FTE	One-time Request Pension Admin. System Project	Additional Senate Amendments	Total Senate Amendments	Total Request from House
Salaries & Wages	$ 4,425,570	(15,251)	294,996	50,000	231,193	560,938	4,986,508
Operating Expenses	862,484	-	14,450	2,789,000	(127,000)	2,676,450	3,538,934
Contingency	52,000	30,000	-	-	-	30,000	82,000
Capital Assets	-	-	-	6,300,000	-	6,300,000	6,300,000
	$ 5,340,054	14,749	309,446	9,139,000	104,193	9,567,388	14,907,442
FTE Count	19	-	1	-	-	1	20

RIO's budget request before you today, as approved by the Senate in engrossed SB 2022, includes increases in funding over the 2017-19 base level appropriation for the addition of one FTE for the investment program and a one-time request of $9 million for the TFFR Pension Administration System Project, as well as the salary and health insurance premium increases added by the Senate.

Additional FTE for Investment Program: This request is for an additional FTE for the SIB investment program and additional operating expenses related to that position.

Significant highlights in the SIB investment program include the following.

- SIB client investments have increased by $7.4 billion or 122% in the past six years while the authorized FTEs assigned to the investment program have remained steady at 6.95.
- Investment returns for the Pension Trust (including PERS and TFFR) improved from the 74th percentile for the last 10-years to the 26th percentile the last 5-years and 23rd percentile for the 3-years ended 6/30/2018.
- Total Legacy Fund investment earnings are over $1 billion since inception including $308 million for the 19 months ended January 31, 2019. NDCC earnings (transferrable to the General Fund) were $381 million as of January 31.
- Customer satisfaction surveys have remained strong (averaging 3.6 on a 4.0 scale)

As an industry best practice, RIO is currently developing a more robust investment risk management oversight and reporting function within the SIB investment program. Investment risk management is the process of identifying the level of risk that an entity wants, measuring the level of risk that an entity currently has, taking actions that bring the actual level of risk to the desired level, and monitoring the new actual level of risk so that it continues to be aligned with the desired level of risk. The process is continuous and developing an effective framework requires measuring, monitoring, and managing exposure to both economic and fundamental drivers of risk and return across asset classes to avoid over-exposures to common risk factors.

The SIB's current strategic plan includes "enhancing our internal control environment by improving the use of proven risk management solutions" noting that "a robust risk management framework serves as the foundation to support a sound internal control environment and lessen downside risk."

Following an extensive review of leading investment risk management system vendors, RIO selected a solution in 2016 to implement a risk management system across the investment program. The state of the art multi-asset class risk management solution combines sophisticated risk analytics and subject matter expertise to help RIO better understand and manage risk, resulting in more informed investment decisions using the system's tools for portfolio risk, stress testing and scenario analysis; asset allocation analysis; performance and attribution; and compliance and oversight.

RIO continues to work with the vendor to develop a risk dashboard for monitoring downside risk under various historical and hypothetical stress scenarios. Additionally, RIO intends to enhance its investment risk monitoring reports to include an expanded list of key risk metrics. However, current staffing within the investment program is seriously limiting the amount of time available to make these enhancements.

RIO recognizes that our ability to continue achieving exceptional results and reaching the goal of additional risk monitoring or any other enhancements to client services will be highly challenged without the additional FTE.

TFFR Pension Administration Software Modernization Project: This request includes funding within the capital assets, operating and salaries line items to identify, purchase and implement an upgrade or replacement of the current pension administration software (PAS) utilized by TFFR.

The TFFR Board and RIO staff believes it is a necessary and prudent use of TFFR funds (special fund, not general fund) to upgrade or replace the current 13-year old system with a more technologically advanced, web based system which would provide significant improvements in functionality, efficiency and system security for TFFR members, employers, and staff. An updated system is needed in order for TFFR to re-engineer business processes and automate TFFR pension administration activities, reporting capabilities, electronic communications and services. The current PAS has many limitations, and without an updated PAS, TFFR will need to spend trust fund assets trying to maintain an old system, instead of investing in newer technology that includes the necessary functionality to efficiently administer the plan.

During the past year, RIO has studied the potential risks, benefits, and costs of upgrading or replacing the current PAS. We have worked with State ITD, State Procurement, PERS, and a nationwide pension software consulting firm on this study.

<u>Risks of Current PAS:</u>

- Functionality and technical architecture of current PAS is outdated. Continuing to utilize the current PAS does not allow RIO to take advantage of advancing technology and security improvements. Current PAS administrator interface is deployed as a client-server application which has significant limitations. For example, TFFR's current software is a 32-bit application. Most operating systems are now based on 64-bit technology platforms.
- Cost to maintain current PAS is expected to increase. While the current vendor provides limited support for the PAS product, the number of personnel familiar with the older version technical environment and TFFR customizations will diminish, resulting in a higher cost for support services as time progresses. Additionally, the older the system gets, the greater the likelihood for the system to crash and need costly fixes in order to continue operating. (See Concerns if Project is Not Approved.)
- Current Member self-service portal is very limited and provides basic "read only" functionality. It does not allow for any electronic member communication and interaction. While it can be customized to add new features (at a significant cost), the portal presentation will retain the present look and feel. The current self-service user interface uses frames technology which has limitations and is not fully ADA compliant.
- Current Employer self-service portal is also very limited and provides only basic functionality. Again, it does not allow for any electronic employer communication and interaction. Employers cannot perform any business rule validations of the member data contained in the file. RIO staff must perform the validations, evaluate any data exceptions and any action for any data corrections that are to be addressed and resubmitted by the employer, which is time consuming and inefficient.

<u>Benefits of Updated PAS (Upgrade or Replacement):</u>

- Most of the features needed to reinvent the way TFFR conducts its business operations are standard functions of a modern PAS.

- Updated PAS will enable TFFR to adopt best practices in self services for members and employers, achieve greater efficiencies in daily administration, and provide security improvements that are available with new technology vs old technology.
- Updated Employer self-service would allow employers to securely communicate with TFFR, and take greater ownership of their data. Employers would have the ability to securely upload contribution data, receive immediate validation results, confirm contribution remittances, and view their remittance histories and receivable accounts.
- Updated Member self-service would allow members to securely communicate with TFFR, access and update certain personal information, and run their own benefit estimates.
- Updated PAS would allow for straight-through-processing to automate enrollment, termination, retirement request processing, benefit calculations, e-communications, e-forms, and e-distribution to members and employers.
- Communications would be timelier with members and employers being able to initiate requests online and receive statements, notifications, and correspondence securely through the web portal from anywhere and at any time using a desktop computer or mobile device.
- Digital (electronic) communication is direct and secure, saves on mailing costs, and reduces reliance on paper which is a cost savings to the fund.
- An updated PAS would provide future ability to deploy the application to either a private or public cloud environment.

Additional benefits include:

- Web-based interface for administrators via commonly used and supported web browsers
- Enhanced web self-services for members, retirees, employers, and other stakeholders
- Benefit estimates and retirement modelling tools with member self-service
- Responsive web design for access with tablets and smartphones – mobile access
- Business process workflow
- Case and task management
- Email notification
- Administrator dashboards
- Employer self-service payroll contribution reporting, real-time data validation, and view access to receivable accounts
- Expanded accounting functionality to capture financial transactions, map to and export data to the general ledger system
- Integrated document imaging with bar-coding capability for process automation
- Online ad-hoc queries and reports
- Seminar scheduling
- Application management tools

Based on the anticipated benefits listed above, RIO believes there is an opportunity for post implementation efficiencies that could result in future budget reductions in the TFFR pension program. Potential budget reductions are not quantifiable at this point in the project planning. However, if TFFR is able to automate current pension administration processes with a new system and transition to secure digital communications with members and employers, at a minimum, it is expected to save printing and mailing costs and allow users to better utilize their skills and knowledge in other needed areas of retirement program administration.

In order to successfully complete the project within the anticipated project timeline (2-3 years), it will be necessary to maintain all current budget and staffing levels in order to re-engineer business processes and maintain adequate service levels during the implementation.

Cost to Upgrade or Replace Current PAS:

To estimate the cost to upgrade or replace the current PAS, RIO reviewed market value research conducted by a nationwide IT consulting firm specifically focused on addressing the operational and technological challenges of retirement benefits administration organizations. Two approaches were used in developing the budget estimate for this project. In these analyses, key parameters such as plan members, employers, users, and market value of assets were matched against a large database of other state and local pension systems, and averaged to those that are similar to TFFR to determine an estimate. Additionally, RIO staff worked with state ITD in project planning and identifying other potential costs for this project. RIO's original estimated project cost was $9.139 million, however the Senate approved $9 million which is included in Engrossed SB 2022. The $9 million includes budget estimates for:

- External vendor costs for software licensure, implementation, deployment, and post implementation maintenance and support.
- External consulting costs including procurement assistance, project management, oversight support, quality assurance, and business process improvement and reengineering.
- Internal consulting costs for ITD project management, ITD oversite, AGO legal fees, temporary salaries, and other project costs and contingencies.

It is important to note that **IF** a **system upgrade** by TFFR's current pension software vendor is selected, the cost could be much less than the $9 million project cost estimate for a **system replacement** by a different vendor. Upgrades by a current vendor to a newer software version typically cost less, have a shorter timeline, require less staff training, and carry less risk than a complete system replacement utilizing a new vendor. (See Vendor Selection and Project Oversight.)

With over 22,200 active, inactive, and retired members, a $9 million one-time cost is approximately $ 405 per member, or spread over 10 years (expected software life), about $40 per member. If the project costs less, for example $6 million, it would be about $270 per member, or about $27 per member over 10 years. Based on June 30, 2018 TFFR market value of $2.53 billion, a $9 million cost is approximately 0.36% (36/100 of 1%). A $6 million cost is about 0.24% (24/100 of 1%).

As part of our study, RIO staff also received a demo of the current web-based PERS pension administration software which utilizes a different vendor than TFFR. Through our discussions with PERS, we determined that while TFFR and PERS perform some similar pension administration functions, TFFR and PERS members are different, and most employers are different. Additionally, TFFR and PERS pension programs are administered by two separate agencies, so processes and procedures require different customizations and implementations. Even if the same vendor was utilized by both TFFR and PERS, each system requires different structures, configuration, and deployment. The RFP selection process will identify if any cost savings could be achieved by utilizing the same pension software vendor for both TFFR and PERS. Regardless, discussions with PERS regarding their pension software, implementation project, and costs have been very helpful, and we appreciate their willingness to share information.

Vendor Selection and Project Oversight

If the Legislature approves this one-time spending for the TFFR pension system upgrade or replacement project, RIO will follow all state statutes and ITD guidelines for a major IT project. RIO will work with state ITD and state Procurement in the consultant and vendor selection process. As required by state law, RIO will utilize the state's procurement process to select a consultant and a software vendor for the project to ensure a fair and competitive bidding process. RIO's current pension software vendor, and many other pension software vendors (including PERS' vendor) will be invited to submit formal proposals which will be closely scrutinized to determine the best long term solution for the best price for this important IT project. The TFFR Board must give final approval to hire both the project consultant and software vendor.

Project planning, management and oversight will be provided by state ITD. Project start up, status, and close out reports will be provided to ITD, SITAC, Legislative IT Committee, TFFR Board, and other interested stakeholders. As fiduciaries of the TFFR fund, the TFFR Board will closely monitor this project to ensure trust fund assets are being appropriately spent.

Concerns if Project Is Not Approved

If this project is not approved, RIO will need to continue operating the current PAS which utilizes outdated technology. Due to the high cost (and inability in some cases) of making technical improvements, RIO would be unable to re-engineer business processes and modernize operations, and would have to rely on an older system with less automation and less security. We would be unable to utilize secure digital communications with members and employers through online services.

Therefore, if the current PAS is not upgraded or replaced, RIO is subject to limited technical support, limited functionality, increased costs, increased security risks, and the potential for the current PAS to crash and not be fixed in a timely manner. This would cause many issues with daily pension administration functions (including monthly payroll to nearly 9,000 retired members). We have already had to make some costly fixes to the current software, and this is expected to increase as the software continues to age. We expect that RIO will incur increased costs to maintain and support the current PAS. Consequently, RIO may need to request an increase in the current IT line of RIO's budget contained in SB 2022 if this project is not approved.

Project Summary

While a TFFR pension administration software modernization project will be costly and time consuming, we believe it is in TFFR's best interests to make this investment now to take advantage of technology improvements and security enhancements that have been made in the years since the current software was implemented. This will allow RIO to reinvent the way it conducts business by providing significant functionality, customer service, and security improvements for over 20,000 active and retired members, 214 school districts and other participating employers, and RIO staff administering the TFFR plan.

Exhibit A (attached) provides a one-page summary of this one-time project request. Our focus is on what is the best and most cost efficient use of TFFR trust funds. These are all special fund dollars – no general funds are being requested.

CONCLUSION

Based on the information provided within this testimony, RIO respectfully requests the House approve engrossed SB2022.

SB 2022 – RIO Budget
TFFR Pension Administration Software (PAS) Modernization Project Summary

Request
- Upgrade or replace TFFR pension software with web-based system
- RIO conducted study involving ITD, Procurement, PERS, and Consultant

Risks of Current PAS
- Current system is 13-years old
- Functionality and technical architecture of client-server system is outdated
- Increased costs to maintain and support
- Limited technical support
- Limited functionality of member and employer online portals – read only
- No electronic member communication and interaction
- Inability to automate manual processes and re-engineer business processes
- Inability to utilize secure digital communi-cations w/members and employers

Benefits of PAS Upgrade or Replacement
- Web based technology is standard
- Re-engineer business processes and adopt best practices in pension administration
- Enhanced member and employer self-service and security improvements
- Straight-through-processing to automate enrollment, termination, retirement processing, calculations, communications, forms, and distribution
- Cost savings with digital communication, and reduced paper mailings
- Improved staff efficiency

Estimated Cost
- $9 million (or less) one- time
- Cost could be less for system upgrade rather than system replacement by a different vendor
- Includes external vendor costs, consulting costs, project management, and ITD, legal, and other project costs and contingencies
- Special funds – no general funds

Vendor Selection and Project Oversight
- Utilize state's procurement/RFP process to select consultant and software vendor
- Follow ITD requirements in managing major IT project
- Required reports to ITD, SITAC, Leg IT Com.
- TFFR Board contract approval and project oversight to ensure TFFR trust fund assets are being appropriately spent

Summary
- Investment in updated technology will provide necessary tools to reinvent and automate TFFR retirement program operations and processes
- Updated technology will improve functionality, customer service, efficiency, and security for TFFR members, employers, and staff

TFFR Investment Update

For the Periods Ended December 31, 2018

March 21, 2019

Note: This document contains unaudited data which is deemed to be materially accurate, but is unaudited and subject to change.

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

Connie Flanagan, Fiscal and Investment Operations Manager

Eric Chin, Senior Investment Officer

ND Retirement & Investment Office (RIO)

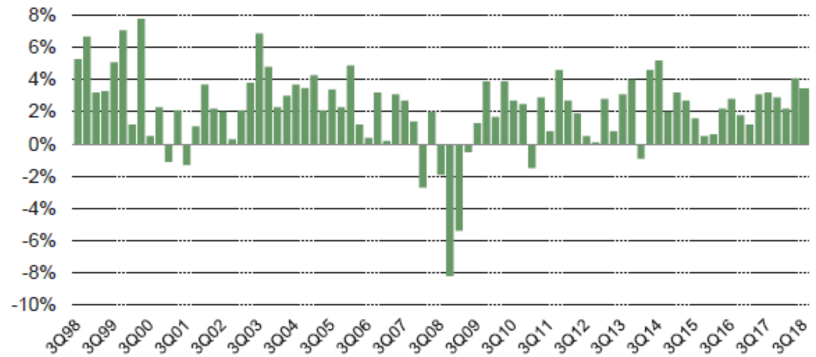
State Investment Board (SIB)

U.S. Economy

December 31, 2018

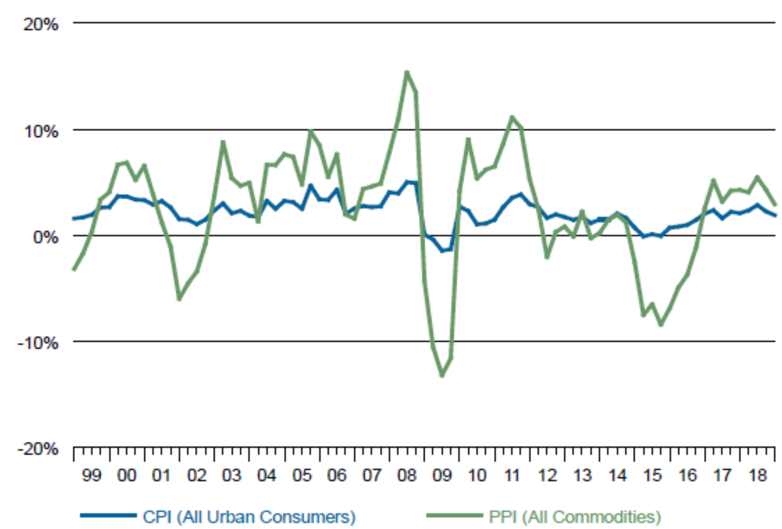
- The final revision of third quarter GDP growth came in at 3.4% (annualized)
  - Down from 4.2% in the second quarter, and revised 10 basis points lower from the first two estimates
  - Consumer spending up 3.5% (annualized); down slightly from a strong 3.8% in Q2
  - As of February 6, Federal Reserve Officials are projecting fourth quarter GDP will come in at 2.7% (annualized)
- Labor market remains strong
  - Unemployment climbed to 3.9% in December; although this was largely due to a rise in the participation rate
  - Approximately 239,000 nonfarm payrolls were added per month during the fourth quarter
- Modest inflation
  - Headline CPI climbed 1.9% in 2018, while Core CPI was up 2.2% during the year
  - Core PCE in line with Fed's 2% target
- The Fed raised rates, but strikes a more dovish tone looking ahead into 2019
  - A 25 bp hike in December brought the target range to 2.25% to 2.50%
  - The Fed's outlook for 2019 has signaled market participants to expect two rate hikes instead of the previously anticipated three

Quarterly Real GDP Growth (20 Years)



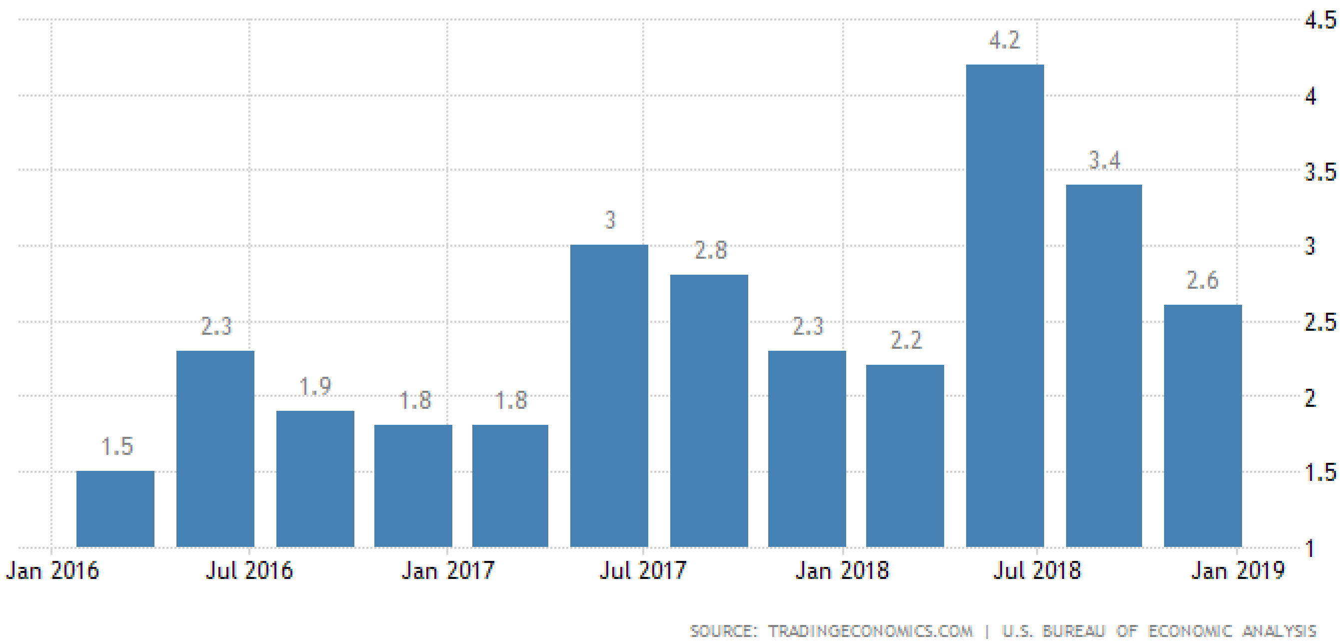
Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

U.S. Economy – Annual GDP Growth Rates

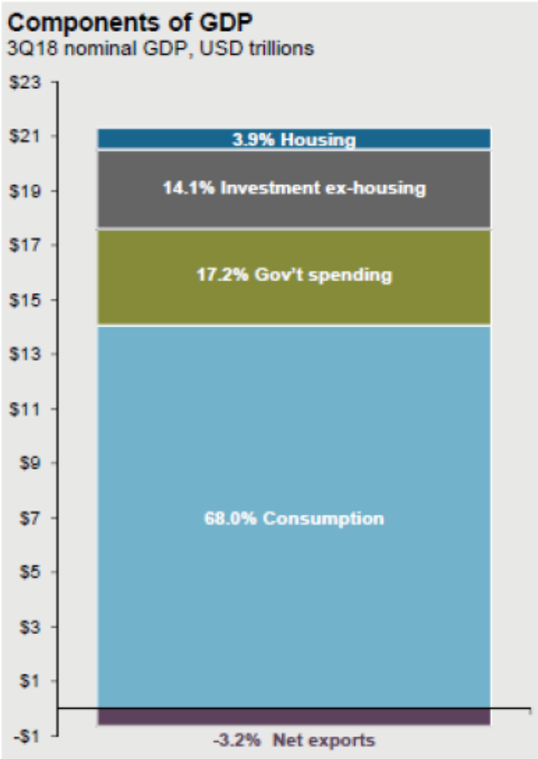


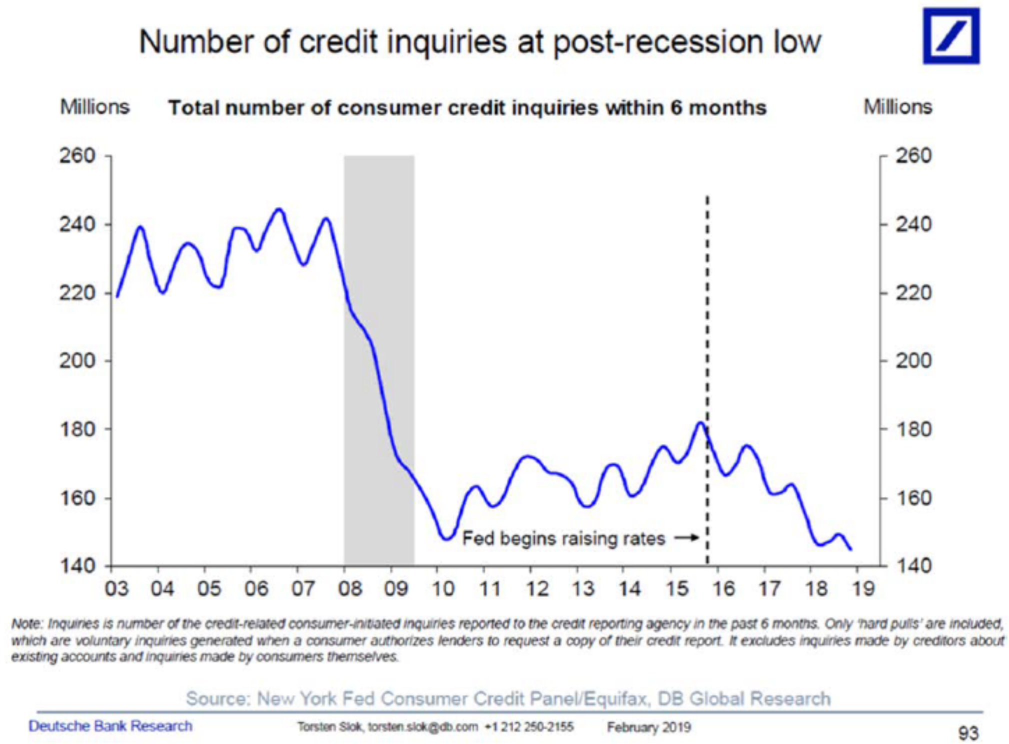
US GDP Growth Rates:

The US economy expanded at an annual growth rate of 2.6% in the 4th quarter of 2018 following a 3.4% growth rate in the third quarter and a 4.2% growth rate in the second quarter of 2018. The United States is the world's largest economy. Yet, like in the case of many other developed nations, U.S. growth rates have generally been declining in the last two decades. GDP annual growth rates in the U.S. averaged 3.2% from 1948 until 2018, reaching an all-time high of 13.4% in the 4th quarter of 1950 and a record low of -3.9% in the 2nd quarter of 2009.

Last updated March of 2019.

GDP Growth: Wassup?



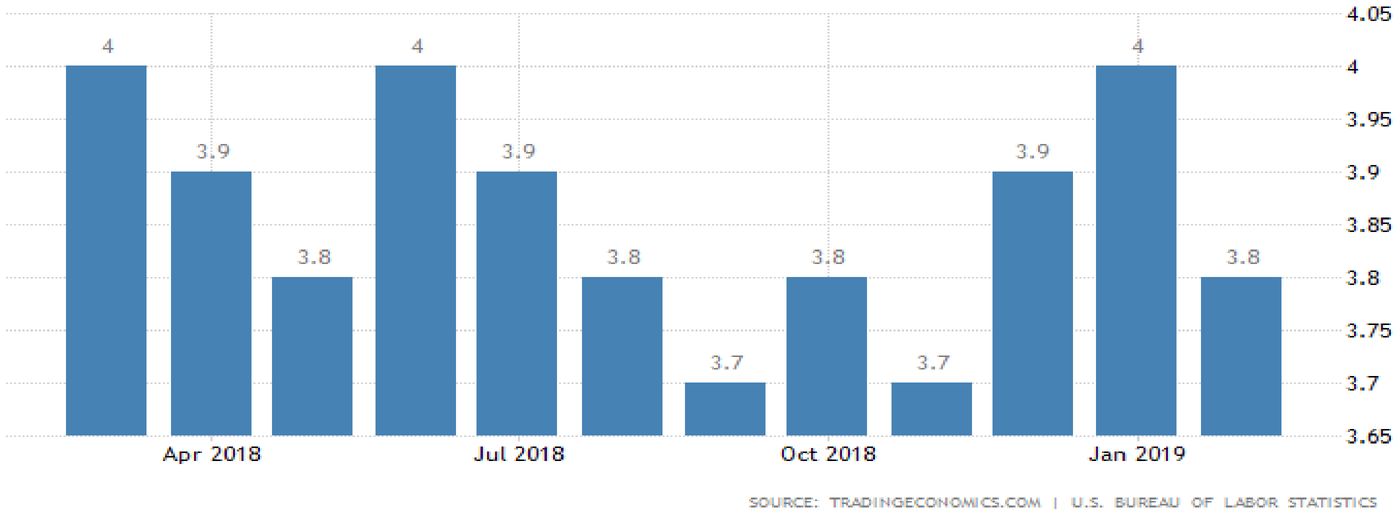


Source: JPMorgan "Guide to the Markets," December 31, 2018

Source: Torsten Sløk, Ph.D., Deutsche Bank Securities

- Over two-thirds of domestic GDP growth is driven by consumption -- consumer spending.
- There has been a relatively steady decline in credit inquiries – applications for consumer loans – since the Fed began raising short term interest rates. The Chief International Economist for Deutsche Bank Securities, Torsten Slok, suggests the chart on the right indicates that credit conditions have been tightening for awhile.

U.S. Unemployment Rates

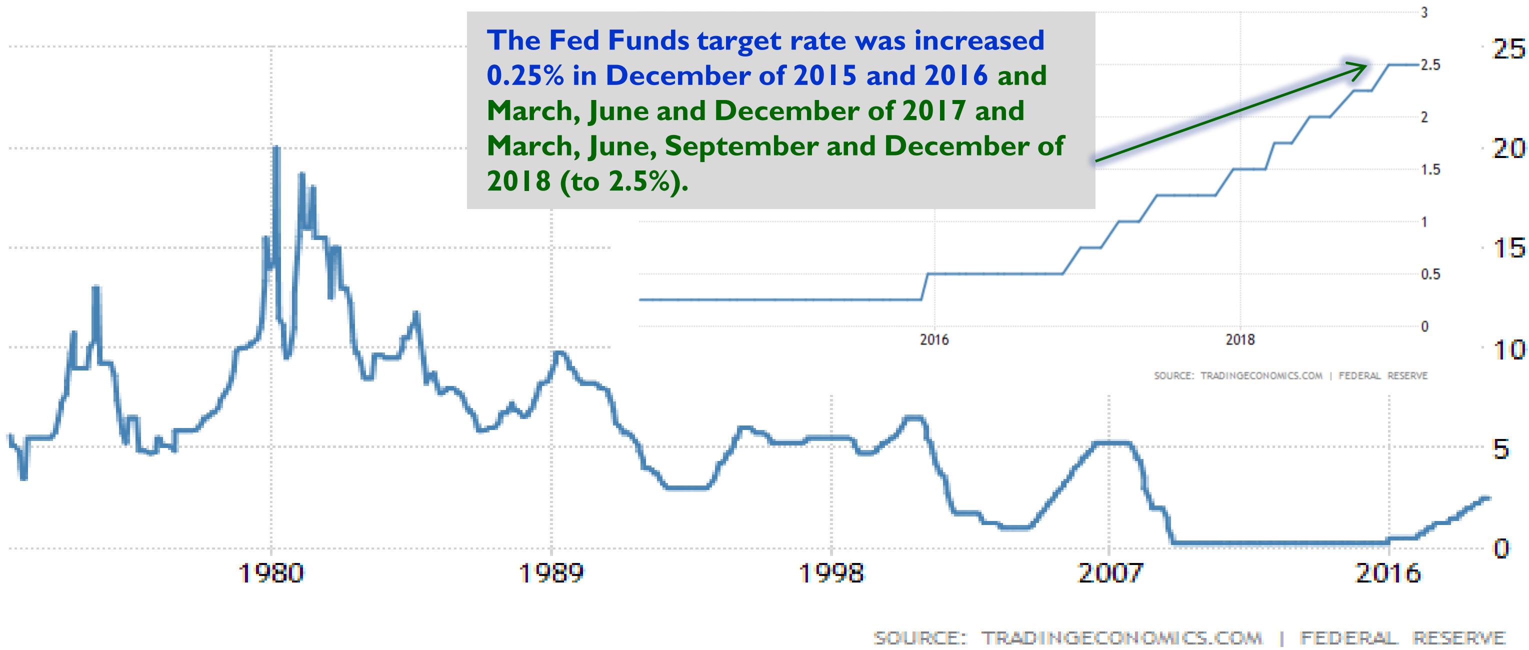


The US unemployment rate fell to 3.8% in February of 2019 from 4% in the previous month & below expectations of 3.9%. The number of unemployed decreased by 300,000 to 6.2 million.

Unemployment Rates in the United States averaged 5.8% from 1948 until 2018, reaching an all time high of 10.8% in November of 1982 and a record low of 2.5% in May of 1953.

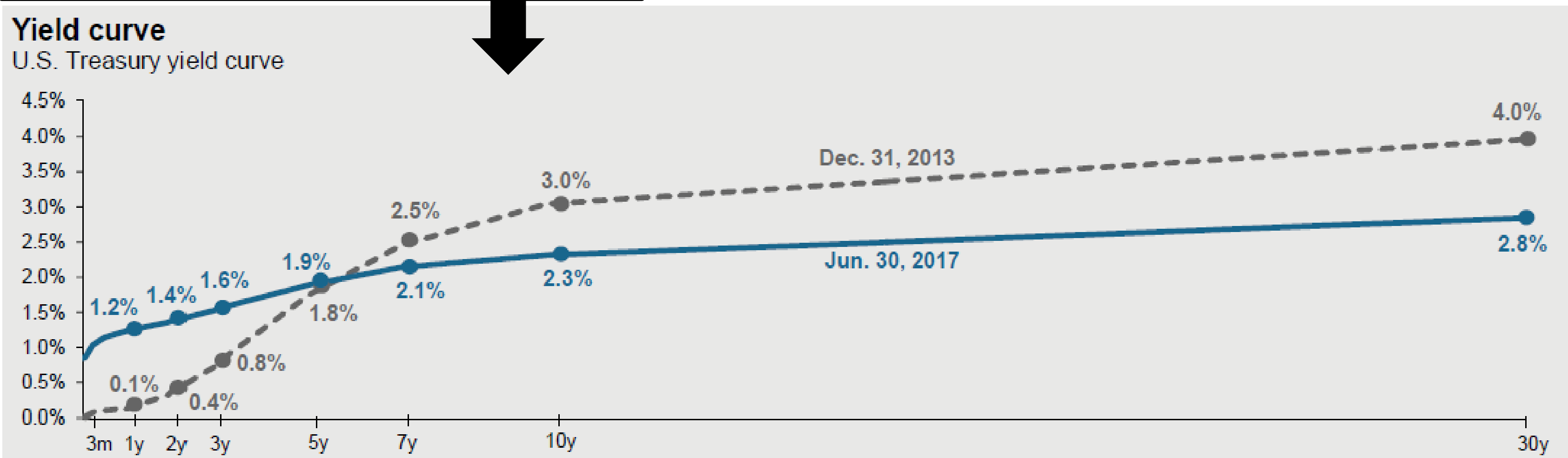
U.S. Fed Funds Rate (1971 to 2018)

Background: The **federal funds rate** is the interest rate at which banks lend reserve balances to other banks overnight (on an uncollateralized basis). Banks with surplus balances lend to those in need of larger balances. Reserve balances are held at the Federal Reserve to maintain the banks' reserve requirements. **Changes in the federal funds rate trigger a chain of events that affect other short-term interest rates,** foreign exchange rates, long-term interest rates, the amount of money and credit, and, ultimately, a range of economic variables, including employment, output, and prices of goods and services. The Federal Reserve uses "monetary policy" to influence the availability and cost of money and credit to help promote national economic goals.

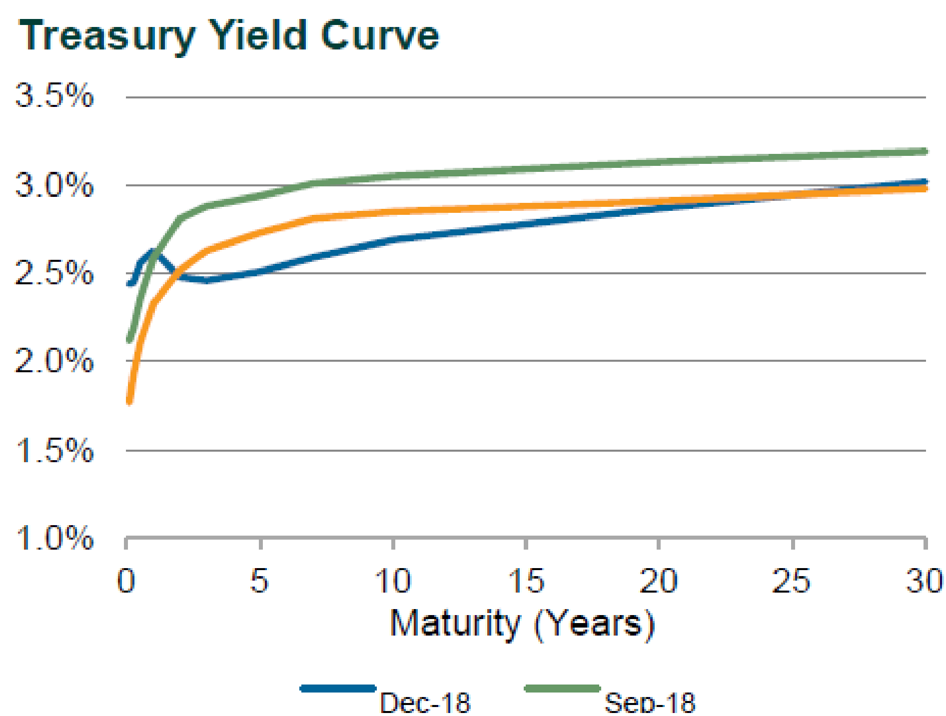


The Federal Reserve has raised the target range for federal funds four (4) times in 2018, three (3) times in 2017 and once each in December of 2016 and 2015. Interest Rates in the United States averaged 5.8% from 1971 until 2017, reaching an all time high of 20% percent in March of 1980 and a record low of 0.25% in December of 2008.

UST Yield Curve 12/31/13 vs 6/30/17:



U.S.Treasury Yield Curve
Sep.30, 2018 to Dec. 31, 2018:



TFFR Investment Ends – December 31, 2018

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 investment return, (b) standard deviation and (c) risk adjusted excess return, to the client's policy benchmark over 5 years.

	1 Yr Ended 12/31/2018	3 Yrs Ended 12/31/2018	5 Yrs Ended 12/31/2018	Risk 5 Yrs Ended 12/31/2018	Risk Adj Excess Return 5 Yrs Ended 12/31/2018
Total Fund Return - Net	-4.05%	6.29%	5.06%	6.0%	0.28%
Policy Benchmark Return	-3.31%	5.71%	4.46%	5.5%	
Excess Return	-0.74%	0.58%	0.60%	108%	

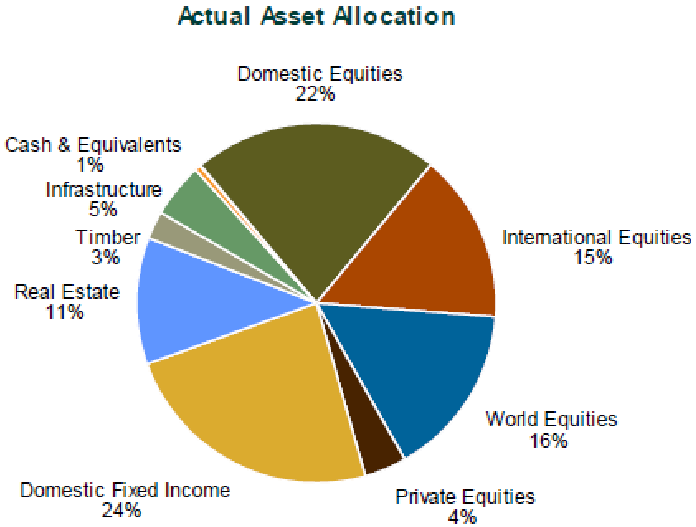
Key Point: TFFR investments have averaged nearly **$2.2 billion** during the last 5-years and Excess Return has averaged over **0.50%** per annum. Based on these values, **TFFR's use of active management has enhanced Net Investment Returns by $55 million for the 5-years ended Dec. 31, 2018** (or $2.2 billion x 0.50% = $11 million x 5 years = $55 million). This Excess Return has been achieved while adhering to prescribed **Risk** limits (e.g. **108%** versus a policy limit of 115%).

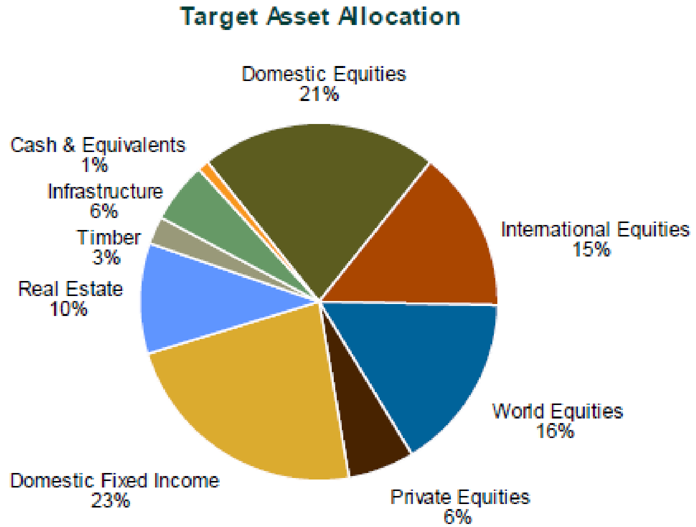
Current Policy Benchmark: 58% Equity (31% U.S., 21% Non-U.S., 6% Private); **23% Fixed Income** (16% U.S., 7% High Yield); **18% Real Assets** (10% Real Estate; 5.7% Infrastructure; 2.3% Timber); and **1% Cash.**

TFFR Allocation

As of December 31, 2018

TFFR's Actual Asset Allocations are within 3% of Target noting the Private Equity Underweight of 2.2% is PARTIALLY offset by an Overweight allocation to Domestic and International Equity of 1.3%.





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equities	514,931	22.1%	21.4%	0.7%	16,662
International Equities	353,141	15.2%	14.6%	0.6%	13,201
World Equities	363,598	15.6%	16.0%	(0.4%)	(8,939)
Private Equities	89,380	3.8%	6.0%	(2.2%)	(50,322)
Domestic Fixed Income	556,803	23.9%	23.0%	0.9%	21,281
Real Estate	265,539	11.4%	10.0%	1.4%	32,703
Timber	58,458	2.5%	2.5%	0.0%	249
Infrastructure	114,521	4.9%	5.5%	(0.6%)	(13,538)
Cash & Equivalents	11,986	0.5%	1.0%	(0.5%)	(11,298)
Total	2,328,357	100.0%	100.0%		

Periodic Table of Investment Returns
for Periods Ended December 31, 2018

Asset Class Performance

	Last Quarter	Last 2 Quarters	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
Best	Blmbg:Aggregate 1.6%	NCREIF:NFI-ODCE Val Wt Nt 3.4%	NCREIF:NFI-ODCE Val Wt Nt 7.4%	MSCI:EM Gross 9.7%	NCREIF:NFI-ODCE Val Wt Nt 9.4%	S&P:500 13.1%	MSCI:EM Gross 8.8%
	NCREIF:NFI-ODCE Val Wt Nt 1.5%	Blmbg:Aggregate 1.7%	3 Month T-Bill 1.9%	S&P:500 9.3%	S&P:500 8.5%	Russell:2000 Index 12.0%	NCREIF:NFI-ODCE Val Wt Nt 7.5%
	3 Month T-Bill 0.6%	3 Month T-Bill 1.1%	Blmbg:Aggregate 0.0%	Russell:2000 Index 7.4%	Russell:2000 Index 4.4%	MSCI:EM Gross 8.4%	Russell:2000 Index 7.4%
	MSCI:EM Gross (7.4%)	S&P:500 (6.9%)	S&P:500 (4.4%)	NCREIF:NFI-ODCE Val Wt Nt 7.3%	Blmbg:Aggregate 2.5%	MSCI:EAFE 6.3%	S&P:500 5.6%
	Blmbg:Commodity Price Idx **(10.0%)**	MSCI:EM Gross (8.3%)	Russell:2000 Index (11.0%)	MSCI:EAFE 2.9%	MSCI:EM Gross 2.0%	NCREIF:NFI-ODCE Val Wt Nt 6.0%	Blmbg:Aggregate 4.5%
	MSCI:EAFE (12.5%)	MSCI:EAFE (11.4%)	Blmbg:Commodity Price Idx **(13.0%)**	Blmbg:Aggregate 2.1%	3 Month T-Bill 0.6%	Blmbg:Aggregate 3.5%	MSCI:EAFE 3.5%
	S&P:500 (13.5%)	Blmbg:Commodity Price Idx **(12.2%)**	MSCI:EAFE (13.8%)	3 Month T-Bill 1.0%	MSCI:EAFE 0.5%	3 Month T-Bill 0.4%	3 Month T-Bill 1.9%
Worst	Russell:2000 Index (20.2%)	Russell:2000 Index (17.3%)	MSCI:EM Gross (14.2%)	Blmbg:Commodity Price Idx **(0.8%)**	Blmbg:Commodity Price Idx **(9.4%)**	Blmbg:Commodity Price Idx **(4.2%)**	Blmbg:Commodity Price Idx **(0.1%)**

Last year, Private Real Estate (NCREIF) returned 7.4% and U.S. Fixed Income (Blmbg. Aggregate) was flat, while public equities declined with Large Cap U.S. Equity (S&P 500) outperforming U.S. Small Cap, International Developed and Emerging Markets Equity.

Callan

Executive Summary for periods ended Dec. 31, 2018

Investment Performance Update –

- **TFFR earned a net investment return of -4.05% for the 1-year ended Dec. 31, 2018 versus a policy benchmark of -3.31%.** TFFR's U.S. equity portfolio earned -4.1% last year (versus -6.2% for the Russell 3000) while TFFR's international equity strategies returned -16.0% last year (versus a -14.1% benchmark). TFFR's world equity portfolio underperformed the MSCI World Equity benchmark (actual -12.1% versus index -8.7%) primarily due to both of our world equity managers (most notably LSV, with a small cap, value tilt, and to a lesser extent, Epoch) posting historically poor returns (since inception). Private Equity returns were up 5.5% driven by recent vintages, but still trailed overall expectations. TFFR's fixed income returns were muted against a backdrop of rising short-term rates but exceeded benchmarks with Investment Grade posting a slight 0.72% gain (versus 0.01% for the Bloomberg U.S. Aggregate) while High Yield earned 2.7% last year (versus a -2.1% benchmark). Real Assets earned 4.8% last year (versus 5.6% benchmark) as results were mixed with real estate up 6.6% and infrastructure up 3.6%, while Timber declined 0.6% (versus the NCREIF Timber Index which increased 3.4% last year).
- **Asset allocation is the primary driver of returns noting that TFFR target allocation is 58% Equity, 23% Fixed Income, 18% Real Assets and 1% Cash. TFFR earned a net return of 5.1% for the 5-years ended December 31, 2018, which exceeded the performance benchmark of 4.5% (but trailed the long-term actuarial assumption of 7.75%).**
- Based on Callan's Public Fund Sponsor Database, TFFR returns were ranked in the **27th** percentile for the 5-years ended 12/31/18 on an unadjusted risk basis (and **3rd** percentile on an asset allocation adjusted basis).

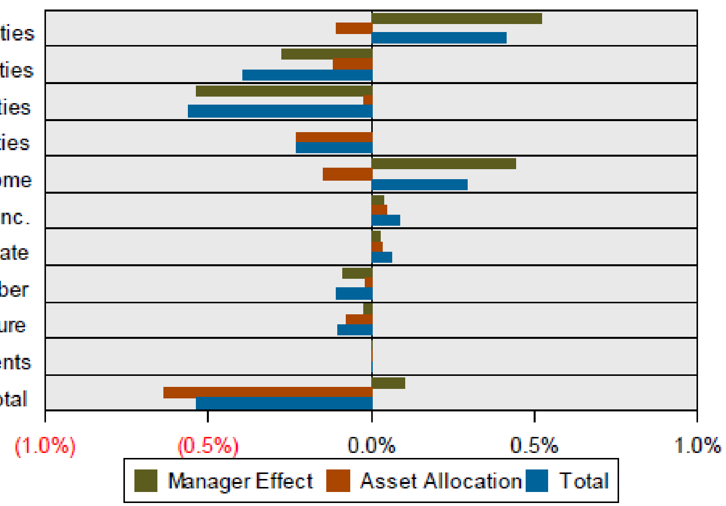
Changes in Asset Class Portfolio Structures and Approaches –

- In 2017, the SIB approved structural changes to eliminate agency MBS and international debt strategies. These changes are expected to improve risk adjusted returns within the Pension Pool largely due to the elimination of international debt with low expected returns and high expected volatility. **In order to implement these changes, the Fixed Income allocation was revised to reduce Investment Grade to 16% (from 19%) and increase High Yield to 7% (from 4%), while remaining constant at 23% in aggregate.**

TFFR Performance and Attribution

As of December 31, 2018

One Year Relative Attribution Effects



Returns for 1 Year Ended 12/31/2018

Return Type	Return (%)
Gross	-3.85%
Net of fees	-4.05%
Target	-3.31%
Net added	-0.74%

One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	(3.96%)	(6.16%)	0.52%	(0.11%)	0.41%
International Equities	16%	15%	(15.83%)	(14.14%)	(0.28%)	(0.12%)	(0.39%)
World Equities	16%	16%	(11.82%)	(8.71%)	(0.54%)	(0.02%)	(0.56%)
Private Equities	3%	6%	5.46%	5.46%	0.00%	(0.23%)	(0.23%)
Domestic Fixed Income	22%	22%	1.39%	(0.72%)	0.44%	(0.15%)	0.29%
International Fixed Inc.	1%	0%	-	-	0.04%	0.05%	0.08%
Real Estate	10%	10%	6.98%	6.72%	0.03%	0.03%	0.06%
Timber	2%	2%	(0.56%)	3.44%	(0.09%)	(0.02%)	(0.10%)
Infrastructure	5%	6%	4.09%	4.63%	(0.02%)	(0.08%)	(0.10%)
Cash & Equivalents	1%	1%	1.97%	1.87%	0.00%	0.00%	0.00%
Total			**(3.85%) =**	**(3.31%) +**	**0.10% +**	**(0.64%)**	**(0.54%)**

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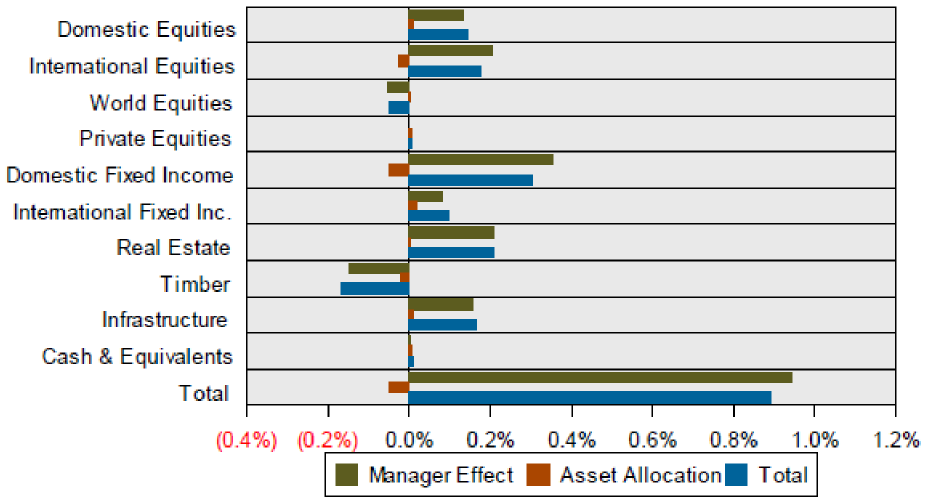
TFFR Performance and Attribution

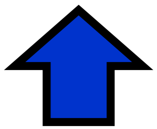
As of December 31, 2018

Five Year Annualized Relative Attribution Effects



Returns for 5 Year Ended 12/31/2018

Return Type	Return (%)
Gross	5.35%
Net of fees	5.06%
Target	4.46%
Net added	0.60%



Five 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 Equities	23%	21%	8.04%	7.42%	0.13%	0.01%	0.14%
International Equities	15%	15%	1.94%	0.69%	0.20%	(0.03%)	0.17%
World Equities	16%	16%	4.22%	4.56%	(0.05%)	0.00%	(0.05%)
Private Equities	4%	6%	1.44%	1.44%	0.00%	0.01%	0.01%
Domestic Fixed Income	19%	18%	4.65%	2.76%	0.35%	(0.05%)	0.30%
International Fixed Inc.	4%	4%	-	-	0.08%	0.02%	0.10%
Real Estate	10%	10%	11.51%	9.33%	0.21%	0.00%	0.21%
Timber	3%	4%	0.27%	4.98%	(0.15%)	(0.02%)	(0.17%)
Infrastructure	4%	5%	5.49%	1.89%	0.16%	0.01%	0.16%
Cash & Equivalents	1%	1%	0.74%	0.63%	0.00%	0.01%	0.01%
Total			**5.35% =**	**4.46% +**	**0.94% +**	**(0.05%)**	**0.89%**

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Comparison of Major Asset Class Returns vs. Benchmark

Global Equities earned -1.45% for the 1-year ended Dec. 31, 2018, which was 1.45% below the benchmark, while the 5-year return of 4.64% surpassed the benchmark of 4.39% by 0.25%. LSV, our largest global (or world) equity manager underperformed by 5.6% last year.

Global Fixed Income earned 2.04% last year and 4.01% the last 5-years due to strong returns in U.S. Debt including high yield & private credit offset by weaker returns in International Debt and Long Term Treasuries due to rising rates.

Global Real Assets earned 4.77% last year and 7.49% the last 5-years with Real Estate and Infrastructure generally surpassing benchmarks while Timber trailed the NCREIF Timber Index by 5%.

<u>Every major asset class outperformed their respective benchmarks for the 5-years ended Dec. 31, 2018</u>, with strong returns in most sub-asset classes other than Private Equity and Timber.

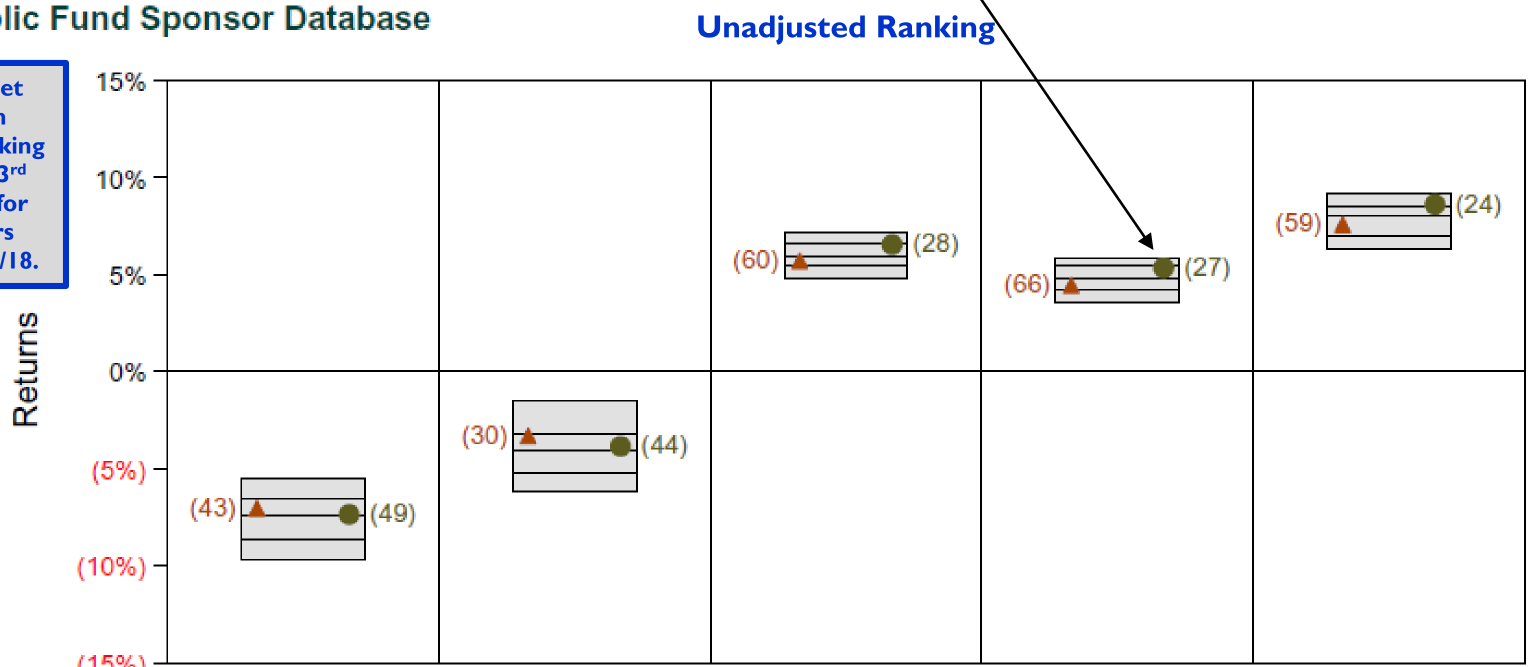
TFFR Asset Allocation

	Target Allocation	1-Year	5-Year
Global Equity	58%	-9.09%	4.64%
Actual		-7.64%	4.39%
Benchmarck		-1.45%	0.25%
Global Fixed Income	23%	2.04%	4.01%
Actual		0.26%	2.40%
Benchmarck		1.78%	1.61%
Global Real Assets	18%	4.77%	7.49%
Actual		5.62%	6.43%
Benchmarck		-0.85%	1.06%
Cash Equivalents	1%	1.97%	0.74%
Actual		1.87%	0.63%
Benchmarck		0.10%	0.11%
TFFR - Total Fund	100%	-4.05%	5.06%
Actual		-3.31%	4.46%
Benchmarck		-0.74%	0.60%

TFFR's "gross" returns were ranked in the 27th percentile for the 5-years ended Dec. 31, 2018, based on Callan's "Public Fund Sponsor Database".

Callan Public Fund Sponsor Database

TFFR's asset allocation adjusted ranking was in the 3rd percentile for the 5-years ended 12/31/18.



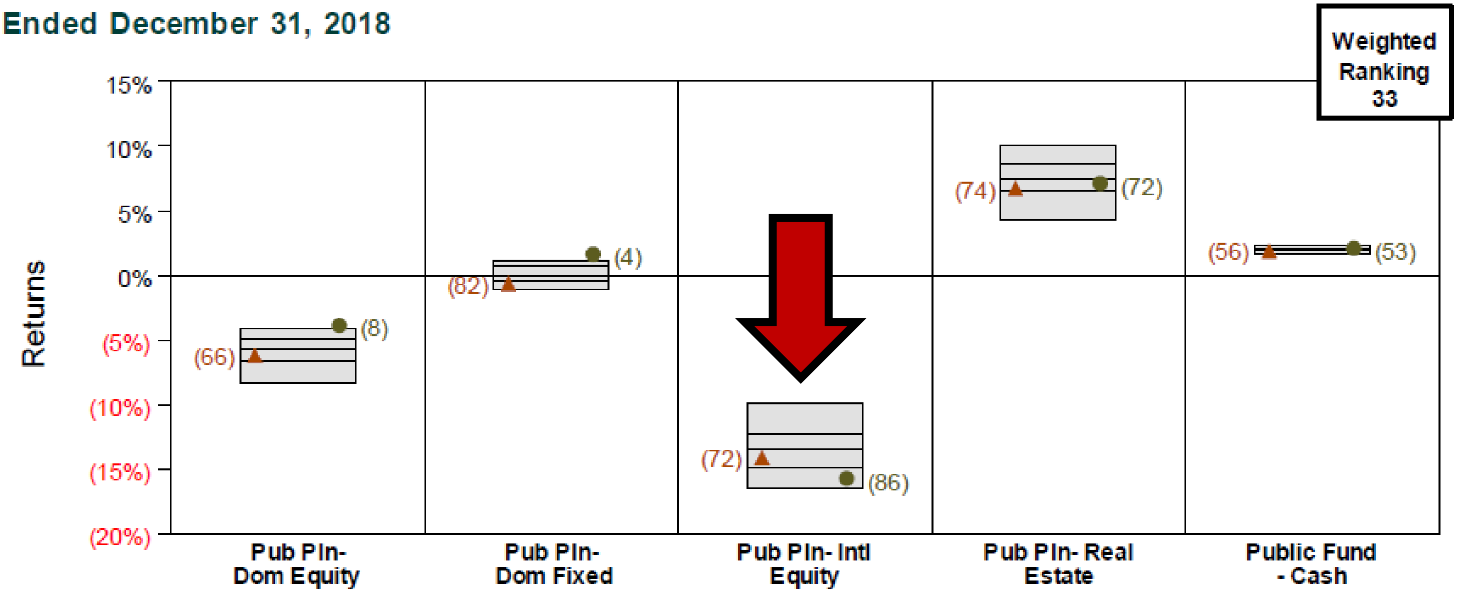
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 8-1/2 Years
10th Percentile	(5.50)	(1.54)	7.21	5.90	9.14
25th Percentile	(6.55)	(3.21)	6.65	5.45	8.55
Median	(7.42)	(4.11)	5.97	4.76	8.01
75th Percentile	(8.62)	(5.22)	5.43	4.26	6.99
90th Percentile	(9.66)	(6.19)	4.78	3.53	6.35
Total Fund ●	(7.36)	(3.85)	6.55	5.35	8.63
Policy Target ▲	(7.05)	(3.31)	5.72	4.46	7.59

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% Blmbg Aggregate, 16.0% MSCI World, 11.8% MSCI World ex US, 10.0% NCREIF Total Index, 7.0% Blmbg HY 2% Iss Cap, 6.0% NDSIB TFFR - Private Equity, 4.8% Russell 2000 Index, 2.8% MSCI EM, 2.8% NCREIF NFI-ODCE Eq Wt Net, 2.8% CPI All Urban Cons lagged 3 months, 2.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

Asset Class Composite Results

Consolidated Pension Trust Asset Class Results vs. Other Public Pension Funds

Total Asset Class Performance
One Year Ended December 31, 2018



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	(4.16)	1.17	(9.88)	10.02	2.31
25th Percentile	(4.91)	0.68	(12.31)	8.64	2.06
Median	(5.76)	(0.05)	(13.44)	7.50	1.96
75th Percentile	(6.60)	(0.41)	(14.83)	6.57	1.71
90th Percentile	(8.30)	(1.13)	(16.50)	4.29	1.67
Asset Class Composite ●	(4.01)	1.50	(15.87)	6.98	1.94
Composite Benchmark ▲	(6.22)	(0.67)	(14.14)	6.72	1.87

- International equity was the only asset class to underperform its benchmark in 2018.
- Domestic equity and domestic fixed income continued to rank in the top decile over the trailing 12-month period.

NOTE: SIB utilizes the private markets to invest in real estate, infrastructure and timber (in addition to private equity and private debt).

Global Equity, Fixed Income and Real Asset Valuations

	December 31, 2018				September 30, 2018	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Global Equities	**$1,321,050,302**	**56.74%**	**$27,915,594**	**$(195,773,708)**	**$1,488,908,415**	**58.93%**
Public Equities	**$1,231,670,597**	**52.90%**	**$30,073,509**	**$(196,322,758)**	**$1,397,919,846**	**55.33%**
World Equities	**$363,598,366**	**15.62%**	**$8,000,187**	**$(53,356,647)**	**$408,954,826**	**16.19%**
Domestic Equities	**$514,930,770**	**22.12%**	**$(759,641)**	**$(90,146,543)**	**$605,836,953**	**23.98%**
Large Cap	395,907,960	17.00%	(121,866)	(65,472,911)	461,502,737	18.27%
Small Cap	119,022,809	5.11%	(637,775)	(24,673,632)	144,334,216	5.71%
International Equities	**$353,141,462**	**15.17%**	**$22,832,963**	**$(52,819,568)**	**$383,128,067**	**15.16%**
Developed	272,267,947	11.69%	12,832,963	(46,550,354)	305,985,338	12.11%
Emerging Markets	80,873,515	3.47%	10,000,000	(6,269,214)	77,142,729	3.05%
Private Equities	**$89,379,705**	**3.84%**	**$(2,157,914)**	**$549,050**	**$90,988,569**	**3.60%**
Global Fixed Income	**$556,802,981**	**23.91%**	**$(25,370,997)**	**$3,460,066**	**$578,713,913**	**22.91%**
Domestic Fixed Income	**$556,802,981**	**23.91%**	**$(25,370,997)**	**$3,460,066**	**$578,713,913**	**22.91%**
Investment Grade	390,155,655	16.76%	(22,966,908)	5,143,101	407,979,463	16.15%
Below Investment Grade	166,647,326	7.16%	(2,404,089)	(1,683,035)	170,734,450	6.76%
Global Real Assets	**$438,517,637**	**18.83%**	**$4,146,077**	**$5,893,059**	**$428,478,502**	**16.96%**
Real Estate	**$265,538,673**	**11.40%**	**$1,078,282**	**$5,754,381**	**$258,706,009**	**10.24%**
Other Real Assets	**$172,978,965**	**7.43%**	**$3,067,794**	**$138,678**	**$169,772,493**	**6.72%**
Infrastructure	114,521,393	4.92%	3,067,794	(773,277)	112,226,875	4.44%
Timber	58,457,572	2.51%	0	911,955	57,545,617	2.28%
Cash	**$11,985,946**	**0.51%**	**$(18,558,488)**	**$192,613**	**$30,351,821**	**1.20%**
Securities Lending Income	**$0**	**0.00%**	**$(39,476)**	**$39,476**	**-**	**-**
Total Fund	**$2,328,356,867**	**100.0%**	**$(11,907,290)**	**$(186,188,494)**	**$2,526,452,651**	**100.0%**

Note: The above table is unaudited and subject to change, but deemed to be materially accurate.

TFFR Net Returns for Periods Ended Dec. 31, 2018

TFFR earned a Net Investment Return of -7.41% for the quarter ended December 31, 2018, missing the Policy Target Benchmark Return of -7.05% by 0.36%.

Equities earned -13.13% for the quarter below the benchmark of -12.26% largely due to sub-par returns for William Blair in International Equity, DFA and Wellington in International Small Cap and Axiom in Emerging Markets (on the next page).

	December-18				
		Allocation		Quarter	
	Market Value	Actual	Policy	Gross (4)	Net
TOTAL FUND	**2,328,356,868**	**100.0%**	**100.0%**	**-7.36%**	**-7.41%**
POLICY TARGET BENCHMARK				*-7.05%*	*-7.05%*
ATTRIBUTION ANALYSIS					
Asset Allocation				**-0.45%**	**-0.45%**
Manager Selection				**0.14%**	**0.09%**
TOTAL RELATIVE RETURN				-0.31%	-0.36%
GLOBAL EQUITIES	***1,321,050,304***	***56.7%***	***58.0%***	***-13.08%***	***-13.13%***
Benchmark				***-12.26%***	***-12.26%***
PUBLIC EQUITIES	***1,231,670,599***	***52.9%***	***52.0%***	***-13.89%***	***-13.94%***
Benchmark				***-13.75%***	***-13.75%***
Epoch Global Choice (1)	162,015,055	7.0%	7.0%	-12.39%	-12.54%
LSV Global Value Equity	201,583,311	8.7%	9.0%	-13.32%	-13.34%
Total Global Equities	**363,598,366**	**15.6%**	**16.0%**	**-12.91%**	**-12.99%**
MSCI World				**-13.42%**	**-13.42%**
Domestic - broad	***514,930,772***	***22.1%***	***21.5%***	***-14.89%***	***-14.93%***
Benchmark				***-15.28%***	***-15.28%***
Large Cap Domestic					
LA Capital Large Cap Growth	155,453,657	6.7%	6.6%	-15.34%	-15.40%
Russell 1000 Growth				**-15.89%**	**-15.89%**
LA Capital 60% Large Cap/40% Large Cap Active Extension	87,481,311	3.8%	3.3%	-13.04%	-13.07%
Russell 1000				**-13.82%**	**-13.82%**
NTAM - Quant Enhanced S&P 500	77,150,644	3.3%	3.3%	-12.99%	-12.99%
Clifton Group Enhanced S&P 500	75,822,350	3.3%	3.3%	-14.30%	-14.30%
S&P 500				**-13.52%**	**-13.52%**
Total Large Cap Domestic	**395,907,962**	**17.0%**	**16.6%**	**-14.19%**	**-14.21%**
Russell 1000 (2)				**-13.82%**	**-13.82%**
Small Cap Domestic					
Atlanta Capital Small Cap Equity Fund	62,900,889	2.7%	2.4%	-13.77%	-13.93%
Clifton Group Enhanced Russell 2000	56,121,921	2.4%	2.4%	-20.65%	-20.65%
Total Small Cap Domestic	**119,022,810**	**5.1%**	**4.8%**	**-17.13%**	**-17.21%**
Russell 2000				**-20.20%**	**-20.20%**
International - broad	***353,141,462***	***15.2%***	***14.5%***	***-13.49%***	***-13.53%***
Benchmark				***-11.78%***	***-11.78%***
Developed International					
NTAM - MSCI World ex-US Index	132,394,334	5.7%	5.9%	-12.65%	-12.66%
MSCI World Ex US				***-12.78%***	***-12.78%***
William Blair International Leaders	77,554,488	3.3%	3.5%	-14.75%	-14.84%
MSCI ACWI ex-US IMI (Net)				***-11.88%***	***-11.88%***
DFA Intl. Small Cap Value Portfolio (5)	32,049,336	1.4%	1.2%	-17.91%	-17.91%
Wellington International Small Cap Opportunities	30,269,789	1.3%	1.2%	-21.53%	-21.71%
S&P/Citigroup BMI EPAC < $2BN				**-16.26%**	**-16.26%**
Total Developed International	**272,267,947**	**11.7%**	**11.8%**	**-14.96%**	**-15.01%**
MSCI World Ex US (3)				**-12.78%**	**-12.78%**

TFFR Net Returns for Periods Ended Dec. 31, 2018

Fixed Income generated a 0.62% return for the 2nd fiscal quarter, outperforming the benchmark of -0.26% largely due to private market returns for Ares, Cerberus and PIMCO BRAVO II being reported on a quarterly lag. Ares, Cerberus and PIMCO BRAVO II earned 1.8%, 2.7% and 2.0%, respectively, for the quarter ended 12/31/18 (as reported in subsequent months).

	December-18				
		Allocation		Quarter	
	Market Value	Actual	Policy	Gross [4]	Net
Emerging Markets					
Axiom Emerging Markets Equity Fund (5)	57,012,794	2.4%	2.1%	-8.68%	-8.68%
DFA Emerging Markets Small Cap Portfolio (5)	23,860,721	1.0%	0.7%	-5.70%	-5.70%
Total Emerging Markets	**80,873,515**	**3.5%**	**2.8%**	**-7.80%**	**-7.80%**
MSCI Emerging Markets				***-7.47%***	***-7.47%***
Total Private Equity (5)	**89,379,705**	**3.8%**	**6.0%**	**0.72%**	**0.72%**
GLOBAL FIXED INCOME	***556,802,981***	***23.9%***	***23.0%***	***0.65%***	***0.62%***
Benchmark				***-0.26%***	***-0.26%***
Domestic Fixed Income	***556,802,981***	***23.9%***	***23.0%***	***0.65%***	***0.62%***
Benchmark				***-0.26%***	***-0.26%***
Investment Grade Fixed Income					
PIMCO Distressed Senior Credit Opportunities II (5)	38,566,335	1.7%	1.7%	-0.02%	-0.02%
Prudential Core Fixed Income	133,053,658	5.7%	5.4%	1.23%	1.23%
Bloomberg Aggregate				***1.64%***	***1.64%***
State Street Long U.S. Treasury Index NL Fund	40,449,417	1.7%	1.6%	4.17%	4.16%
Bloomberg Long Treasuries				***4.19%***	***4.19%***
PIMCO Core Plus Constrained (formerly Unconstrained)	131,768,747	5.7%	5.4%	1.16%	1.13%
Bloomberg Aggregate (4)				***1.64%***	***1.64%***
Declaration Total Return Bond Fund (5)	46,317,499	2.0%	1.9%	1.26%	1.26%
3m LIBOR				***0.69%***	***0.69%***
Total Investment Grade Fixed Income	**390,155,655**	**16.8%**	**16.0%**	**1.37%**	**1.36%**
Bloomberg Aggregate				***1.64%***	***1.64%***
Below Investment Grade Fixed Income					
Ares ND Credit Strategies	31,812,689	1.4%	1.4%	1.80%	1.80%
Cerberus ND Private Credit Fund	29,816,612	1.3%	1.3%	2.73%	2.73%
S&P LSTA Leveraged Loan B Index				***-3.29%***	***-3.29%***
Loomis Sayles High Yield	89,780,203	3.9%	3.7%	-3.68%	-3.80%
PIMCO BRAVO II (5)	15,019,967	0.6%	0.6%	2.00%	2.00%
GS Mezzanine Partners 2006 Offshore, L.P. (5)	40,383	0.0%	0.0%	6.45%	6.45%
GS Mezzanine Partners V Offshore, L.P. (5)	177,472	0.0%	0.0%	33.64%	33.64%
Bloomberg High Yield 2% Issuer Constrained Index				***-4.54%***	***-4.54%***
Total Below Investment Grade Fixed Income	**166,647,326**	**7.2%**	**7.0%**	**-1.00%**	**-1.07%**
Bloomberg High Yield 2% Issuer Constrained Index				***-4.54%***	***-4.54%***

TFFR Net Returns for Periods Ended Dec. 31, 2018

Global Real Assets earned 1.30%, surpassing the benchmark of 1.14% last quarter due to the strength of returns in private real estate. Timber returns rebounded in the quarter, while infrastructure returns were a detractor.

Cash returns were consistent with the 90-day U.S. T-Bill benchmark index.

	December-18				
		Allocation		Quarter	
	Market Value	Actual	Policy	Gross [(4)]	Net
GLOBAL REAL ASSETS	***438,517,637***	***18.8%***	***18.0%***	***1.37%***	***1.30%***
Benchmark				***1.14%***	***1.14%***
Global Real Estate					
Invesco Core Real Estate - U.S.A., L.P.	129,009,521			2.57%	2.48%
INVESCO Real Estate Fund II (5)	74,532			-3.42%	-3.42%
Invesco Real Estate Fund III, LP (5)	8,084,813			2.10%	2.10%
Invesco U.S. Value-Add Fund IV, L.P. (5)	21,420,794			2.56%	2.56%
Invesco U.S. Value-Add Fund V, L.P. (6)	-			N/A	N/A
Invesco Asia Real Estate Fund I, L.P. (5)	95,514			-5.00%	-5.00%
Invesco Asia Real Estate Fund III, L.P. (5)	1,716,749			0.60%	0.60%
JP Morgan Strategic & Special Situation Property Blend	103,004,303			1.99%	1.99%
JP Morgan Alternative Property Fund	148,017			12.62%	12.62%
JP Morgan European Opportunistic Property Fund III (5)	1,984,412			-9.55%	-9.55%
JP Morgan Greater China Property Fund (5)	19			-0.81%	-0.81%
Total Global Real Estate	**265,538,673**	**11.4%**	**10.0%**	**2.21%**	**2.17%**
NCREIF TOTAL INDEX				***1.37%***	***1.37%***
OTHER REAL ASSETS	***172,978,965***	***7.4%***	***8.0%***	***0.09%***	***-0.01%***
Benchmark				***0.84%***	***0.84%***
Timber					
TIR Teredo Timber, LLC	13,753,760	0.6%		0.91%	0.91%
TIR Springbank, LLC	44,703,812	1.9%		1.79%	1.79%
Total Timber (5)	**58,457,572**	**2.5%**	**2.5%**	**1.58%**	**1.58%**
NCREIF Timberland Index				***0.97%***	***0.97%***
Infrastructure					
Rohatyn Group Asian Infrastructure & Related Resources (5)	7,986,528	0.3%		-7.36%	-7.36%
JP Morgan Infrastructure Investments Fund (IIF)	80,978,382	3.5%		0.54%	0.34%
ISQ Global Infrastructure Fund II	6,376,124	0.3%		-23.11%	-23.11%
Macquarie Infrastructure Partners IV	2,090,317	0.1%		N/A	N/A
Grosvenor Customized Infrastructure Strategies, LP (5)	11,009,525	0.5%		0.92%	0.92%
Grosvenor Customized Infrastructure Strategies II (5)	6,080,517	0.3%		2.25%	2.25%
Total Infrastructure	**114,521,393**	**4.9%**	**5.5%**	**-0.67%**	**-0.81%**
50% NCREIF ODCE/50% CPI-U (lagged one quarter)				***0.78%***	***0.78%***
Cash Equivalents					
Northern Trust Collective STIF	5,757,489			0.59%	0.59%
Bank of ND	6,228,457			0.56%	0.56%
Total Cash Equivalents	**11,985,946**	**0.5%**	**1.0%**	**0.58%**	**0.58%**
90 Day T-Bill				***0.56%***	***0.56%***

NOTE: Monthly returns and market values are preliminary and subject to change.

TEACHERS' FUND FOR RETIREMENT
A Division of ND Retirement and Investment Office
Statement of Net Position
As of 1/31/2019

		As of 1-31-19		As of 6-30-18
ASSETS:				
INVESTMENTS (AT FAIR VALUE)				
GLOBAL EQUITIES	$	1,444,396,394	$	1,441,132,463
GLOBAL FIXED INCOME		530,739,260		589,368,951
GLOBAL REAL ASSETS		440,799,576		416,937,112
INVESTED CASH (NOTE 1)		9,923,198		28,631,157
TOTAL INVESTMENTS		2,425,858,428		2,476,069,683
RECEIVABLES				
DIVIDEND/INTEREST RECEIVABLE		7,792,400		9,765,629
CONTRIBUTIONS RECEIVABLE		(2,971,986)		26,548,463
MISCELLANEOUS RECEIVABLE		4,699		8,301
TOTAL RECEIVABLES		4,825,113		36,322,393
OTHER ASSETS				
INVESTED SECURITIES LENDING COLLATERAL (NOTE 2)		9,296,942		7,413,200
OPERATING CASH (NOTE 3)		19,645,362		20,486,449
FIXED ASSETS (NET OF ACCUM DEPR)		6,749		6,749
TOTAL ASSETS		2,459,632,594		2,540,298,474
DEFERRED OUTFLOWS OF RESOURCES				
DEFERRED OUTFLOWS RELATED TO PENSIONS		736,644		813,903
LIABILITIES:				
SECURITIES LENDING COLLATERAL (NOTE 2)		9,296,942		7,413,200
ACCOUNTS PAYABLE		3,832		138,447
ACCRUED EXPENSES		1,988,084		2,395,362
INVESTMENT EXPENSES PAYABLE		459,438		459,438
TOTAL LIABILITIES		11,748,296		10,406,447
DEFERRED INFLOWS OF RESOURCES				
DEFERRED INFLOWS RELATED TO PENSIONS		48,519		48,519
NET POSITION:				
HELD IN TRUST		2,448,572,423		2,530,657,411
TOTAL NET POSITION	$	2,448,572,423	$	2,530,657,411

TEACHERS' FUND FOR RETIREMENT
A Division of ND Retirement and Investment Office
Statement of Changes in Net Position
For the Month Ended 1/31/2019

		Month Ended 1-31-19		Year-to-Date
ADDITIONS:				
INVESTMENT INCOME				
GAIN ON SALE OF INVESTMENTS	$	29,491,908	$	202,323,085
LOSS ON SALE OF INVESTMENTS		16,755,166		166,350,072
NET GAINS (LOSSES) INVESTMENTS		12,736,742		35,973,013
NET APPREC (DEPREC) MARKET VALUE		93,979,089		(78,918,912)
NET CHANGE IN FAIR VALUE OF INVESTMENTS		106,715,831		(42,945,899)
INTEREST, DIVIDEND & OTHER INVESTMENT INCOME		3,852,222		29,723,611
		110,568,053		(13,222,288)
LESS INVESTMENT EXPENSES		472,025		2,953,977
NET INCOME FROM INVESTING ACTIVITIES		110,096,028		(16,176,265)
SECURITIES LENDING INCOME		19,082		121,133
SECURITIES LENDING EXPENSES		3,815		24,218
NET SECURITIES LENDING INCOME		15,267		96,915
NET INVESTMENT INCOME		[illegible]		(16,079,350)
PURCHASE OF UNITS ($1/UNIT) (NOTE 4)		32,625,000		189,775,000
MEMBER & EMPLOYER CONTRIBUTIONS (NOTE 6)		14,774,977		63,497,007
PURCHASED SERVICE CREDIT (NOTE 7)		116,725		861,312
PENALTY & INTEREST (NOTE 8)		1,441		92,354
TOTAL ADDITIONS		157,629,438		238,146,323
DEDUCTIONS:				
BENEFITS PAID PARTICIPANTS (NOTE 9)		17,712,346		124,815,356
PARTIAL LUMP SUM BENEFITS PAID		-		959,482
REFUNDS TO MEMBER (NOTE 10)		319,570		3,618,578
TOTAL BENEFITS PAID		18,031,916		129,393,416
ADMINISTRATIVE EXPENSES		201,549		1,062,895
REDEMPTION OF UNITS ($1/UNIT) (NOTE 5)		32,625,000		189,775,000
TOTAL DEDUCTIONS		50,858,465		320,231,311
CHANGE IN NET POSITION		[illegible]		(82,084,988)
NET POSITION:				
BEGINNING OF PERIOD		2,341,801,450		2,530,657,411
END OF PERIOD	$	2,448,572,423	$	2,448,572,423

These financial statements are preliminary, unaudited and subject to change. 2/28/2019

TFFR assets declined to $2.45 billion at January 31, 2019, from $2.53 billion at June 30, 2018.

TFFR Estimated Fiscal Year To Date Returns – Feb. 28, 2019

Estimated YTD Through **2/28/2019**
(Actual returns are net of fees; estimates are gross indices)

		TFFR
Market Value	**31-Jan**	**2,433,650,826**
Total Fund Actual through	31-Jan	**-0.66%**
Total Fund Policy through	31-Jan	0.12%
	28-Feb	
MSCI World	3.01%	16.0%
Russell 1000	3.20%	16.6%
S&P 500 ex Tobacco	3.21%	0.0%
Russell 2000	5.20%	4.8%
MSCI World ex US	2.57%	11.8%
MSCI EAFE	2.55%	0.0%
MSCI Emerging Mkts	0.23%	2.8%
BC Aggregate	-0.06%	16.0%
High Yield	1.66%	7.0%
Real Estate	0.46%	10.0%
Private Equity	0.00%	6.0%
TIPS	-0.03%	0.0%
Timber	0.32%	2.4%
Infrastructure	0.06%	5.6%
ML 1-3Y Treasury	0.10%	0.0%
T-Bill	0.18%	1.0%
MSCI World 100% Hedged	3.39%	0.00%
Russell 3000	3.52%	0.00%
ML 3M LIBOR Con Mat	0.24%	0.00%
BC 9-12 M	0.21%	0.00%
Est. MTD through	**2/28/2019**	**1.74%**
Estimated FYTD Return	**2/28/2019**	**1.07%**
Estimated FYTD Policy	2/28/2019	1.85%

Comparison to 8% return assumption pro-rated FYTD
Comparison to 7.75% return assumption pro-rated FYTD ***5.09%***

The above estimates are preliminary, unaudited and subject to change.

Asset Class Performance

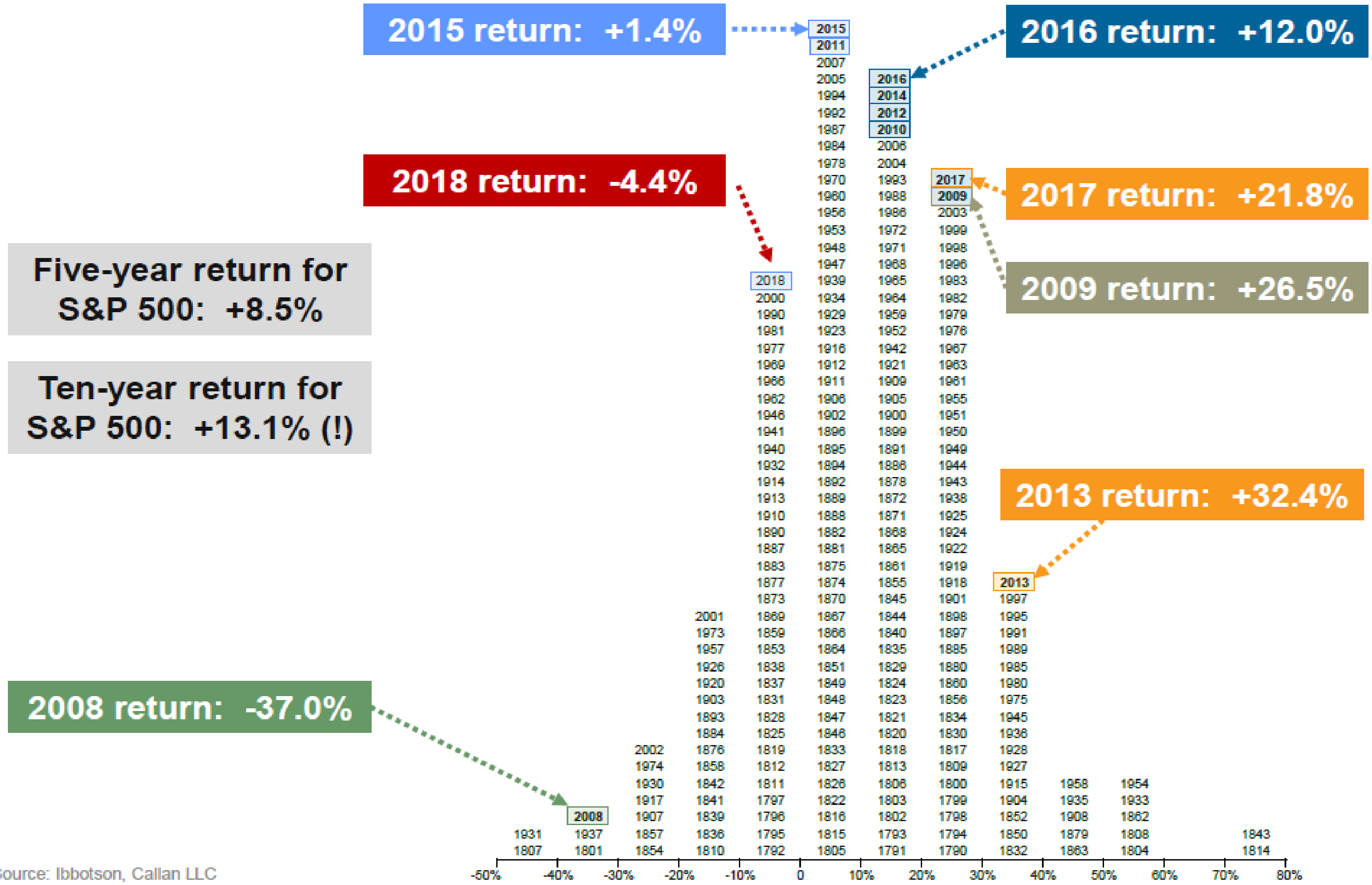
Periodic Table of Investment Returns
for Periods Ended December 31, 2018

Best → Worst

Last Quarter	Last 2 Quarters	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
Blmbg:Aggregate 1.6%	NCREIF:NFI-ODCE Val Wt Nt 3.4%	NCREIF:NFI-ODCE Val Wt Nt 7.4%	MSCI:EM Gross 9.7%	NCREIF:NFI-ODCE Val Wt Nt 9.4%	S&P:500 13.1%	MSCI:EM Gross 8.8%
NCREIF:NFI-ODCE Val Wt Nt 1.5%	Blmbg:Aggregate 1.7%	3 Month T-Bill 1.9%	S&P:500 9.3%	S&P:500 8.5%	Russell:2000 Index 12.0%	NCREIF:NFI-ODCE Val Wt Nt 7.5%
3 Month T-Bill 0.6%	3 Month T-Bill 1.1%	Blmbg:Aggregate 0.0%	Russell:2000 Index 7.4%	Russell:2000 Index 4.4%	MSCI:EM Gross 8.4%	Russell:2000 Index 7.4%
MSCI:EM Gross (7.4%)	S&P:500 (6.9%)	S&P:500 (4.4%)	NCREIF:NFI-ODCE Val Wt Nt 7.3%	Blmbg:Aggregate 2.5%	MSCI:EAFE 6.3%	S&P:500 5.6%
Blmbg:Commodity Price Idx **(10.0%)**	MSCI:EM Gross (8.3%)	Russell:2000 Index (11.0%)	MSCI:EAFE 2.9%	MSCI:EM Gross 2.0%	NCREIF:NFI-ODCE Val Wt Nt 6.0%	Blmbg:Aggregate 4.5%
MSCI:EAFE (12.5%)	MSCI:EAFE (11.4%)	Blmbg:Commodity Price Idx **(13.0%)**	Blmbg:Aggregate 2.1%	3 Month T-Bill 0.6%	Blmbg:Aggregate 3.5%	MSCI:EAFE 3.5%
S&P:500 (13.5%)	Blmbg:Commodity Price Idx **(12.2%)**	MSCI:EAFE (13.8%)	3 Month T-Bill 1.0%	MSCI:EAFE 0.5%	3 Month T-Bill 0.4%	3 Month T-Bill 1.9%
Russell:2000 Index (20.2%)	Russell:2000 Index (17.3%)	MSCI:EM Gross (14.2%)	Blmbg:Commodity Price Idx **(0.8%)**	Blmbg:Commodity Price Idx **(9.4%)**	Blmbg:Commodity Price Idx **(4.2%)**	Blmbg:Commodity Price Idx **(0.1%)**

Stock Market Returns by Calendar Year

2018 Performance in Perspective: History of the U.S. Stock Market (230 Years of Returns)



Source: Ibbotson, Callan LLC

Appendix of Supporting Materials

TFFR Update as of December 31, 2018

Callan's Quarterly Reports of investment performance are available on the following web address:
http://www.nd.gov/rio/SIB/Publications/Callan%20Quarterly%20reports/Invest%20Quarterly.htm

Board members can review monthly manager level performance using the following web address:
http://www.nd.gov/rio/rio_ref/

The SIB has no investment managers on our Watch List at this time, and there are no material legal or legislative proceedings affecting the SIB, excluding RIO's Budget Request for the 2019-21 biennium.

Option 1 – Reinstate 10%; Option 2 – SIB Additional FTE; and Option 3 – TFFR Pension Admin. System Enhancement.

RIO Budget Submission – Agency Overview

	1	2	3	4	5	6	7	8
	2017-19 Base Budget	2019-21 Base Budget Request (w/10% reduction)	Optional Adjustment #1 "Reinstate 10% Reduction"	Optional Adjustment #2 "Additional FTE"	Additional Governor's Recommendations	Total Governor's Recommendation	Optional Adjustment #3 One-time Request "Pension Admin. System Project"	Total Agency Request
Salaries & Wages	$ 4,425,570	$ 3,860,125	$ 550,194	$ 294,996	$ 304,981	$ 5,010,296	$ 50,000	$ 5,060,296
Operating Expenses	862,484	862,484	-	14,450	12,000	888,934	2,789,000	3,677,934
Contingency	52,000	82,000	-	-	-	82,000	-	82,000
Capital Assets	-	-	-	-	-	-	6,300,000	6,300,000
	$ 5,340,054	$ 4,804,609	$ 550,194	$ 309,446	$ 316,981	$ 5,981,230	$ 9,139,000	$ 15,120,230
FTE Count	19	16	3	1	-	20	-	20

Column 1: RIO's **2017-19 Base Budget** was for **$5.3 million** (including 19 FTE).

Column 2: RIO's **Base Budget** submission of **$4.8 million** reflected a 10% cut in agency expenses as OMB requested.

Column 3: **Option 1** - Given RIO's desire to maintain high quality service levels while noting that SIB investments and TFFR membership are at all-time highs. **The Governor recommended RIO "Reinstate 10% Reduction", which is greatly appreciated.**

Column 4: **Option 2** – RIO requested **$309,446** for one additional FTE (Full Time Equivalent) position to support the continued growth of the SIB investment program. **The Governor recommended approval of one "Additional FTE", which is greatly appreciated.**

Column 5: **Additional Governor Recommendations** – **The Governor included $316,981 of additional compensation and benefits for RIO which is greatly appreciated** particularly given our increasing responsibilities and 0% pay raises for the last two years.

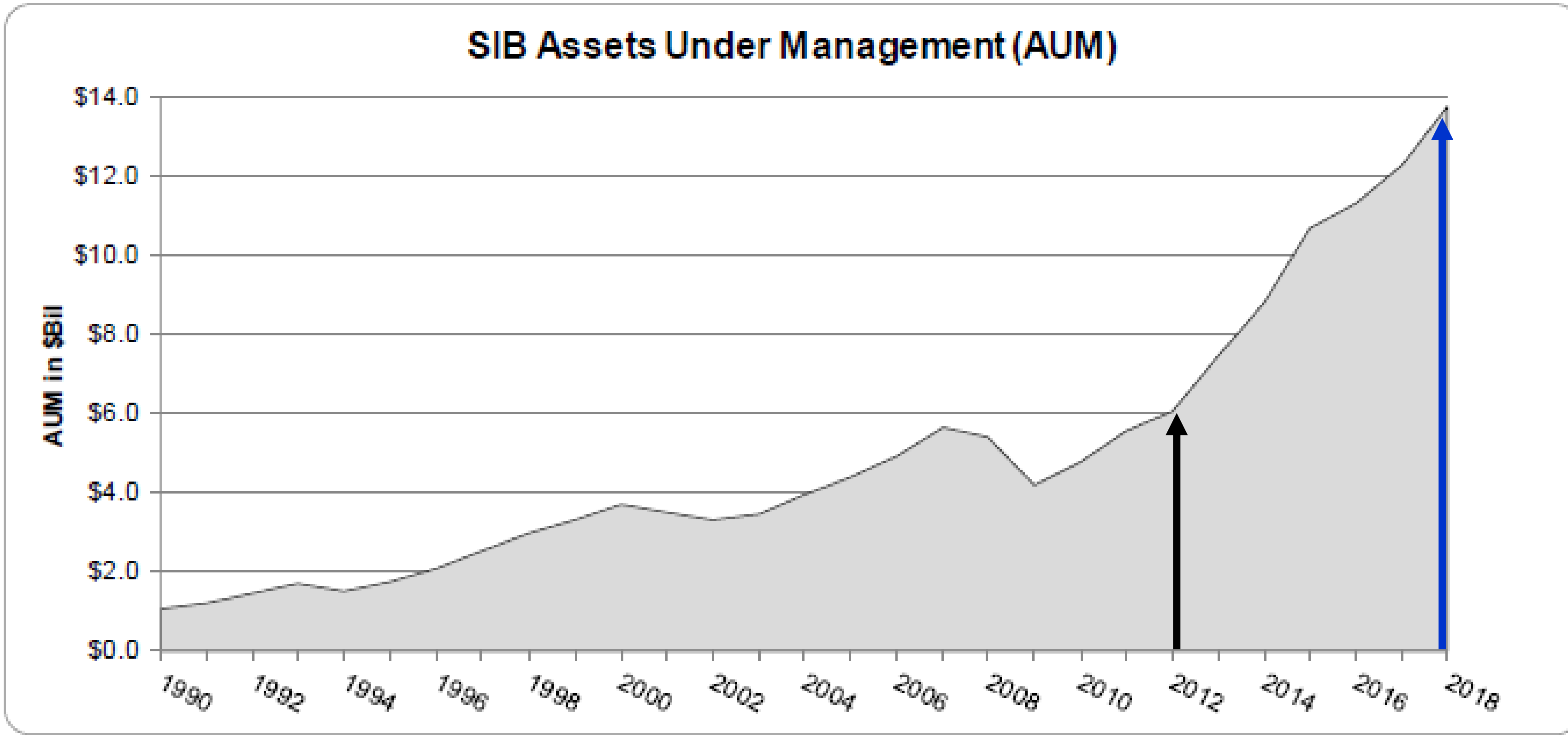
Column 6: Total Governor's Recommendation – Governor's recommendation increased RIO's budget by 12% to $5.98 million.

Column 7: **Option 3** - Given TFFR's pension administration system is 13-years old and our strong desire and need to adopt recent IT system advances, efficiencies and cybersecurity protection levels, we respectfully made a 1-time funding request for **$9.139 million**.

Column 8: RIO's Total Budget Request for 2019-21 including three optional packages is $15.12 million with 20 FTE.

The Senate effectively approved Optional Adjustment # 1 and # 2 and $9 million of Optional Adjustment # 3.

SIB Client Investments Have Doubled since 2012

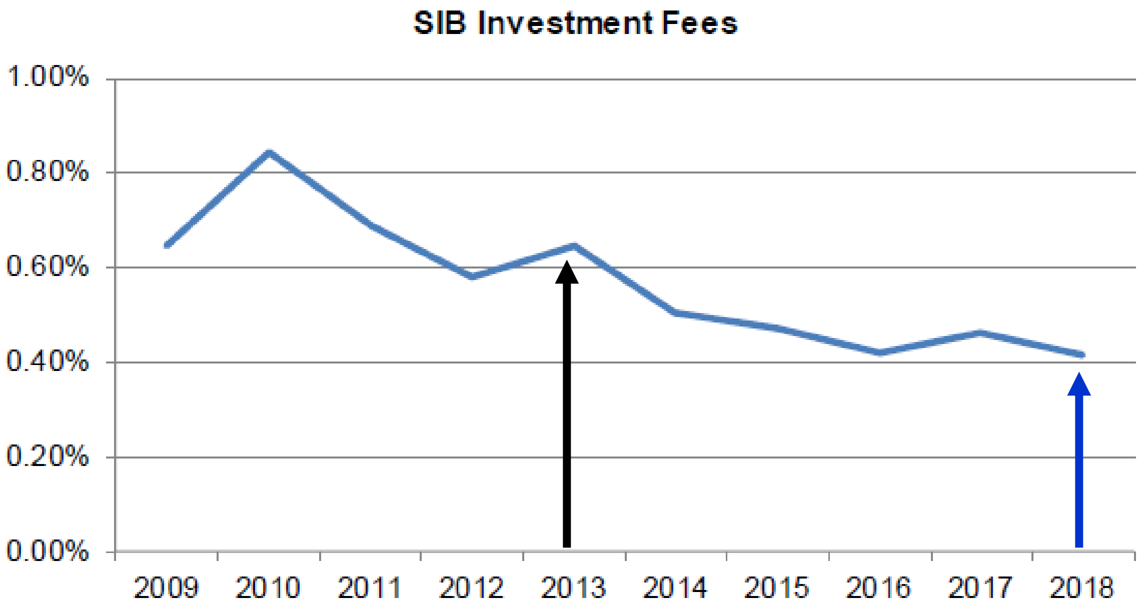


SIB clients Assets Under Management (AUM) have grown from $6 billion in 2012 to over $14 billion in 2019 largely as a result of deposits into the Legacy Fund in addition to reasonable investment earnings growth.

Despite significant growth in client services offered by both the SIB and TFFR programs, SIB and TFFR client satisfaction ratings remain solid at 3.7 for the SIB and 3.8 for TFFR (on a 4.0 grading scale).

SIB Client Investment Fees and Expenses

Investment fees have declined from 0.65% in fiscal 2013 to 0.42% in fiscal 2018 (as a % of AUM).



The SIB and RIO work to keep investment fees at or below 0.50% per year, while seeking to identify investment firms which beat their performance benchmarks by 0.50% or more (after all expenses) over the long-term.

If the SIB and RIO are successful in attaining both of the above goals, our SIB clients are effectively earning a minimum 2-for-1 return on their investment fee dollars (in the form of better returns over stated benchmarks).

The SIB and RIO were successful in attaining the above goals for nearly all of our clients in fiscal 2018 such that the use of active management generated $100 million of incremental income for our clients (in fiscal 2018).

North Dakota Teachers' Fund For Retirement

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 14, 2019**

SUBJ: **Annual Pension Plan Comparison Report – 2017 Public Fund Survey**

Attached is the Public Fund Survey for FY 2017 (published November 2018) conducted by the National Association of State Retirement Administrators (NASRA) with survey data compiled by the Center for Retirement Research at Boston College (CRRBC). This survey provides information on key characteristics of most of the nation's largest public retirement systems.

Keep in mind that the survey does not include 2018 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 2017 Public Fund Survey.

Attachment

Board Action Requested: Accept annual public pension plan comparisons report.

Public Fund Survey

SUMMARY OF FINDINGS FOR FY 2017 **NOVEMBER 2018**

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.

Beginning with fiscal year 2001, the Survey contains data on public retirement systems that provide pension and other benefits for 12.9 million active (working) members and 9.3 million annuitants (those receiving a regular benefit, including retirees, disabilitants and surviving beneficiaries). At the end of fiscal year 2017, systems in the Survey held combined assets of $3.47 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. Since FY 13, much of the survey data has been compiled by the Center for Retirement Research at Boston College as part of Public Plans Data, an online, interactive resource containing public retirement system information culled chiefly from public retirement system annual financial reports, and also from actuarial valuations, benefits guides, system websites, and input from system representatives. This report, focusing on FY 17, uses graphs to illustrate and describe changes in selected elements of the survey.

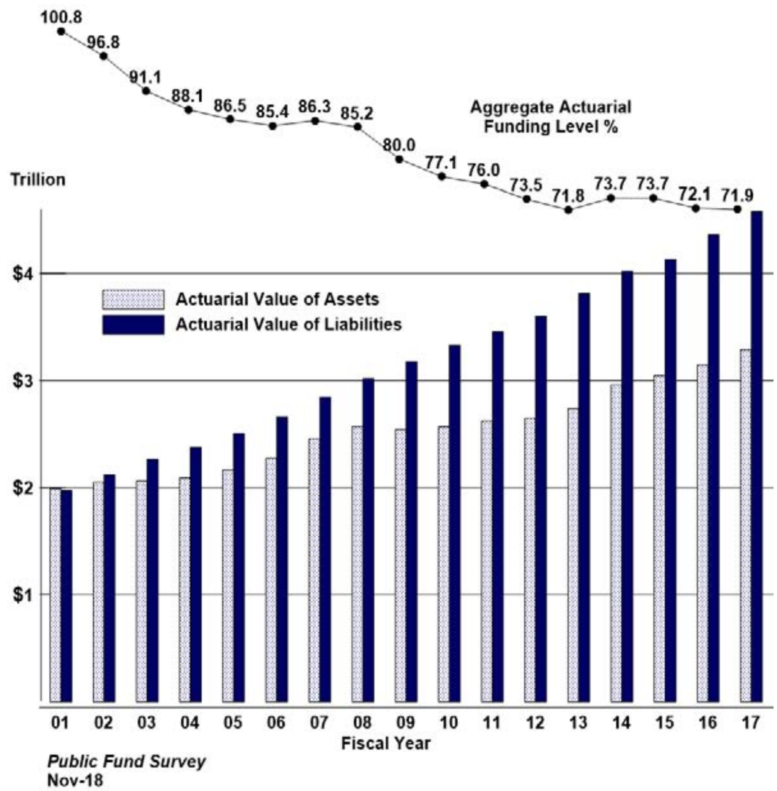
Some of the information on this page is presented in the context of changes to median, or midpoint, data. Presenting changes based on a median, rather than aggregate (total) basis, reduces the effects of very large plans and plans with extreme or exceptional results, enabling readers to focus on the experience of a more typical plan instead of results that could be skewed by the experience of one or a few outliers.

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 17 was 71.9 percent, down slightly from the prior year. The aggregate actuarial value of assets grew by 4.4 percent, from $3.15 trillion to $3.29 trillion. This value reflects changes based on the multiple timeframes pension plans use to phase in investment gains and losses, sometimes referred to as smoothing. Three plans in the survey use their funds' market value of assets to value liabilities, i.e., these plans do not phase in investment gains and losses. Combined liabilities grew from $4.36 trillion to $4.59 trillion, or 4.9 percent. Liabilities grow primarily as active plan participants accrue retirement benefit service credits and as their salaries increase.

FY 17 marks the sixth consecutive year that aggregate funding levels have been within a narrow range. Many factors combine to affect a plan's funding ratio, complexity that is increased when incorporating a large number of plans, each of which is unique in various ways pertaining to its combination of actuarial experience, methods, and assumptions. Major factors affecting the aggregate funding level include pension funds' investment returns, illustrated by Figure L, and changes in investment return assumptions, charted on Figure M. Although investment returns for most plans have exceeded assumptions for five-year periods ended in FY 17, this experience has been offset by many reductions in investment return assumptions and changes to mortality assumptions to reflect longer expected lifespans. *See the NASRA issue brief on investment return assumptions.*

Figure A



The latest individual funding levels of the 121 plans in the Survey are depicted in Figure B. 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 72.9 percent, and the range is 16.3 percent to 110.8 percent. This chart illustrates the wide distribution that exists in public pension funding levels.

Figure B

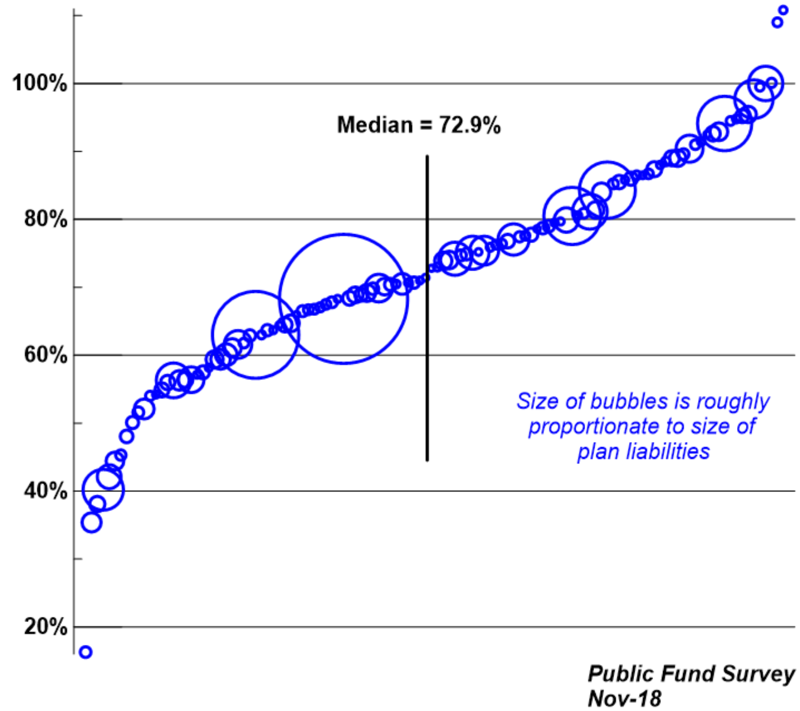
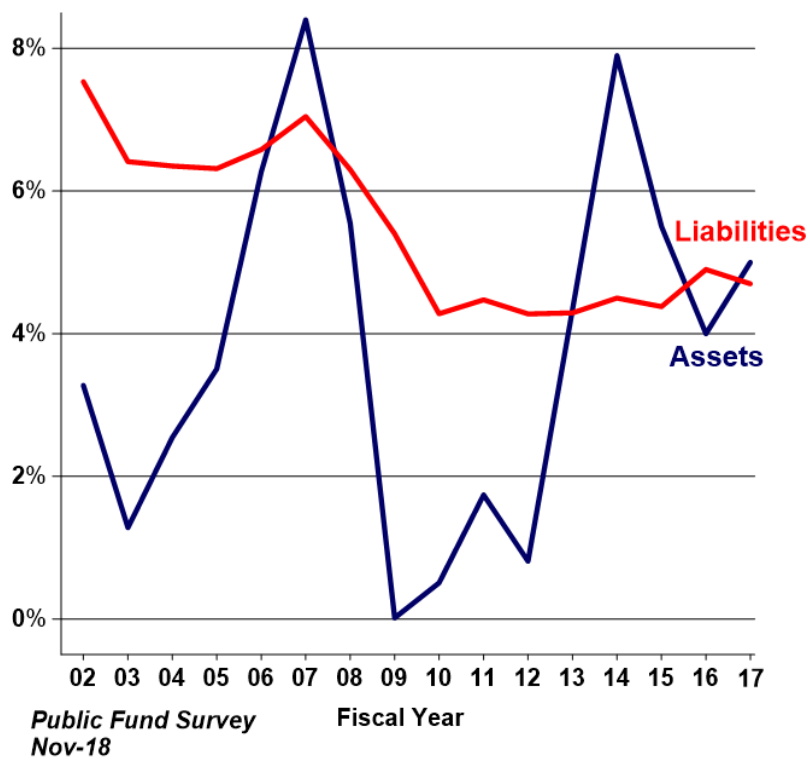


Figure C plots the median annual change among plans in the Survey in the actuarial value of assets and liabilities since FY 01. For a pension plan's funding level to improve, its actuarial value of assets must grow faster than its liabilities. For the seventh consecutive year, at a median rate below 5.0 percent, liability growth remains notably lower than historical rates. This lower rate of growth in liabilities is due to several factors, chiefly slow rates of growth in salaries and employment levels, and the effects of many reforms (chiefly reductions) in pension benefits enacted in recent years. Rates of liability growth would be lower were many plans not also reducing their investment return assumptions in recent years (see Figure M), an action that increases a plan's liabilities.

As with individual plans, the volatility in aggregate changes in asset values this measurement period also is muted compared to actual changes in market values of assets. Most plans phase in investment gains and losses over several years, a process that is intended to smooth out market volatility.

Figure C



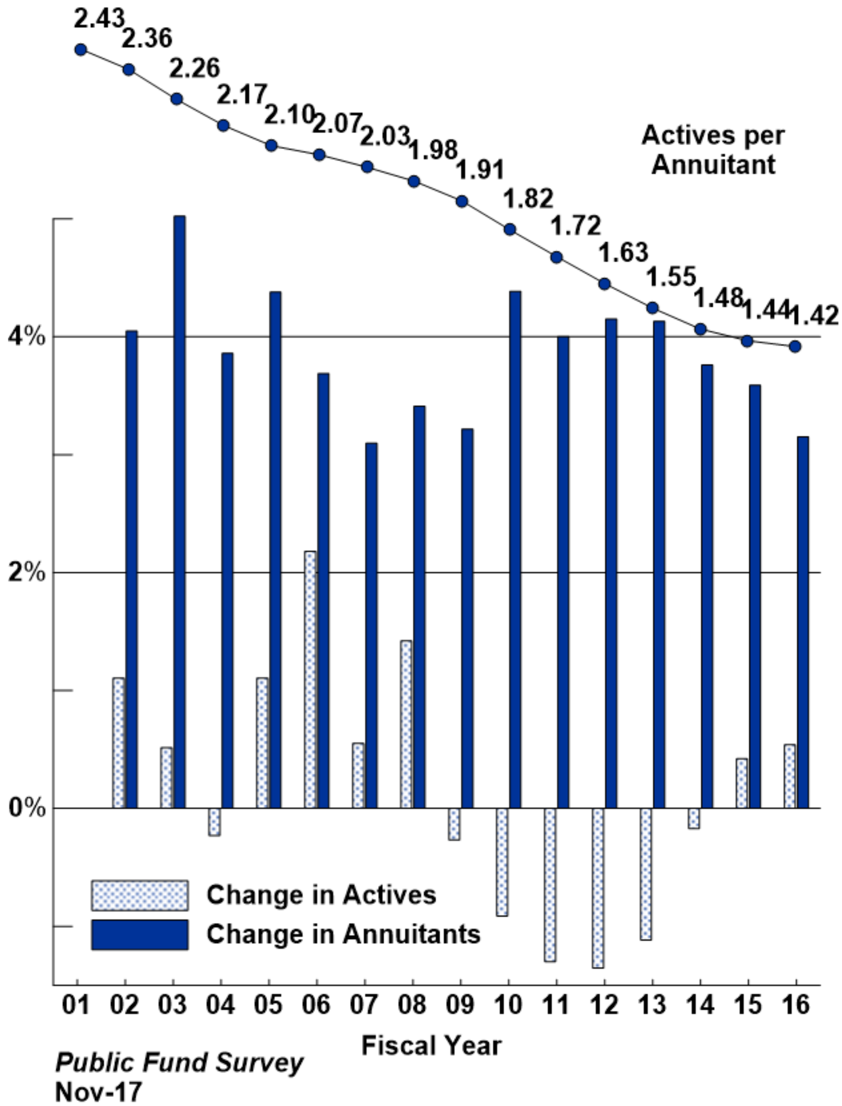
The Survey measures two types of retirement system members: actives and annuitants. Actives are those who currently are working and earning retirement service credits; most actives also make contributions toward the cost of their pension benefit. Annuitants are those who receive a regular benefit from a public retirement system; these are predominantly retired members, but also include those who receive a disability benefit (disabilitants), and survivors of retired members or disabilitants.

As shown in Figure D, the median rate of increase in annuitants among systems in the Survey declined for a fifth consecutive year, with FY 17 marking the lowest rate of annuitant growth since FY 07. The number of active members grew for the third consecutive year in FY 17, following six consecutive years of decline, from FY 09 to FY 14. This pattern of change in the number of active members is consistent with US Census Bureau reports showing a continued reversal of a trend of fewer persons employed by state and local government, a trend Census data shows began in August 2008. As Figure D shows, marginal gains have been reported each year since FY 14.

The difference between the continued increase in annuitants and a declining number of active members is driving a secular reduction in the overall ratio of actives to annuitants. In FY 17, this ratio dropped to 1.38, which marks the third consecutive year of more modest rate of decline, below three percent, following six consecutive years of steeper decline of three percent or greater. 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, in anticipation of higher rates of payout as members retire.

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 a higher cost of the plan above the normal cost, which is the cost of benefits earned each year. A lower ratio of actives to annuitants results in costs to amortize a plan's unfunded liability being spread 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 higher required pension costs.

Figure D



On a market value basis, as of FY 17, systems in the Survey held a combined $3.47 trillion in assets. Figure E, 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. As the aggregate market value of assets has grown by roughly $1.2 trillion over the past decade, funds in the Public Fund Survey also have paid out approximately $2.3 trillion in benefits.

Figure E

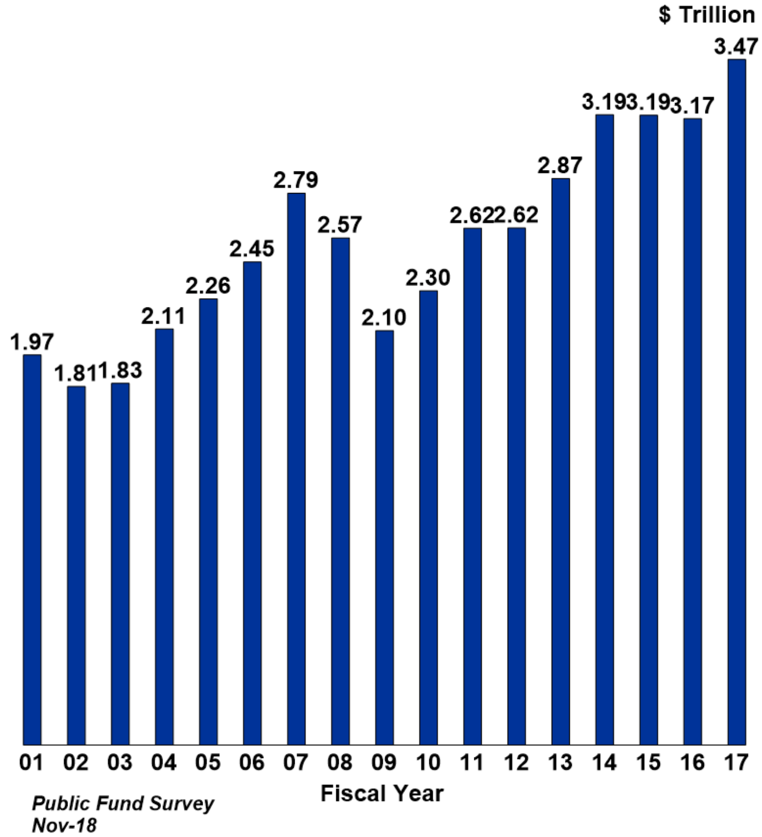


Figure F plots the combined revenues and expenditures of the systems in the Public Fund Survey. The green line reflects investment gains and losses, which vacillate as investment markets fluctuate. Blue bars indicate contributions, from employees and employers, and red bars show benefit payments. Because most plans pay out more each year in benefits than they receive in contributions, contributions are used to pay current benefits (see Figure H), and investment earnings accrue to pension trust funds. Pension trust funds are established for the sole purpose of paying benefits and funding administrative costs. The benefits paid by public retirement systems are paid from trust funds, not from state and local government operating budgets or general funds.

Growth in levels of contributions and benefits is mostly stable and predictable over time. Investment earnings, which comprise over 60 percent of public pension revenues over the past thirty years, vacillate, often appreciably, depending on market performance (see Figure L).

Figure F

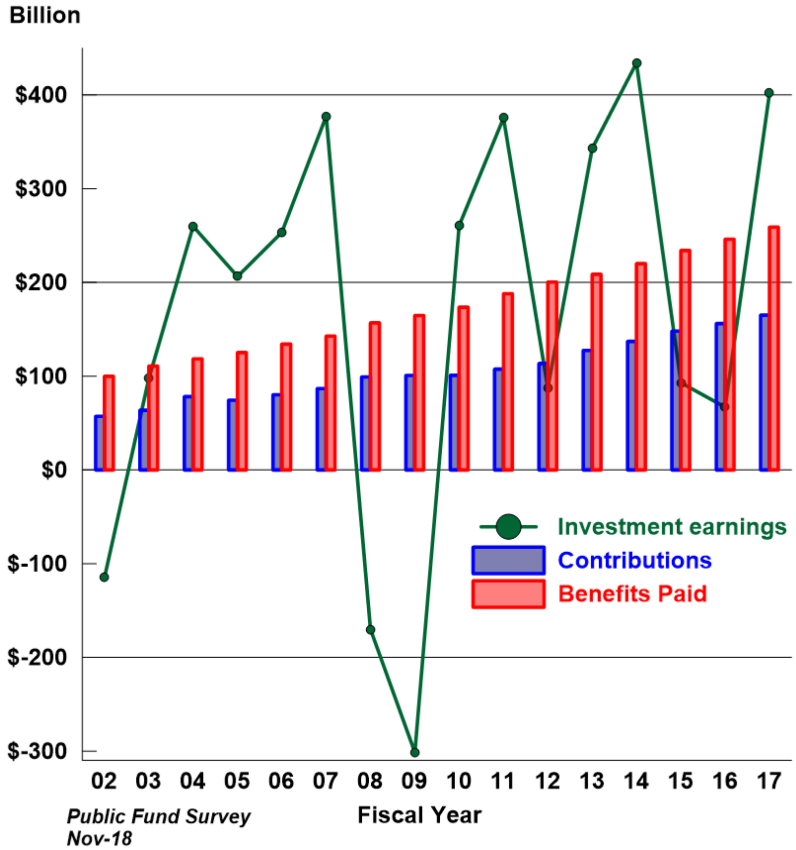


Figure G plots the distribution of annual changes in payroll from FY 02 to FY 17 among plans in the survey for which this data is available. (The chart excludes plans in the Survey that are closed to new hires. Closed plans have no new, active members joining, and the number of annuitants grows each year as active members retire).

As the chart shows, the median change in payroll was either negative or in decline from FY 08 to FY 12, and has increased slowly but steadily compared to historical experience in subsequent years. At 2.77 percent, the FY 17 median change in payrolls is the highest rate of growth since FY 09 and marks the sixth consecutive year of increase. Negative or slow payroll growth reflects one or both of two basic factors: stagnant or declining employment levels, and modest salary growth among employees of state and local government. The experience of public pension plans is corroborated by information provided by the U.S. Bureau of Labor Statistics, indicating that annual growth in wages and salaries for employees of state and local government remained below two percent from 2009 until 2016, and has hovered around two percent since then. Employment levels among states and local governments likewise have been virtually flat in recent years after climbing out of the recent low point in around FY 13.

Payroll growth affects a pension plan actuarially because the long-term funding of a typical pension plan is based partly on expected annual increases in a pension plan's payroll base. When a plan's payroll grows at a rate less than expected, the base that is used to amortize the plan's unfunded liability is smaller, meaning that the cost of amortizing the unfunded liability is larger. This situation is analogous to a mortgage, in which the mortgage-holder anticipates a growing salary to make her or his monthly mortgage payment. When salary growth does not materialize as anticipated, the cost of the mortgage payment as a percentage of expected income is higher.

Many pension plans in recent years have reduced their payroll growth assumption to reflect changing economic realities and expectations for future payroll growth. As a result, improving payroll growth experience and assumptions for future payroll growth are converging.

Figure G

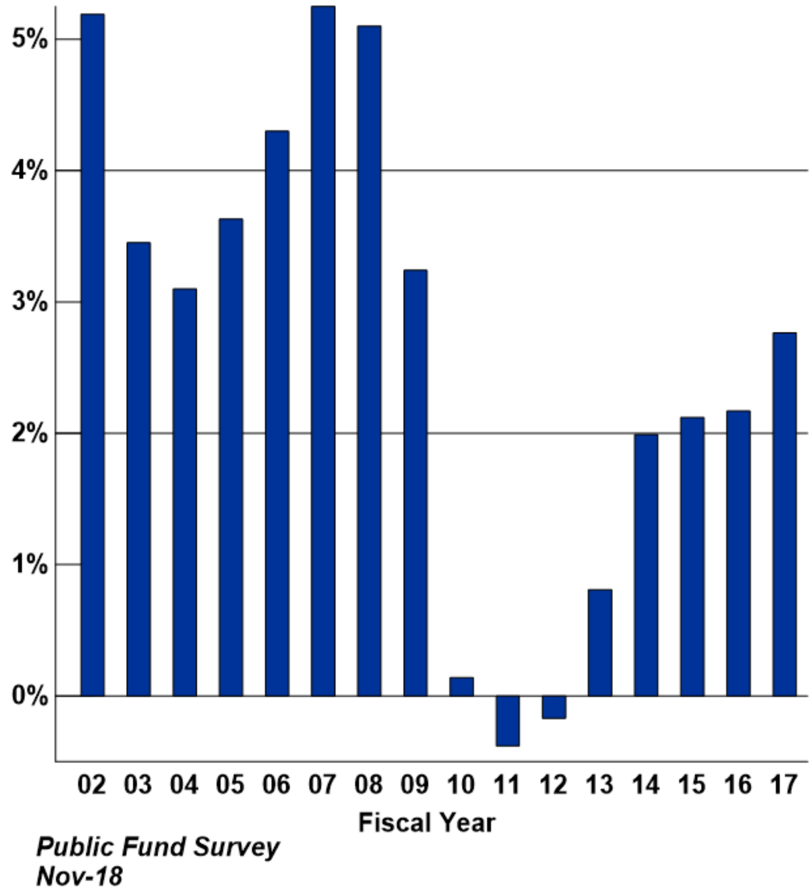
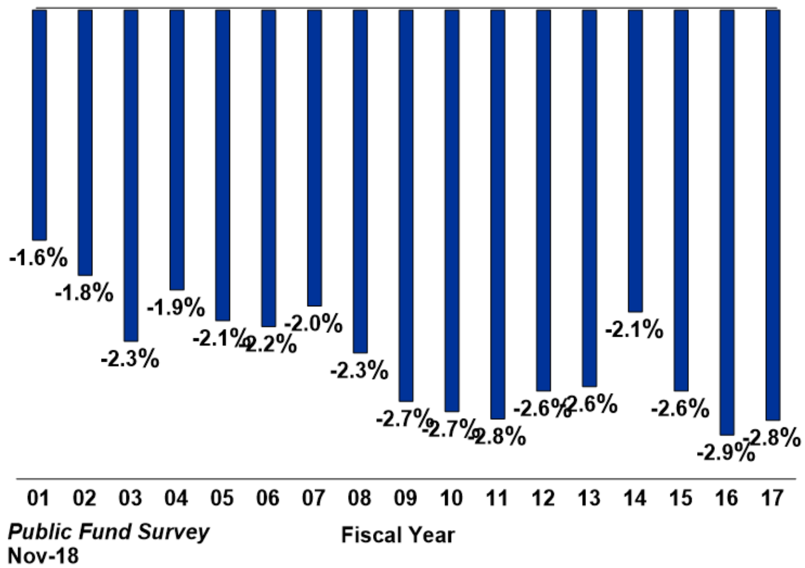


Figure H plots median external cash flow as a percentage of assets since FY 01. External cash flow is the difference between a system's revenue from contributions, and payouts for benefits and administrative expenses. External cash flow excludes investment gains and losses. Dividing a system's cash flow into the market value of the system's assets produces the measure of cash flow as a percentage of assets. 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.

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 negative cash flow is not, by itself, an indication of financial or actuarial distress. 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.

The median external cash flow in FY 17 is -2.8 percent, up from -2.9 percent in FY 16. Reductions in net external cash flow, such as those that occurred in FY 14 and FY 17, reflect the strong investment performance in those years, so that the rate of growth in the value of assets exceeded the relative growth in annual benefit payments.

Figure H



Figures I and J reflect changes in median employee and employer contribution rates. Figure I includes active members and employers for active members who also participate in Social Security; Figure J includes those participants and their employers who do not participate in Social Security. These contribution rates apply to general employees and public school teachers; the rates do not reflect those for public safety workers and narrow employee groups, such as legislators, judges, etc.

Approximately 30 percent of employees of state and local government do not participate in Social Security, including approximately 40 percent of all public school teachers, and a majority to substantially all state and local government workers in seven states: Alaska, Colorado, Louisiana, Maine, Massachusetts, Nevada, and Ohio.

Nearly every state has made changes to its pension plan(s) since 2009; the most common change has been an increase in required employee contribution rates. This trend is reflected in Figure I, which shows the median employee rate for employees with Social Security increasing to 6.0 percent in FY 14, after a long period at 5.0 percent. Contribution rates for many non-Social Security employees have increased as well, though the median rate remains at 8.0 percent. Contribution rates among both sets of employers—in and out of Social Security—have increased considerably since inception of the survey. For the first time in many years, the median rate for Social Security-eligible employers declined in FY 17, to 12.8 percent from 13.1 percent in FY 16. FY 02 was at or near the all-time low point for employer contribution rates, following the strong investment gains experienced in the 1980s and 1990s.

Figure I

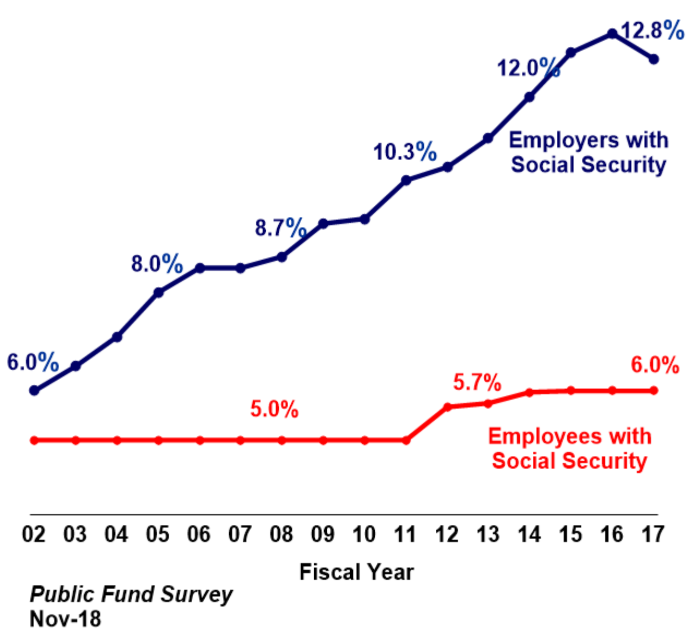


Figure J

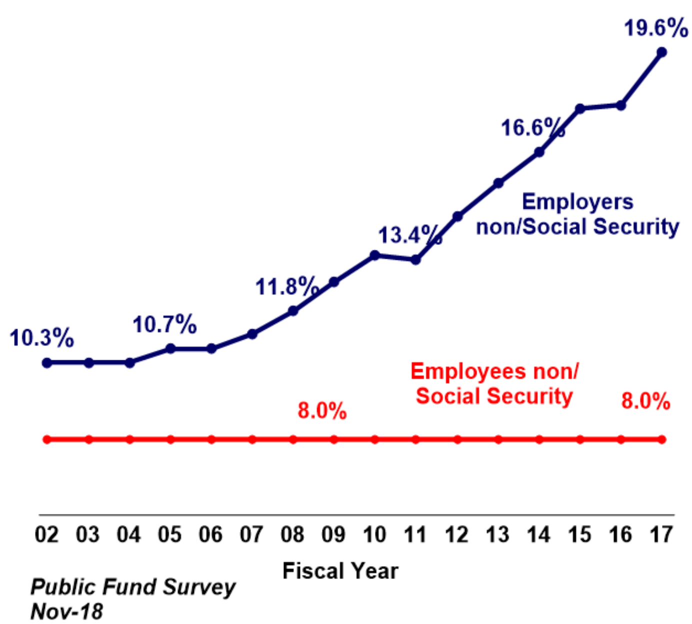
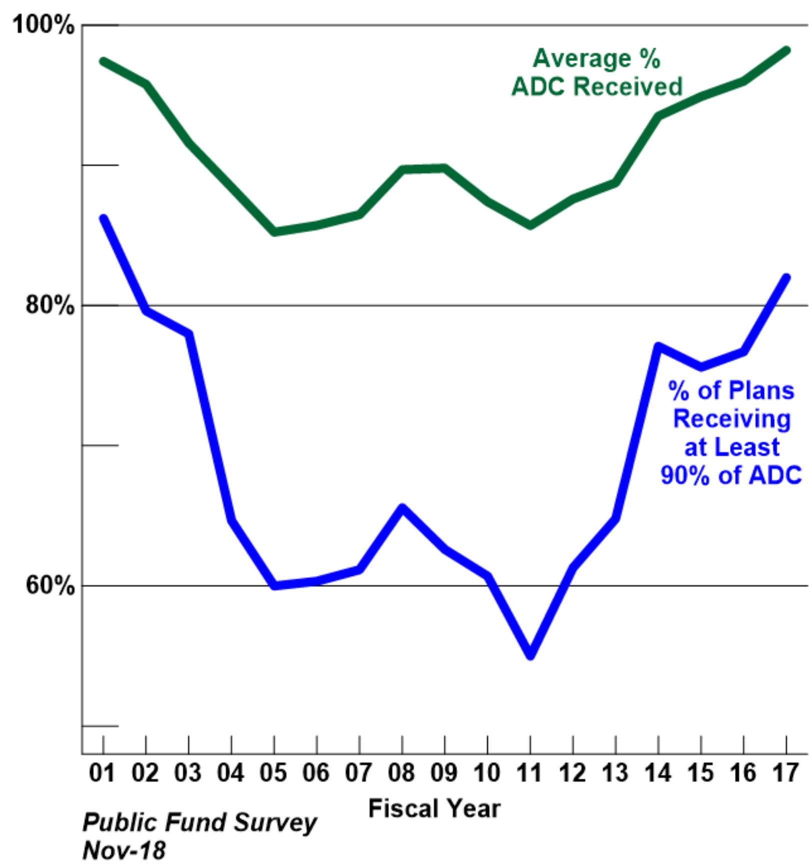


Figure K illustrates the changes over time in two measures pertaining to required pension contributions. Governmental Accounting Standards Board Statements 25 and 27 defined the Annual Required Contribution (ARC) and prescribed its reporting by public pension plans and their sponsoring employers. Effective 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," or ADC, 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 ADC 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 K shows the average ARC/ADC received by all plans in the Survey; and the percentage of plans that received at least 90 percent of their ARC/ADC. The investment market losses of 2008-09 increased public pensions' unfunded liabilities, resulting in higher required costs to amortize those liabilities. Meanwhile, the Great Recession decimated state and local government revenues, impairing, at least temporarily, employers' ability to pay the higher costs. As the fiscal condition of states and local governments has improved, so has their collective ability and commitment to paying a larger portion of the required cost of employee pension benefits.

Implementing higher contributions, both from employees and employers, takes time. The effect of factors that change contribution rates, such as investment losses and changes in a plan's actuarial experience, must first be measured through an actuarial valuation. In the case of most statewide plans, a legislature or other governing body must then approve new rates. This cycle, from actuarial event to approval and implementation of higher contribution rates, can take several years. Figure K indicates that efforts to fund public pensions are improving after a period of declining ARC/ADC effort during and after the Great Recession. The average ADC received in FY 17 was above 98 percent, and 82 percent of plans received more than 90 percent of their ADC, representing a continued restoration of funding discipline beginning in FY 12. More detailed information about public employers' contribution efforts is presented in the NASRA issue brief, State and Local Government Contributions to Statewide Pension Plans.

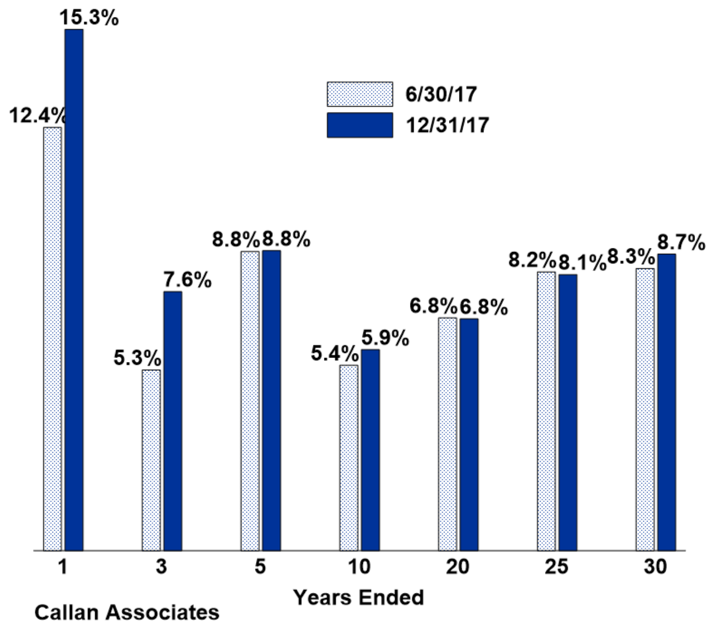
Figure K



As shown in Figure L, the median investment return for plans with a FY-end date of June 30, 2017 (the FY-end date used by approximately three-fourths of the funds in the survey), was 12.4 percent; the return for plans whose fiscal year-end coincides with the calendar year (used by most other plans) was 15.3 percent.

Returns for some of the periods shown are below the assumed investment returns used by most public pension plans, a result largely of sub-par returns over the 10-year period ended 6/30/17 and 12/31/17, especially the sharp market decline of 2008-09.

Figure L



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

Until FY 11, the median investment return assumption used by public pension plans was 8.0 percent. Since 2009, more than 90 percent of plans have reduced their assumed investment return, resulting in a reduction to the median return assumption to just below 7.4 percent. Figure M compares the distribution of investment return assumptions for each fiscal year since the inception of the Survey through the present. This chart illustrates the steady reduction in assumed rates of return, particularly since 2009, and the continuation of lower return assumptions beyond FY 17 and into FY 19.

Figure M

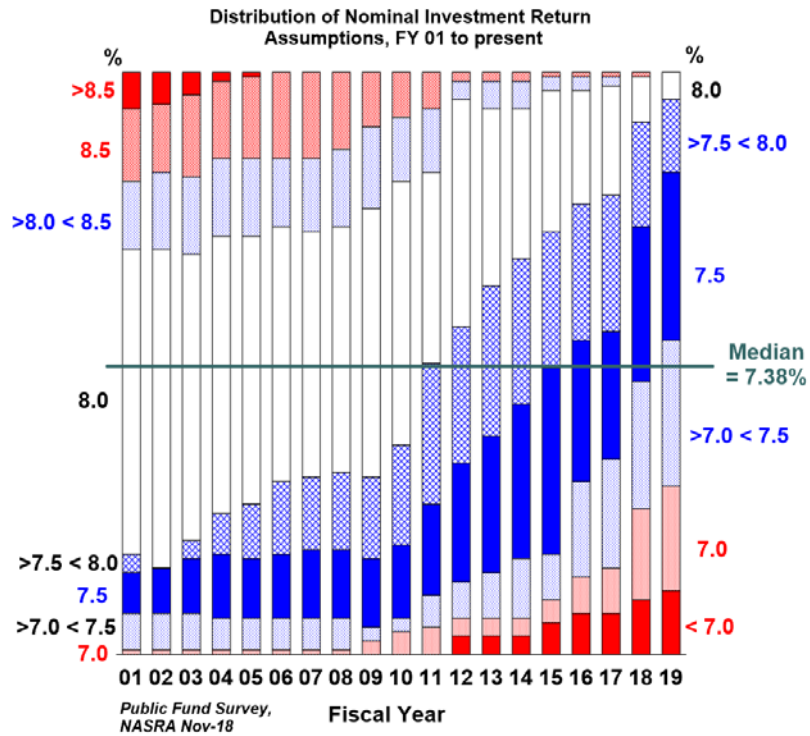
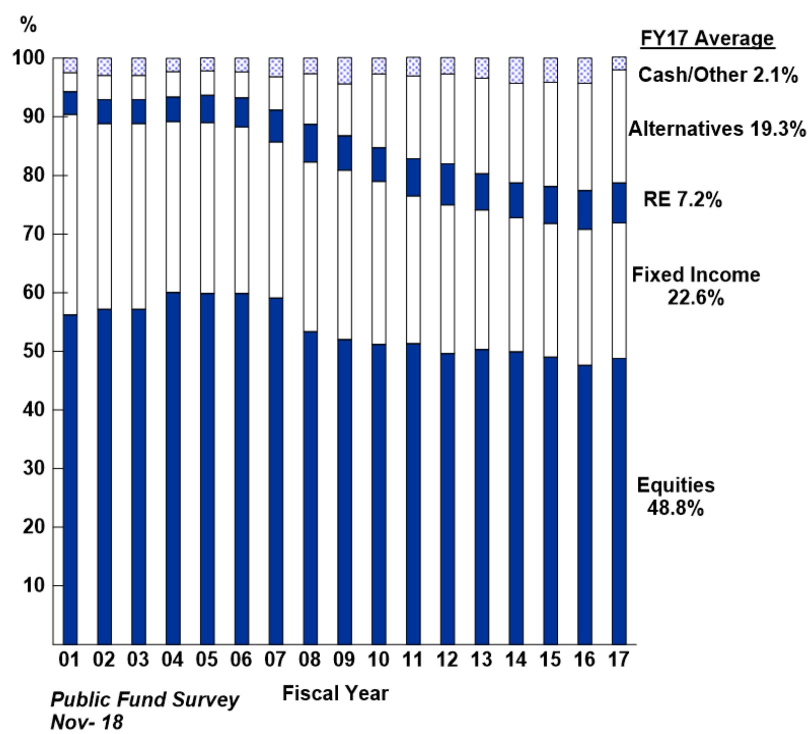


Figure N plots the average asset allocation of 90+ funds in the Public Fund Survey since its inception. The average allocation to public equities remains approximately 50 percent, while Fixed Income has dropped below 23 percent, its lowest allocation ever. Real Estate has grown incrementally to 7 percent, and the average allocation to Alternatives, which is composed primarily of private equity and hedge funds, continues to grow steadily, now exceeding 19 percent.

Figure N



- Appendix A: Public Retirement System Assets and Membership
- Appendix B: Actuarial Funding Levels for FY 17

See Also

- Public Plans Data
- NASRA Issue Briefs & Analysis

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Public Pension Plan Comparisons

ND TEACHERS' FUND FOR RETIREMENT BOARD

MARCH 2019

2017 Public Fund Survey

- Published November 2018 for FY 2017
  - **Survey results do not include FY 2018 data.**
- Includes key characteristics of 121 large public retirement plans which represents about 85% of entire state and local government (SLG) retirement system community.
- Survey sponsored by NASRA from 2001-2012. Survey data compiled by Center for Retirement Research at Boston College since 2013.
- Annual Public Fund Survey accessible online at NASRA.org/publicfundsurvey.

Public Pension Plans Overview

- Retirement benefits play an important role in attracting and retaining qualified teachers and 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 SLG public employees and teachers, 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.

Response to 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 around the country.
- Since 2009, most public plan sponsors have responded to higher pension costs by:
  - Raising contributions from employers
  - Raising contributions from employees
  - Reducing benefits (primarily for new hires) – higher retirement ages, lower retirement multipliers, increased vesting requirements, etc.
  - Capping benefits or salaries; addressing salary spiking, etc.
  - Offering DC or hybrid plan designs for new employees.
  - Postponing or reducing future retiree COLAs

Actuarial Funding Levels

- Funding ratio is the 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 participants.
- Pay-as-you-go is opposite of prefunded.
  - Current pension obligations are paid with current revenues.
  - Much more expensive.

Actuarial Funding Levels

- Investment returns have a substantial effect on a pension plan's funding level.
- Other factors which affect a plan's funding level include adequacy of employer and employee contributions, demographic composition, actuarial methods and assumptions, and changes in benefit levels.
- Although investment returns for most plans have exceeded assumptions for 5-year periods ended in FY 2017, this experience has been offset by reductions in investment return assumptions and changes to mortality assumptions to reflect longer expected lifespans.

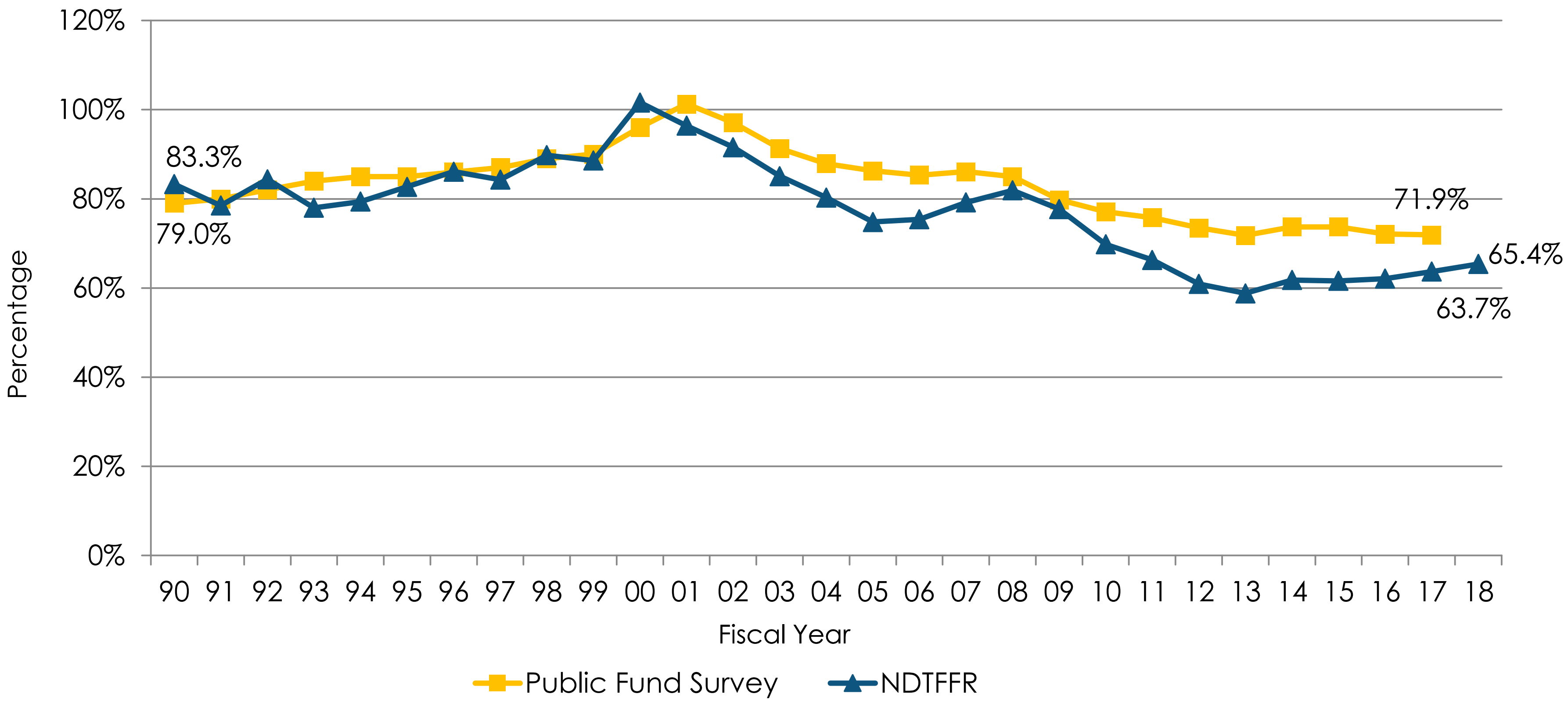
Actuarial Funding Levels

- According to the 2017 Public Fund Survey, public pension funding levels declined from 72.1% in FY16 to 71.9% in FY17.

- **NDTFFR** funding level increased slightly from 62.1% in FY16 to 63.7% in FY17 (and to 65.4% in FY18).

- **NDTFFR** ranking, in terms of funding level, improved slightly from 92 to 89 of 121 plans in 2017 Survey (still near bottom quartile).

Change in Actuarial Funding Levels

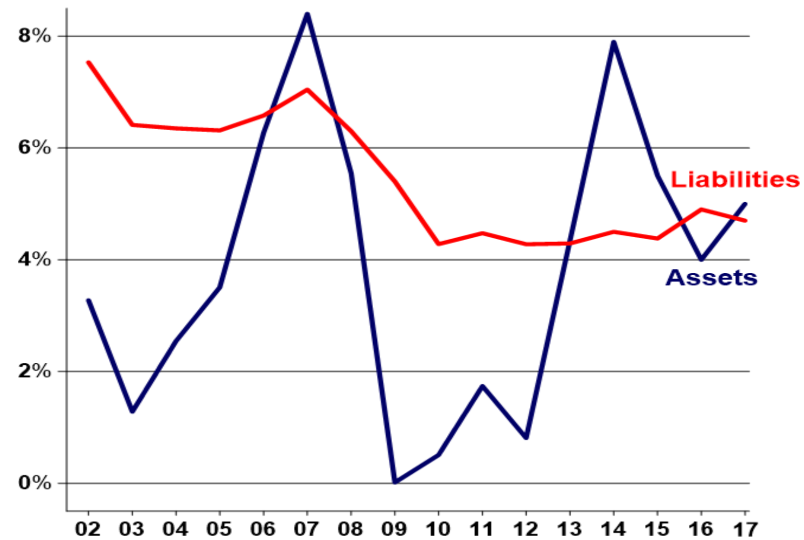


*Note: 1990-2000 PFS funding level numbers are biannual

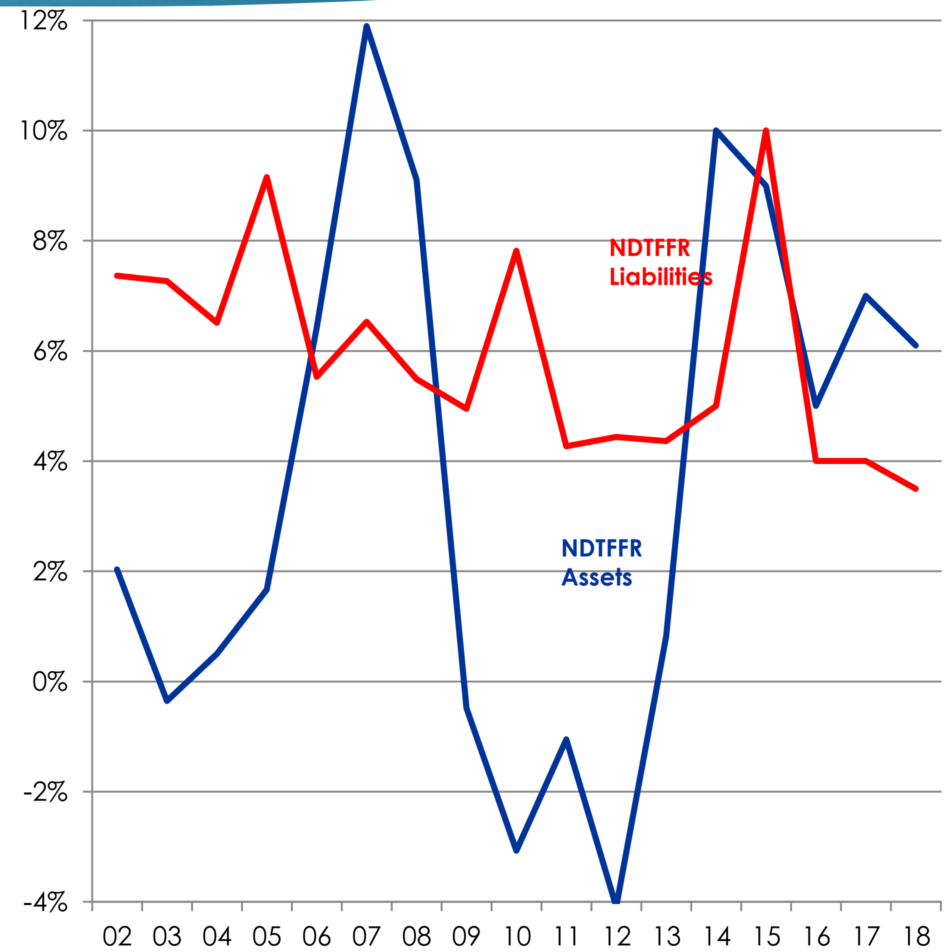
Actuarial Assets and Liabilities

- For a pension plan's funding to improve, its AVA must grow faster than its AVL.
- For most plans in the PFS, **liability growth** remains lower than historical rates, at a median rate below 5%, for 7 consecutive years.
  - Lower rate of growth in liabilities is due to slow rates of growth in salaries and employment levels and the effects of many reforms (chiefly reductions) in pension benefits enacted in recent years.
  - Rates of liability growth would be lower were many plans not also reducing their investment return assumptions in recent years, which increases a plan's liabilities.
- **NDTFFR** liability growth has generally declined over the past decade, but changes in actuarial assumptions following experience studies in 2005, 2010, and 2015 increased liabilities as expected. Liability growth was 4% in FY17 (and 3.5% in FY18).
- Volatility in aggregate changes in **asset values** is muted compared to actual changes in market values of assets because plans phase in investment gains and losses over several years which smooths out market volatility.
- **NDTFFR** asset growth followed similar trends as the PFS, although asset returns were more volatile.

Change in Actuarial Assets & Liabilities



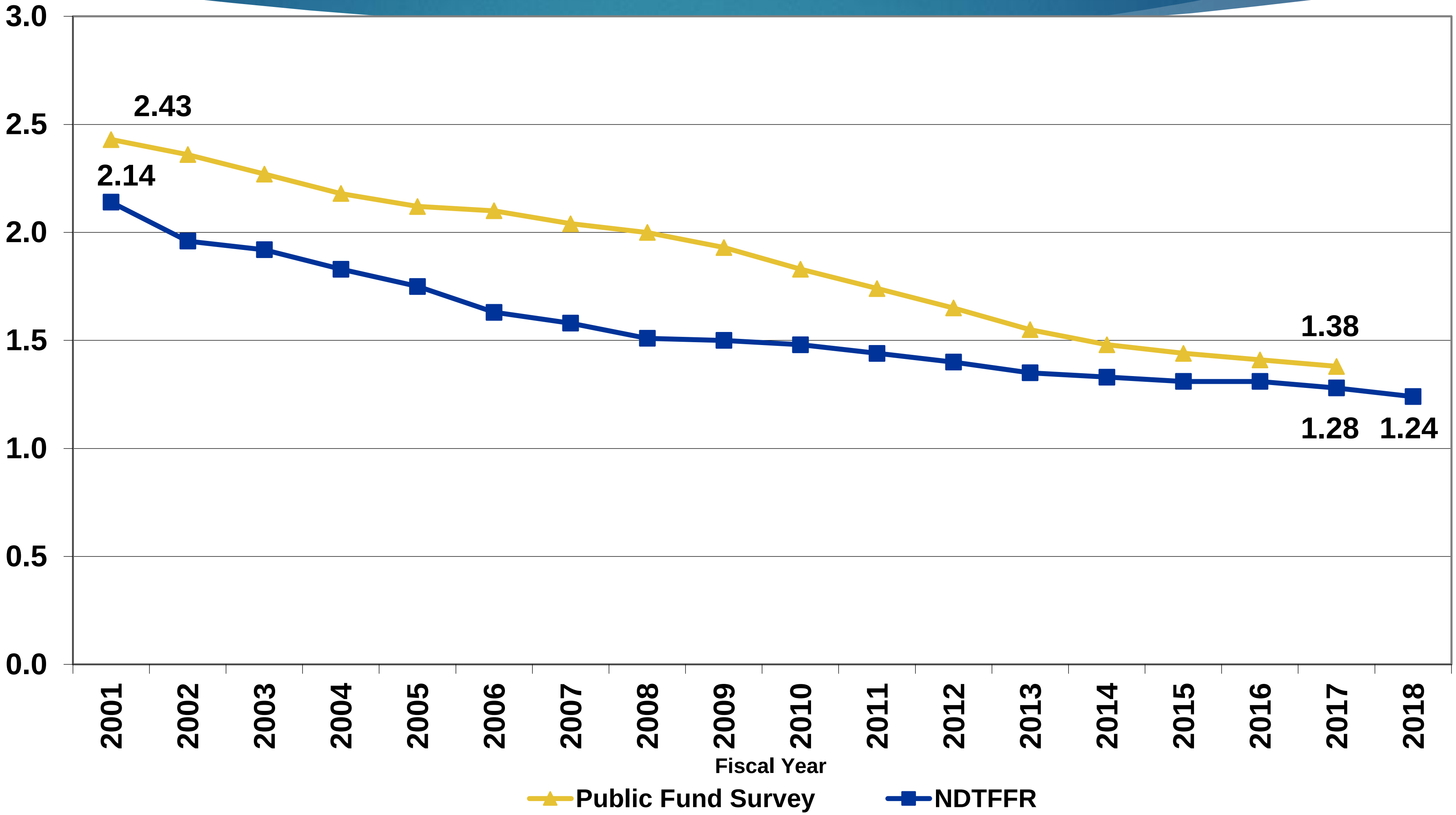
Public Fund Survey PFY - 18



Membership Changes

- PFS shows the median rate of increase in **annuitants** declined for a 5th consecutive year to less than 3%.
- The number of **active members** grew for the 3rd consecutive year to about 0.75%, following 6 years of decline.
- The ratio of active members to annuitants is continuing to decline. In FY 17, this ratio dropped from 1.42 to 1.38.
- For **NDTFFR** the ratio was 1.28 in FY17 (and 1.24 in FY18).
- Although a declining active-annuitant ratio does not, by itself, pose an actuarial or financial problem, when combined with a poorly funded plan with a high UAAL, a low or declining ratio of actives to annuitants can result in higher required pension costs (like NDTFFR).

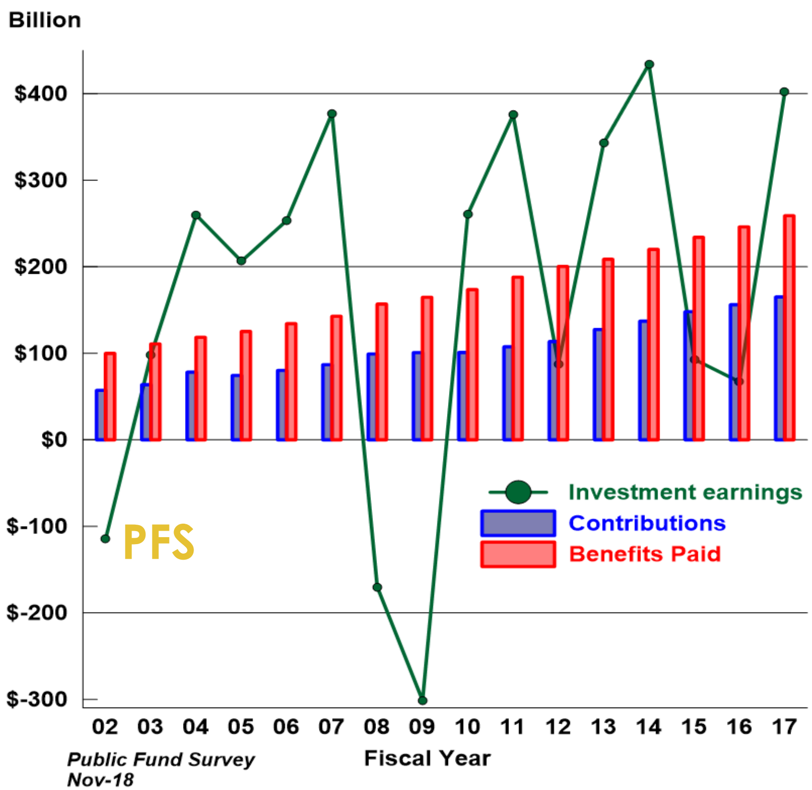
Ratio of Active Members to Annuitants

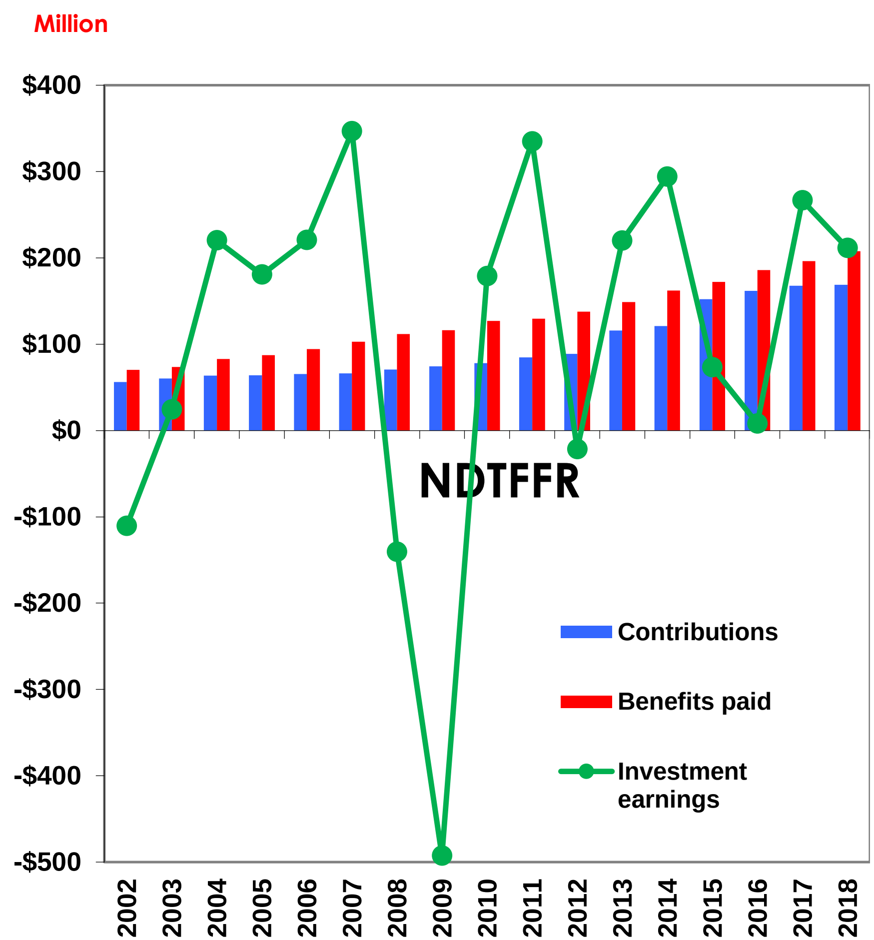


Revenues, Expenditures, and Investments

- 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.
- Growth in levels of contributions and benefits is mostly stable and predictable over time.
- Investment earnings, which comprise over 60% of public pension revenues over the past 30 years, vacillate, often appreciably, depending on market performance.

Revenues and Distributions



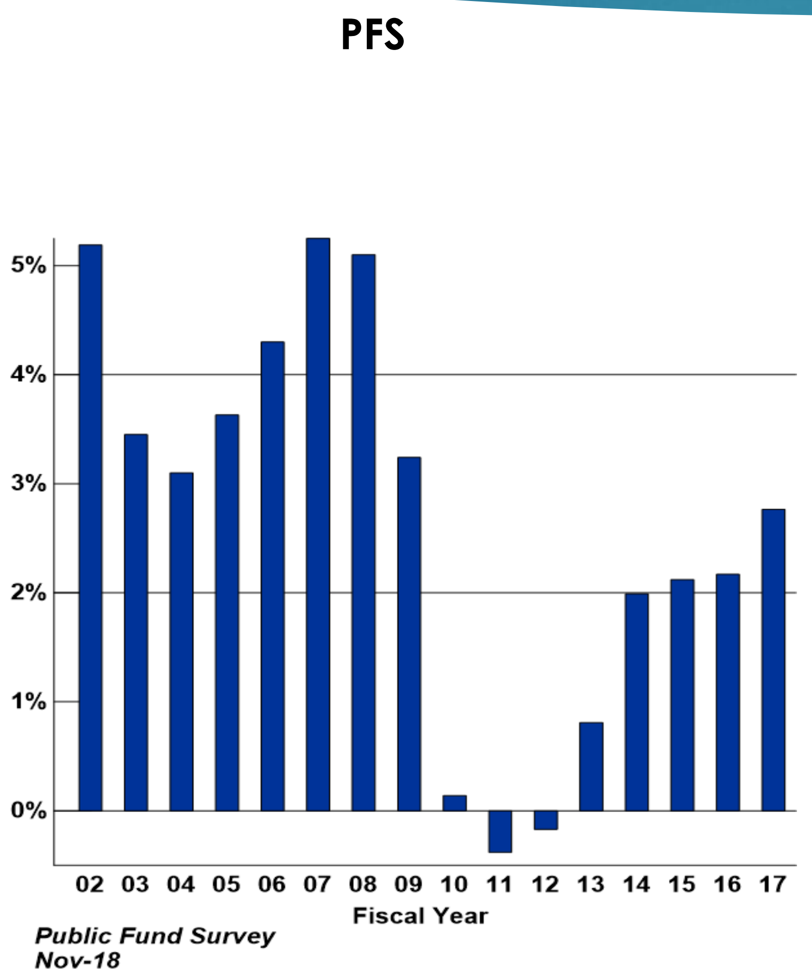


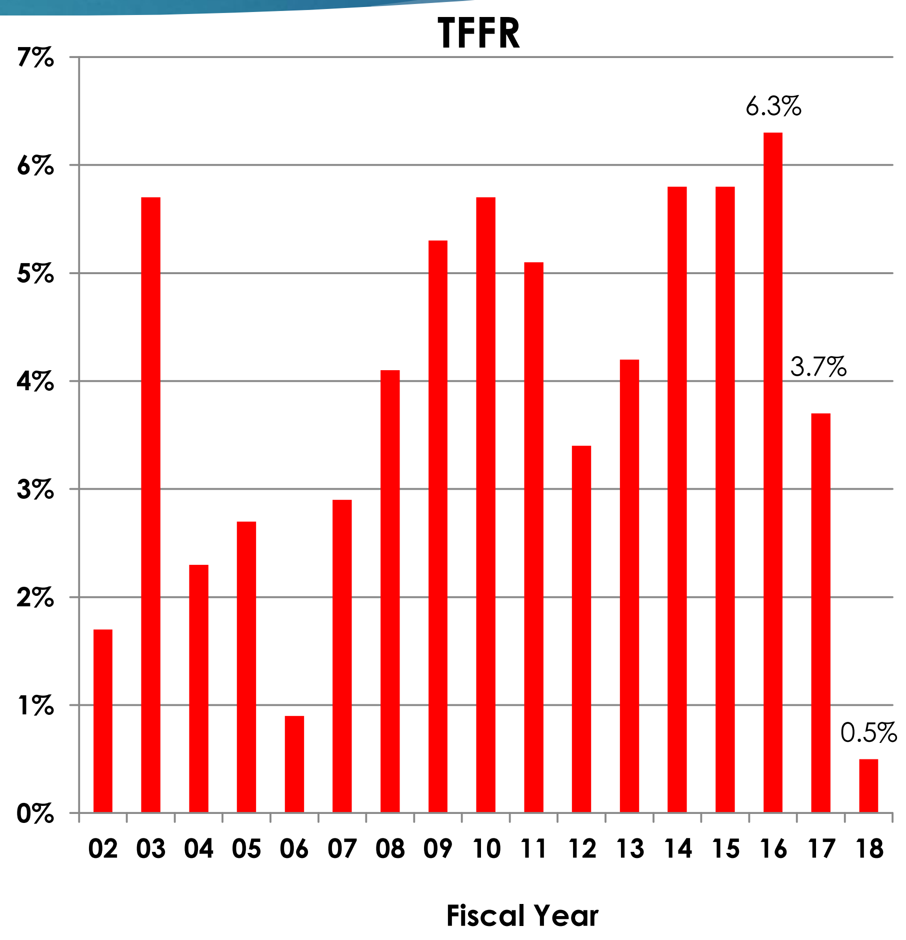
Annual Change in Payroll

- Median change in active member payroll was either negative or in decline from FY08 to FY12, and has increased slowly since that time to 2.77% in FY 17. This reflects:
  - Stagnant or declining employment levels
  - Modest salary growth

- **NDTFFR** active payroll growth has not followed the experience of PFS, and has been higher in recent years. NDTFFR payroll growth was 3.7% in FY17 (but only 0.5% in FY18).

Annual Change in Payroll

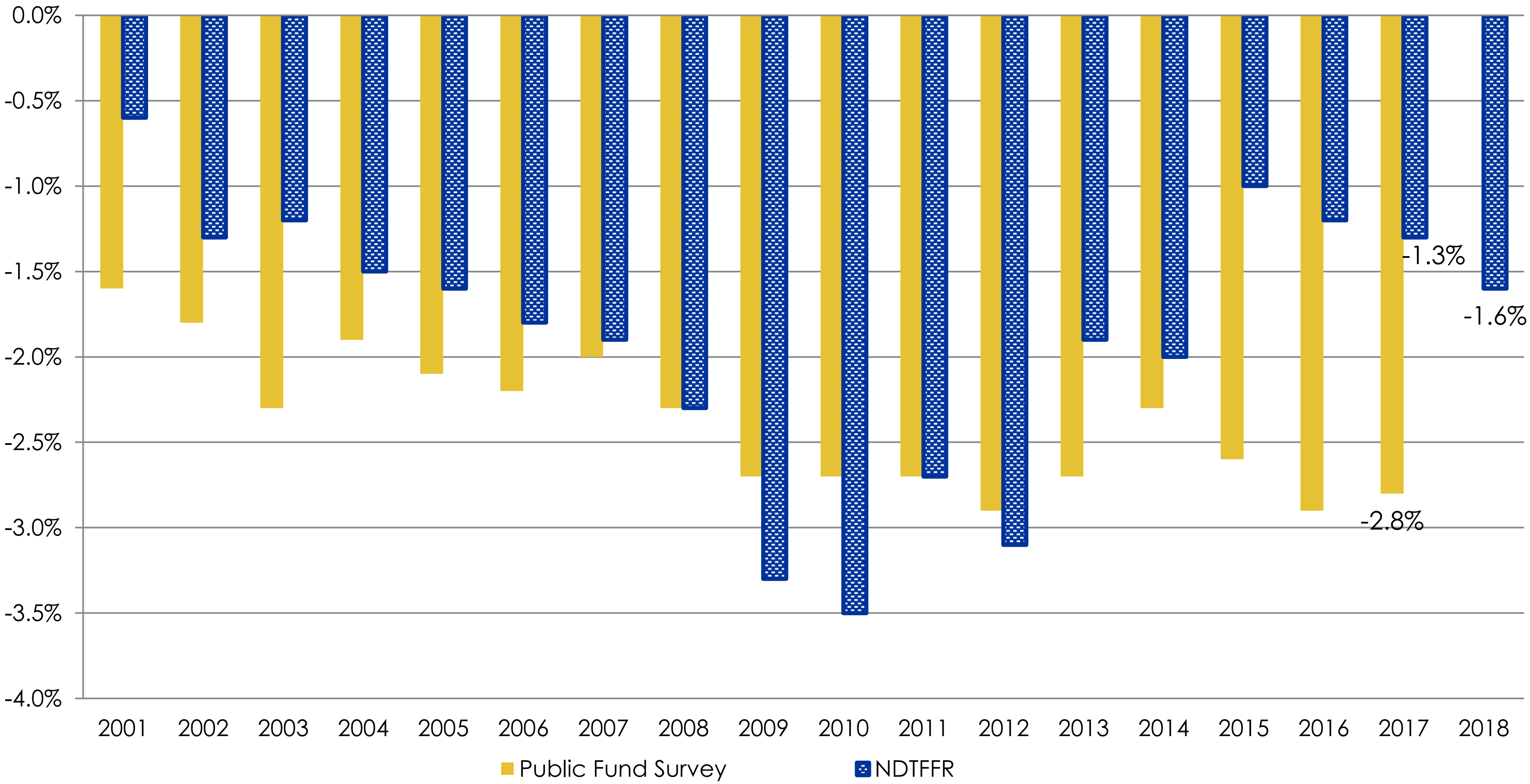




External Cash Flow

- External cash flow is the difference between a system’s revenue from contributions and payouts for benefits and administrative expenses, divided into the value of the system’s assets. It excludes investment gains and losses.
  - A growing number of annuitants, combined with low or negative rate of growth in active members will result in a reduction in external cash flow.
  - Conversely, a growing asset base will offset a rate of negative cash flow.
- Nearly all systems in PFS have external cash flow that is negative, meaning they pay out more each year than they collect in contributions.
  - By itself, negative cash flow is not an indication of financial or actuarial distress.
  - 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 to meet payroll requirements.
- PFS median external cash flow was -2.9% in FY16, and -2.8% in FY17.
- **NDTFFR** external cash flow was -1.2% in FY16, declining to -1.3% in FY17 (and -1.6% in FY18).

External Cash Flow



Contribution Rates

- Variety of arrangements for payment of employee and employer contribution rates.
  - Employee rates are typically fixed % of pay.
  - Employer rates may be fixed or floating.
  - Rates may be set by statute, actuarial requirements, board, etc.

- Contribution rates differ on basis of Social Security participation.
  - About 30% of employees of SLGs do not participate in Social Security.
  - About 40% of all public school teachers do not participate in Social Security.

- Other considerations include benefit design (benefit multiplier, early retirement eligibility, vesting, automatic retiree increase provisions); statutory limits; funded status; actuarial assumptions; demographics (number of females, retirement rates, termination rates, etc.)

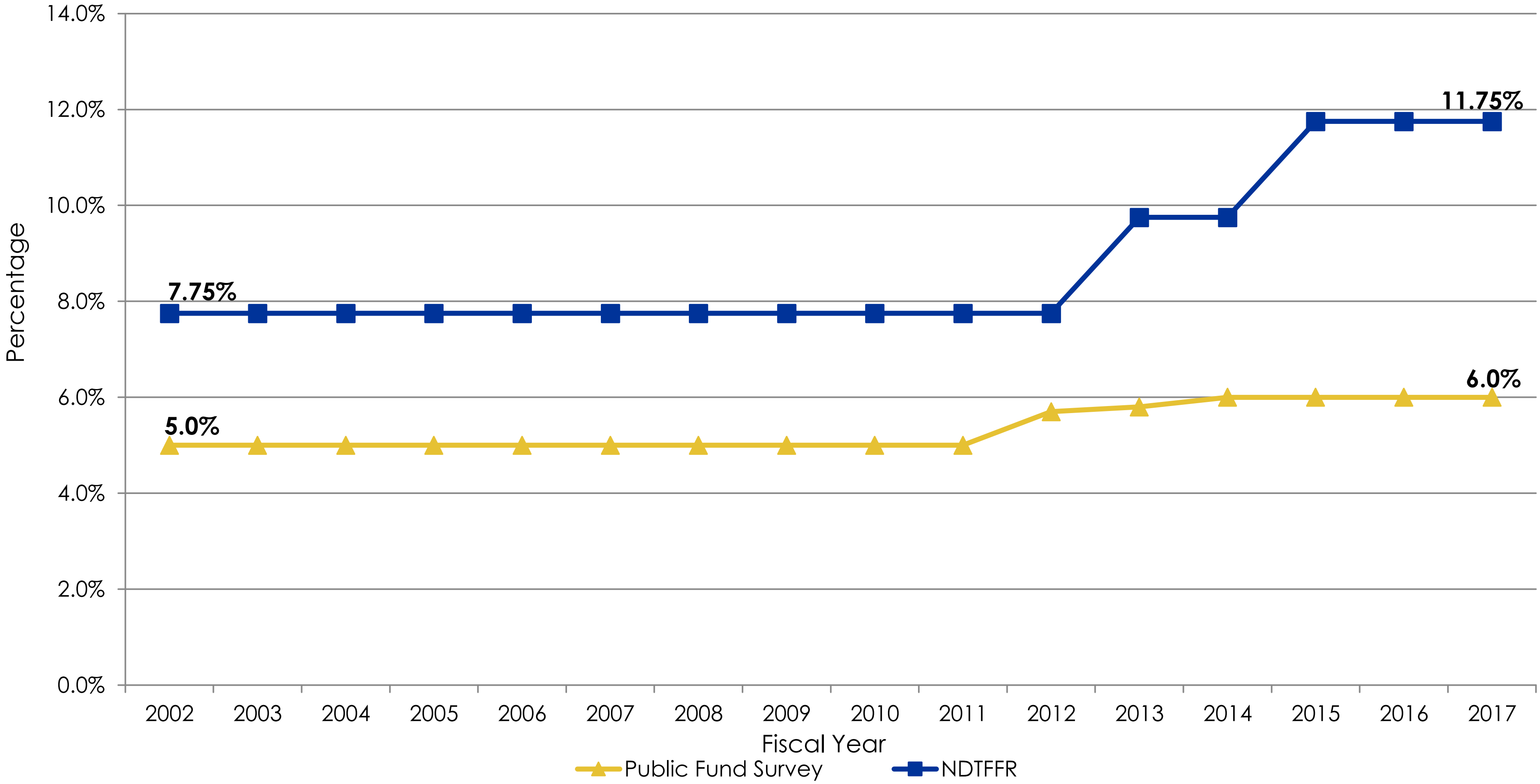
Contribution Rates

- Nearly every state has made changes to its pension plan; since 2009, the most common change has been an increase in required employee and employer contribution rates.

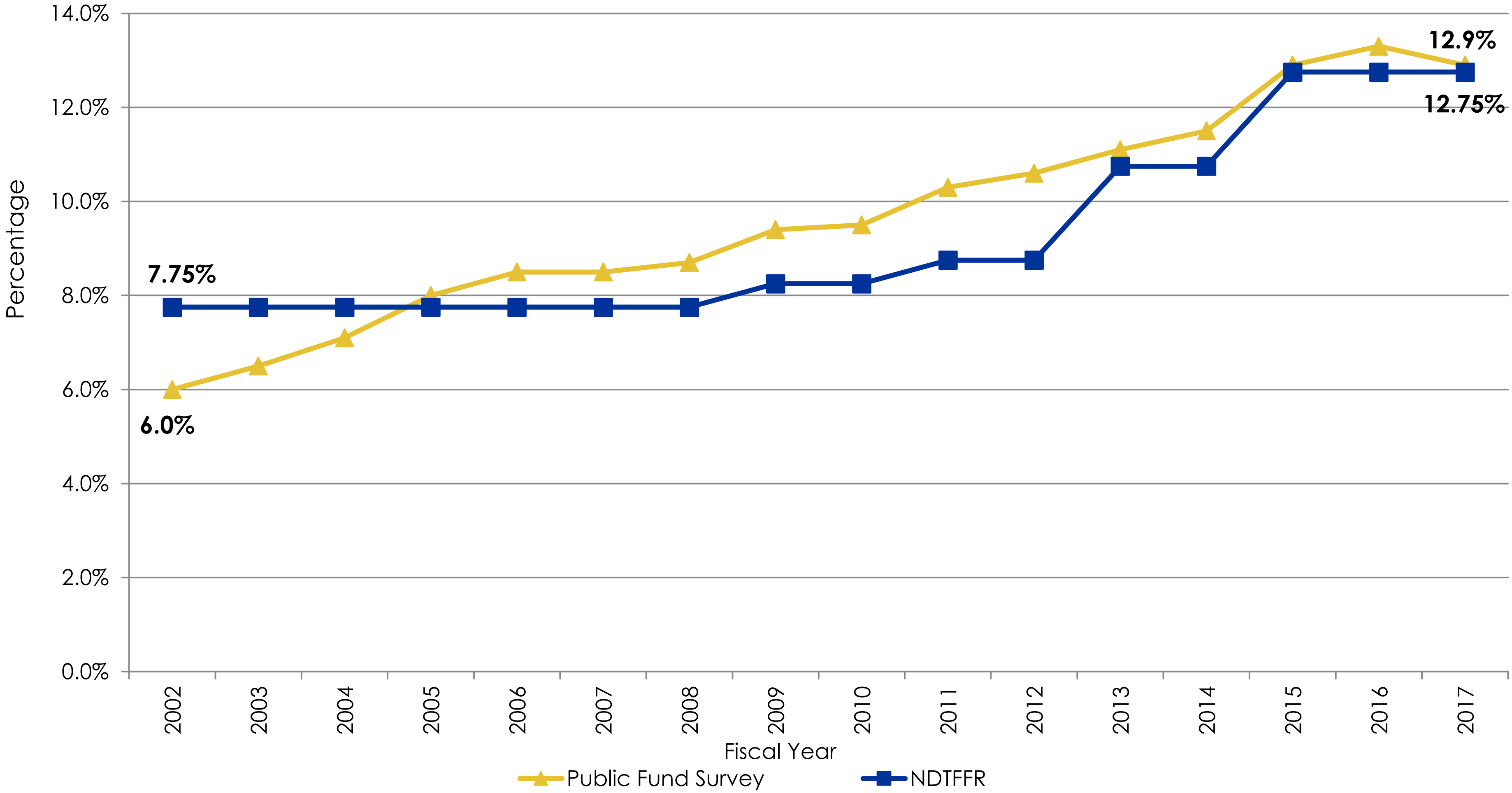
- Median **employee** contribution rate remained at 6.0% in 2017 for Social Security eligible workers.
  - **NDTFFR** employee rate is 11.75% (effective 7/1/14). Rate will be in effect until plan is 100% funded, then reduced to 7.75%.

- Median **employer** contribution rates were 12.9% in 2017 for Social Security eligible workers.
  - **NDTFFR** employer rate is 12.75% (effective 7/1/14). Rate will be in effect until plan is 100% funded, then reduced to 7.75%.

Employee Contribution Rates



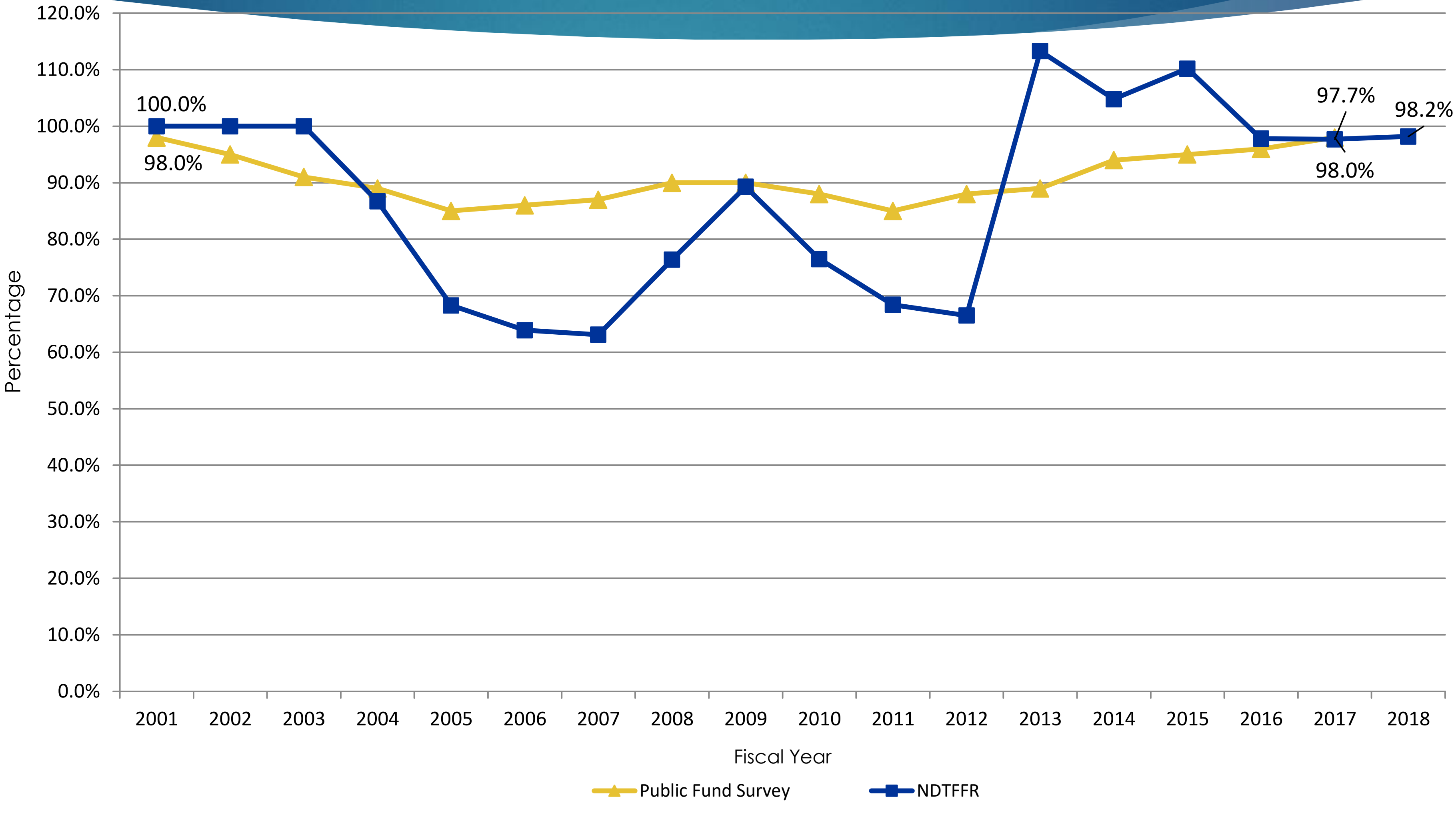
Employer Contribution Rates



Actuarially Determined Contribution

- An actuarially determined contribution (ADC)is a target or recommended contribution to a DB pension plan as defined by GASB.
- Efforts to fund public pensions are improving after a period of declining ADC effort during and after the Great Recession.
- According to the PFS, the average ADC received in FY 17 was above 98%. Over 82% of plans received more than 90% of their ADC.
- **NDTFFR** received 97.7% of ADC in FY17 (and 98.2% in FY18).

Average ADC Received



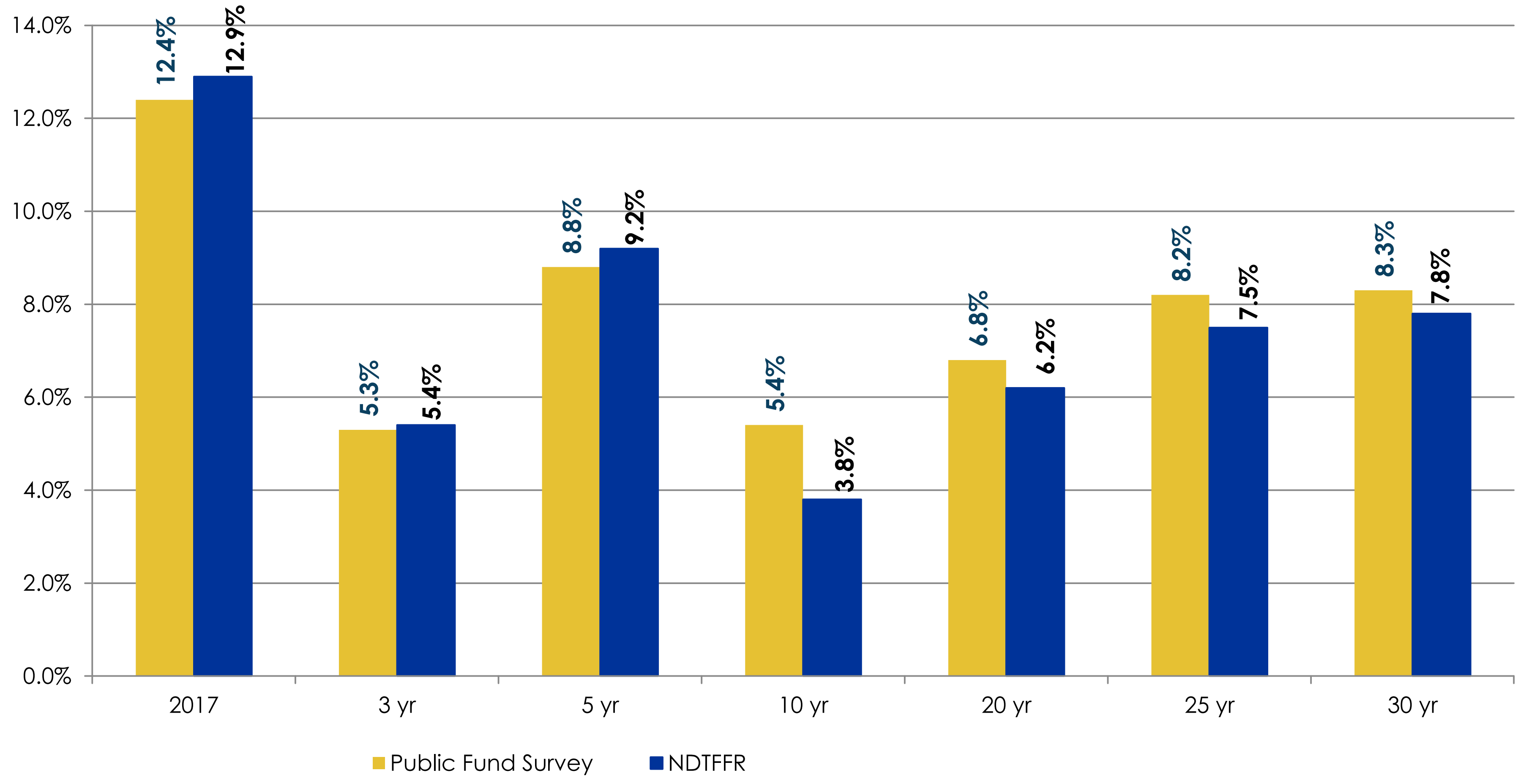
Investment Returns

- Median investment return for plans with FY end date of 6/30/17 (about ¾ of PFS participants), was 12.4%.

- **NDTFFR** return was 12.9% for FY17 (and 9.1% for FY18).

- Returns for some of the time periods are below the assumed investment returns used by most public plans, a result largely of sub-par returns over the 10-year period ended 6/30/17,especially the sharp market decline of 2008-09.

Annual Investment Returns (net)



Actuarial Assumptions

Actuarial valuations contains many assumptions.

- Demographic
  - Retirement rate
  - Mortality rate
  - Turnover rate
  - Disability rate
- Economic
  - Investment return rate
  - Inflation rate
  - Salary increase rate
- Last NDTFFR Experience Study was conducted in 2014-15; revised assumptions approved by the Board became effective 7/1/15. Next Study scheduled for 2019-20.

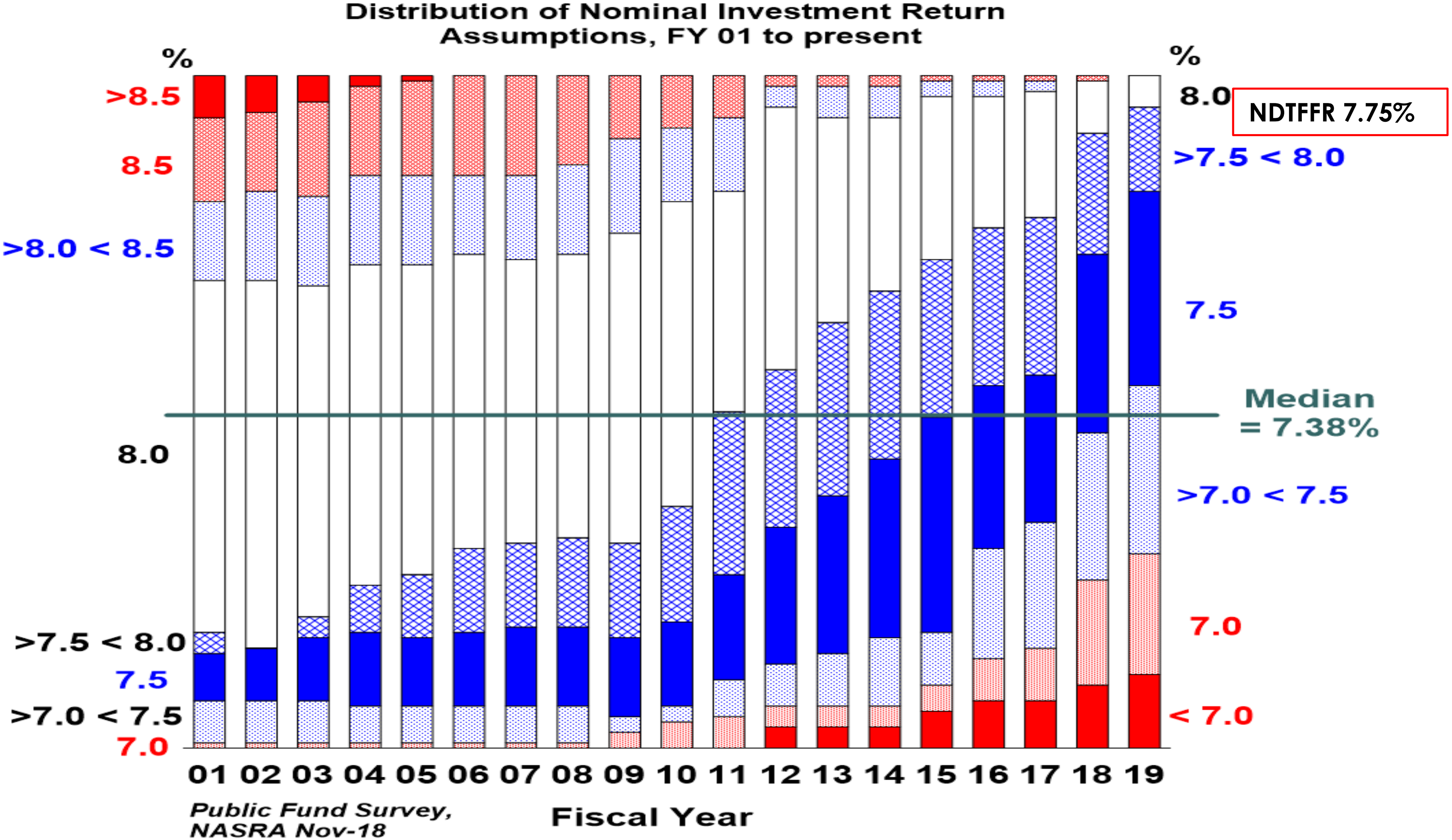
Investment Return Assumption

- 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 public pension fund come from investment earnings, even a small 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

- Until FY11, the most common investment return assumption used by public pension plans was **8.0%**.
- Since 2009, over 90% of plans have reduced their investment return assumption.
- Median investment return assumption was **7.38%** in 2017.
- **NDTFFR** investment return assumption was reduced from 8.0% to **7.75%** effective 7/1/15. Further reduction will be considered during the Experience Study scheduled in 2019-20.

Investment Return Assumption



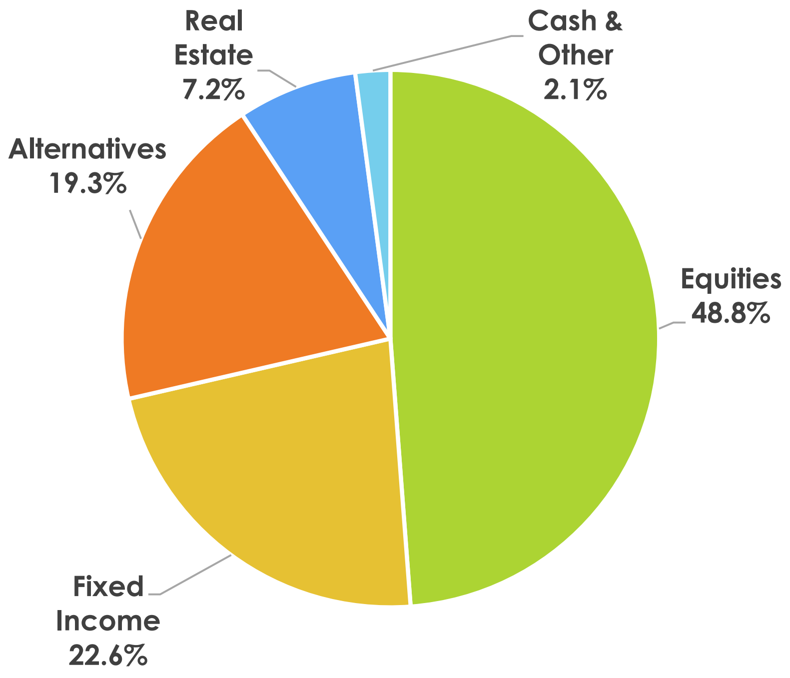
Asset Allocation

There were minor changes to PFS plan's asset allocations.

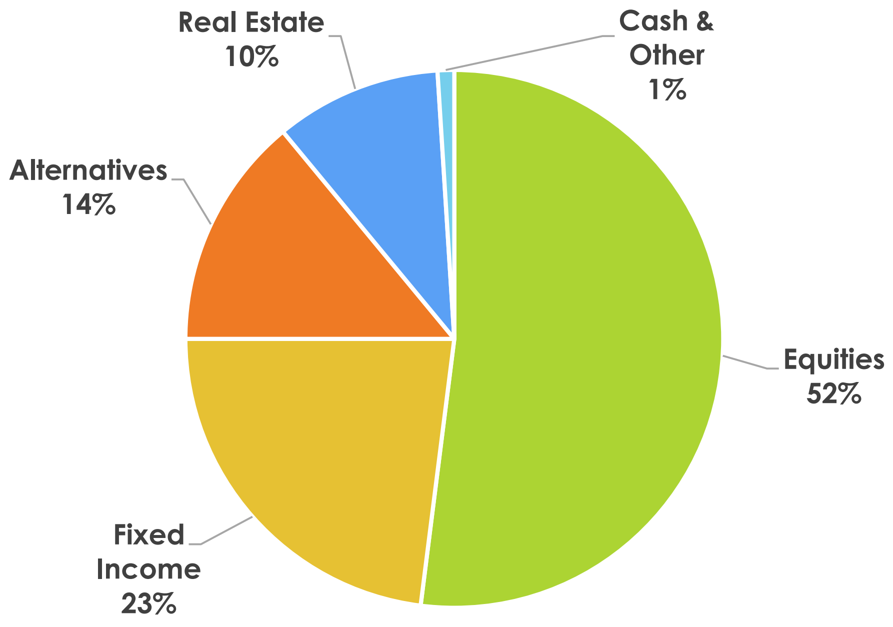
- PFS average allocation to Public Equities remains about 50%.
- Fixed Income dropped below 23%, its lowest allocation ever.
- Real Estate has grown incrementally to 7%.
- Alternatives (composed of primarily private equity and hedge funds) continues to grow steadily, now exceeding 19%.

- Compared to the 2017 PFS, **NDTFFR** has less in Cash and Alternatives, about the same in Fixed Income, and more in Real Estate and Equities.
    - Last NDTFFR Asset Liability Study was conducted in 2015-16, with minor allocation changes effective in 7/1/16. Next ALS scheduled for 2020-21.

Asset Allocation



Public Fund Survey Fiscal Year 2017



NDTFFR (Target) 2017

Conclusion

- A very difficult operating environment currently exists featuring volatile investment markets; criticism of public employees, their benefits, and their governing boards; and challenging fiscal conditions facing many state and local governments.

- **Like NDTFFR, 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?

North Dakota Teachers' Fund For Retirement

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: March 14, 2019
SUBJ: Other Public Pension Databases, Reports, and Studies

In addition to the Public Fund Survey conducted by NASRA, there are other databases, reports, and surveys on public pension plans which are intended to serve as a source of information for those involved with pension and retirement security policy. Here are a few examples:

1) Public Plans Database (PPD) is a publicly accessible database of financial, actuarial, and other plan data for 180 of the nation's largest state and local government (SLG) public pension plans which accounts for 95% of state/local pension assets and members in the U.S. The PPD is a partnership between the Center for State and Local Government Excellence (CSLGE), the Center for Retirement Research at Boston College (CRR), and the National Association of State Retirement Administrators (NASRA). Data comes from the annual financial reports, actuarial reports, benefit summaries, and other information on system's websites.

2) NCPERS Public Retirement Systems Study is an annual survey conducted by the National Council of Public Employee Retirement Systems (NCPERS) which analyzes the most current data available on 167 SLG funds' fiscal condition and steps being taken to ensure fiscal and operational integrity. Survey topics include expenses, actuarial assumptions, investment returns and allocation, funding levels, cost of living adjustments, trends in plan changes, retirement benefits, business practices, and oversight practices, and innovations/best practices.

3) Wisconsin Study of Major Public Employee Retirement Systems is a biannual report which compares retirement benefits of general employees and teachers from about 87 public employee retirement systems to the Wisconsin Retirement System. Survey topics include comparisons and trends for normal and early retirement provisions, contribution rates, vesting requirements, benefit formulas and calculations, post-retirement increases, and actuarial and accounting information.

4) NEA Characteristics of Large Public Pension Plans is a detailed study conducted by the National Education Association (NEA) every 5 years and includes data from 114 large plans which contain pre-k-12 and higher education employees. Survey topics include plan administration, investment, retirement eligibility, COLA, contribution rates, benefit formulas, actuarial methods and funding, and retirement board membership.

Board Information Only. No board action is requested.

NCPERS

1941

Certificate of TRANSPARENCY

This Certificate of Transparency is awarded to the

ND Teachers' Fund for Retirement

for its participation in the *2018 NCPERS Public Retirement Systems Study*, which seeks to further open disclosure, data collection, and encourage the public's understanding of public retirement systems.

Hank Kim, Esq.
Executive Director & Counsel

National Conference on
Public Employee Retirement Systems
The Voice for Public Pensions

2/8/2019

Dear Public Retirement Systems Study Respondent,

Thank you for participating in the *2018 NCPERS Public Retirement Systems Study*! In this 8th year study, we invited public retirement plans across North America to participate by providing the latest information on plan design, investment allocation & returns, actuarial assumptions, and plan governance practices.

As one of the 167 plans who participated, we would like to recognize you for furthering open disclosure, increasing the range of data from which to learn from, and contributing to the public's understanding of public retirement systems. The enclosed Certificate of Transparency acknowledges your commitment to furthering an atmosphere of openness between public pensions and the public. Thank you!

Enclosed you will also find an order form for a plaque modeled after your Certificate of Transparency. This 8 x 10 plaque will serve as a tangible and lasting remembrance of your recognition. The plaque is $75.00 which includes shipping. If you would like to order a plaque for your plan, please complete and return the enclosed form.

The result of the 2019 survey, as well as surveys from past years, can be seen at www.ncpers.org/surveys.

Sincerely,

Hank Kim
Executive Director & Counsel

The National Conference on Public Employee Retirement Systems (NCPERS) is the largest trade association for public sector pension funds, representing approximately 500 funds throughout the United States and Canada. It is a unique non-profit network of public trustees, administrators, public officials and investment professionals who collectively manage more than $3.5 trillion in pension assets. Founded in 1941, NCPERS is the principal trade association working to promote and protect pensions by focusing on providing **A**dvocacy, **R**esearch and **E**ducation for the benefit of public sector pension stakeholders. It's who we **ARE**!

Retirement Trends and Projections

North Dakota
Teachers' Fund for Retirement

January 2019

Retirement: Now or Later?

The decision to retire is prompted by both non-financial and financial reasons.

- **Non-financial considerations:**
- Health of teacher (and spouse)
- Family issues (spouse, children, parents)
- Personal reasons (job satisfaction vs. job stress)
- Federal regulations
- State and local issues (school closings, school consolidations)

- **Financial considerations:**
- Salary vs. Retirement benefits
- Health insurance benefits – rising cost of medical care
- Employment in retirement
- Inflation

TFFR Members

- TFFR member count includes number of people, not FTE's.

- TFFR members may be full time, part time, or temporary teachers, but must be licensed and contracted. Noncontract substitute teachers are not TFFR members.

TFFR Member Categories

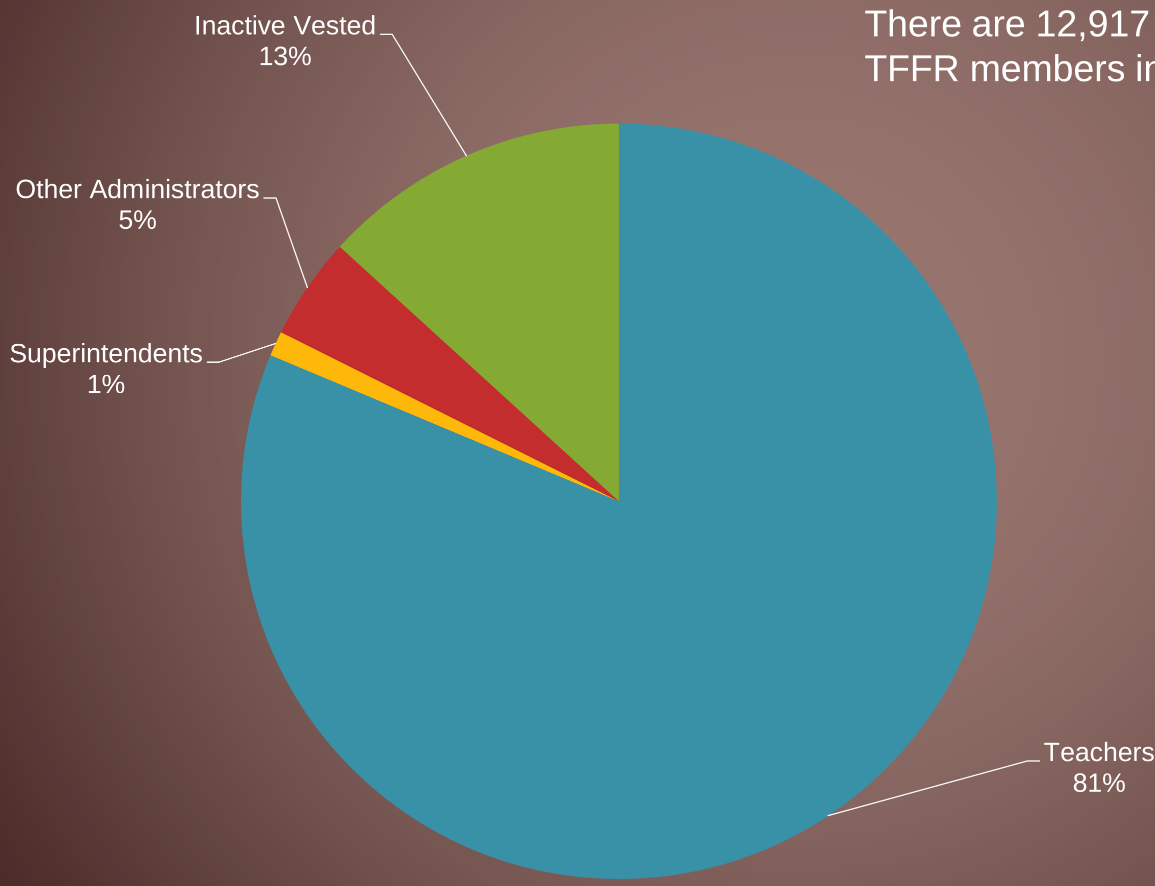
TFFR member categories are based on DPI title codes and presented according to teacher and administrator categories defined in NDCC 15.1-02-13.6.

- “Teacher” includes positions of teacher, special ed teacher, career advisor, coordinator, strategist, counselor, instructional coach, library media specialist, psychologist, and speech/language pathologist.
- “Superintendent” includes only school superintendents.
- “Other Administrators” includes positions of assistant superintendent, director, assistant director, principal, assistant principal, county superintendent, and other administrative positions.

Today

Current TFFR Membership

There are 12,917 active and inactive vested TFFR members in January 2019.



Teachers	10,495
Superintendents	134
Other Administrators	565
Inactive Vested	1,723
Total	12,917

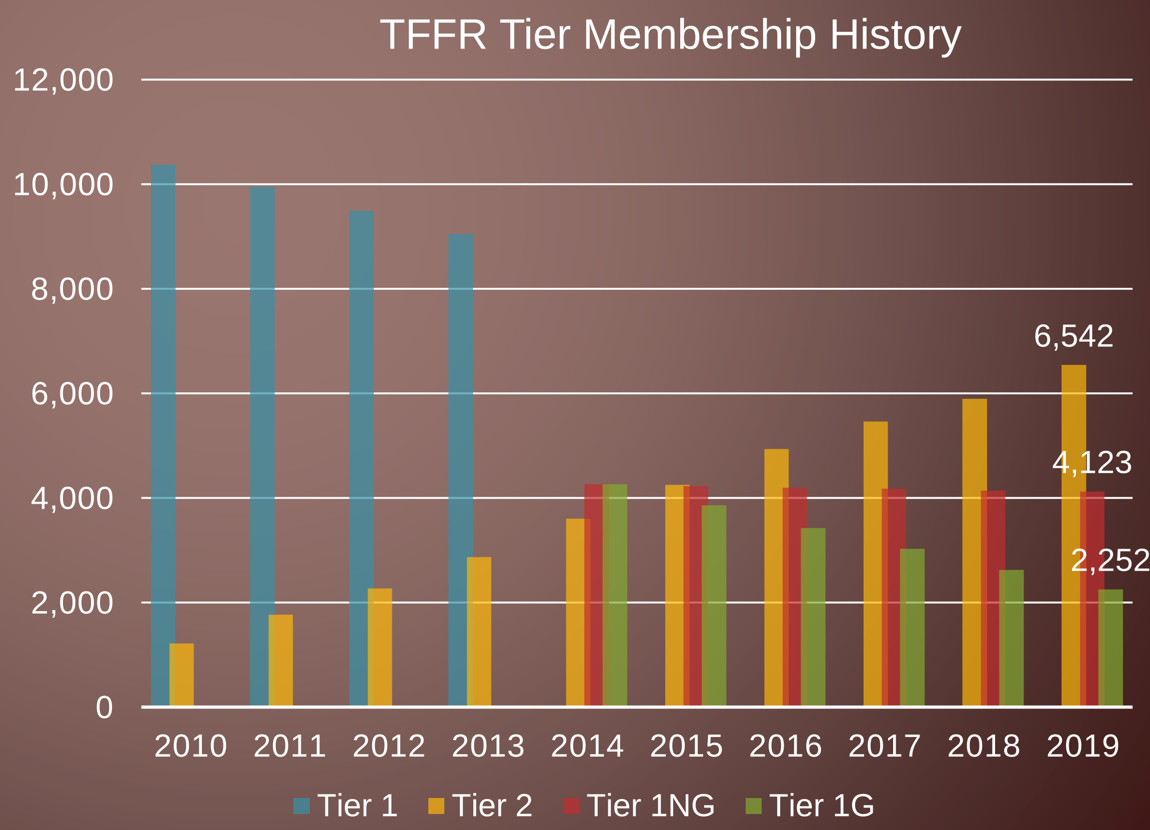
Note: There are also 1,118 inactive non-vested TFFR members and 8,740 retired members and beneficiaries.

Today

TFFR Tier Membership

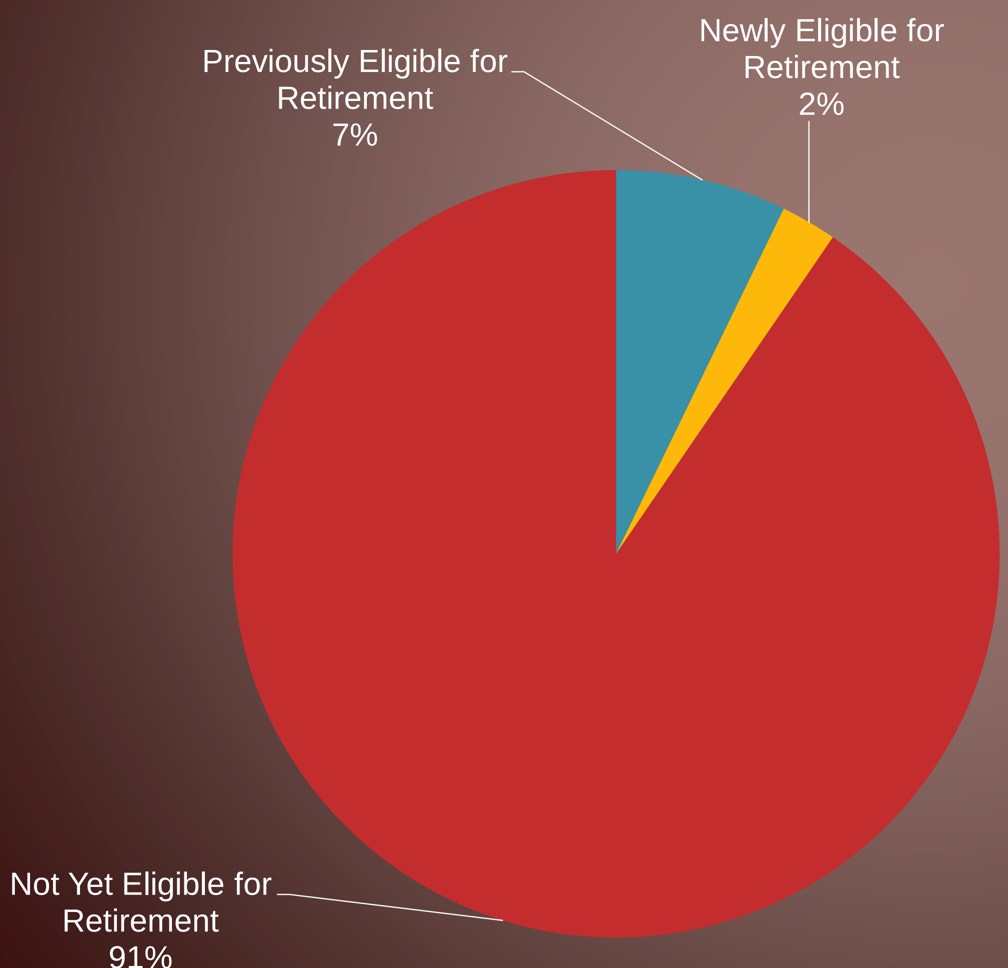
Active and inactive vested Tier membership in January 2019

TFFR Members	Tier 1G	Tier 1NG	Tier 2	Total
Teachers	1,668	2,825	6,002	10,495
Superintendents	44	42	48	134
Other Administrators	129	260	176	565
Inactive Vested	411	996	316	1,723
Total	2,252	4,123	6,542	12,917



Today

Current Active TFFR Membership Eligible for Retirement



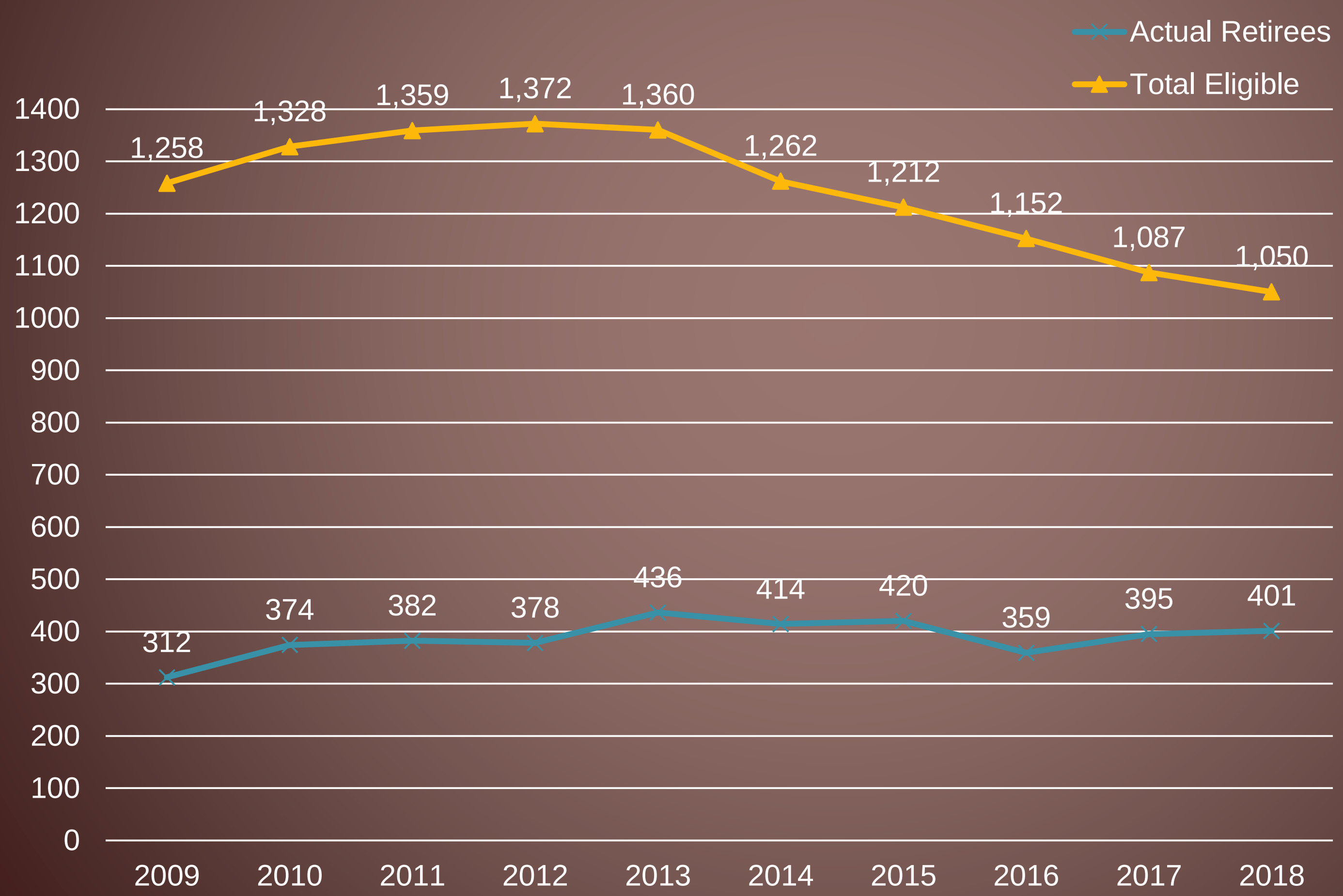
Of the 11,194 active TFFR members, 1,014 members are currently eligible to retire (9%) either under the Rule of 85, Rule of 90/Min age 60, or age 65.

Of the 1,014 active TFFR members eligible to retire, 75% are previously eligible and 25% are newly eligible in 2018-19.

Previously Eligible for Retirement	758
Newly Eligible for Retirement	256
Not Yet Eligible for Retirement	10,180
Total	11,194

Yesterday

Actual Retirees & Total Eligible

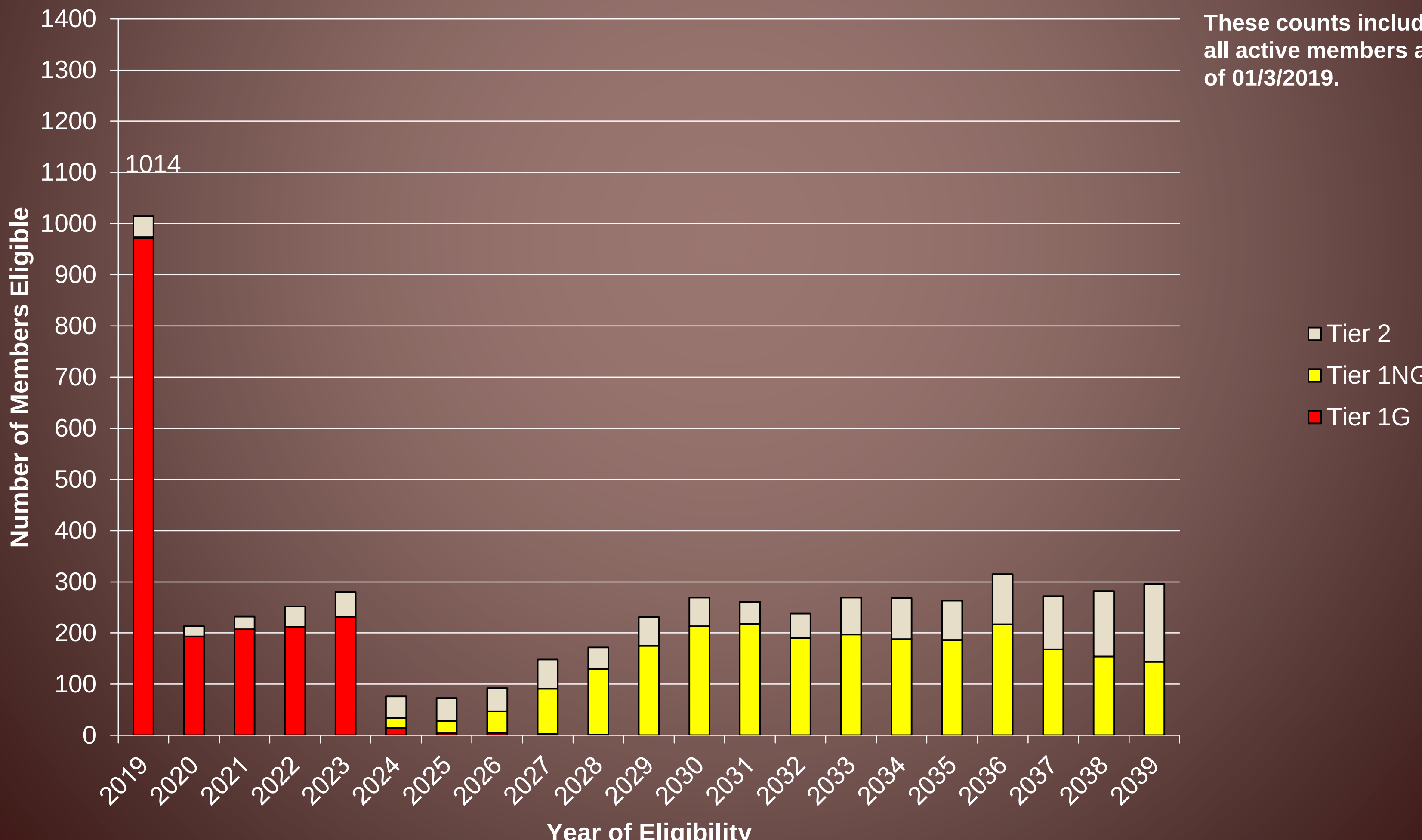


10 Year History

2009-2018

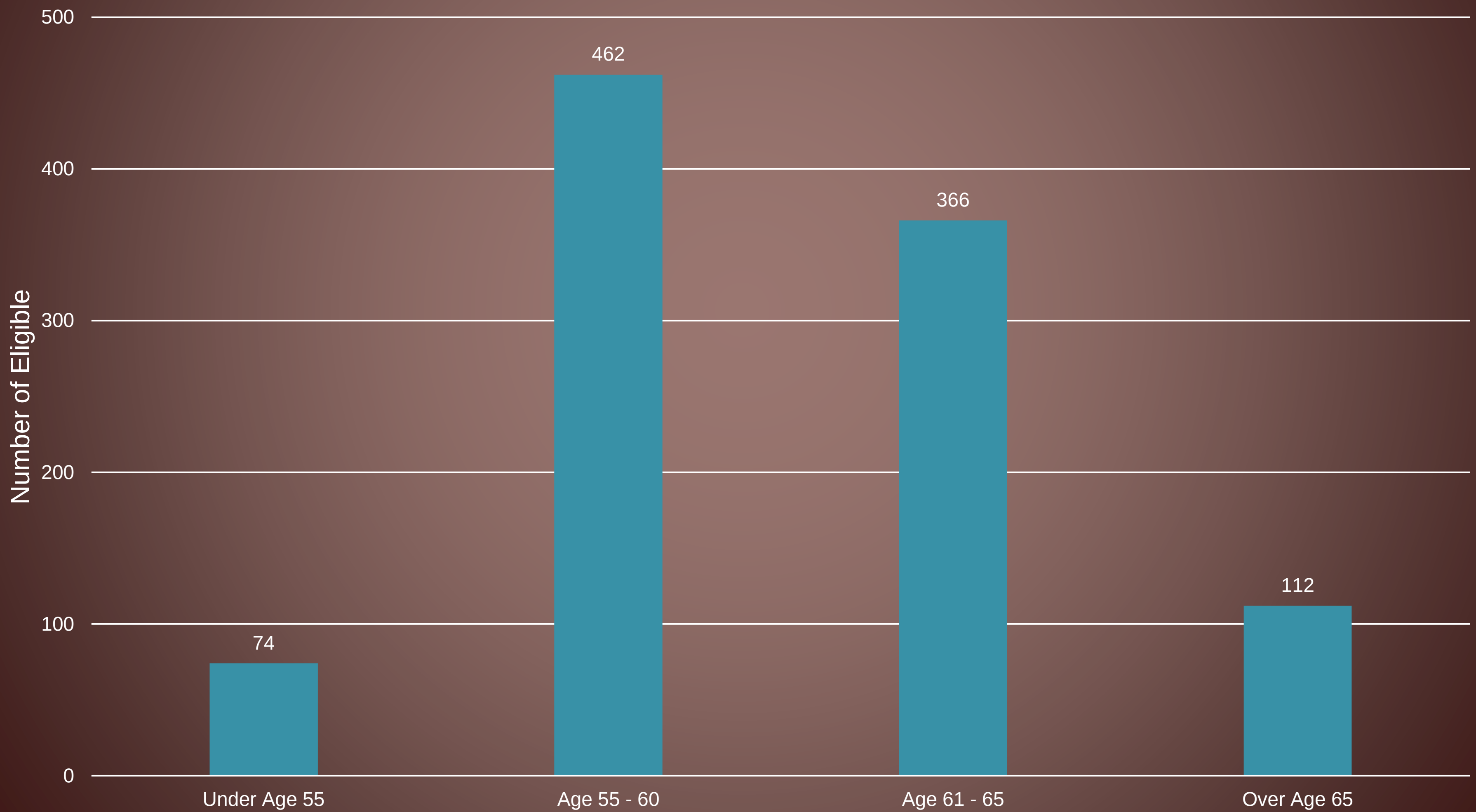
- On average, 1,244 teachers have been eligible to retire each year over the last 10 years.
- On average, 387 teachers actually retired each year, or total of almost 3,871 for 10 year period.
- Approximately 31% of eligible members actually retired over the past 10 years.

TFFR Active Membership Retirement Eligibility Profile - 20 Year Projection



These counts include all active members as of 01/3/2019.

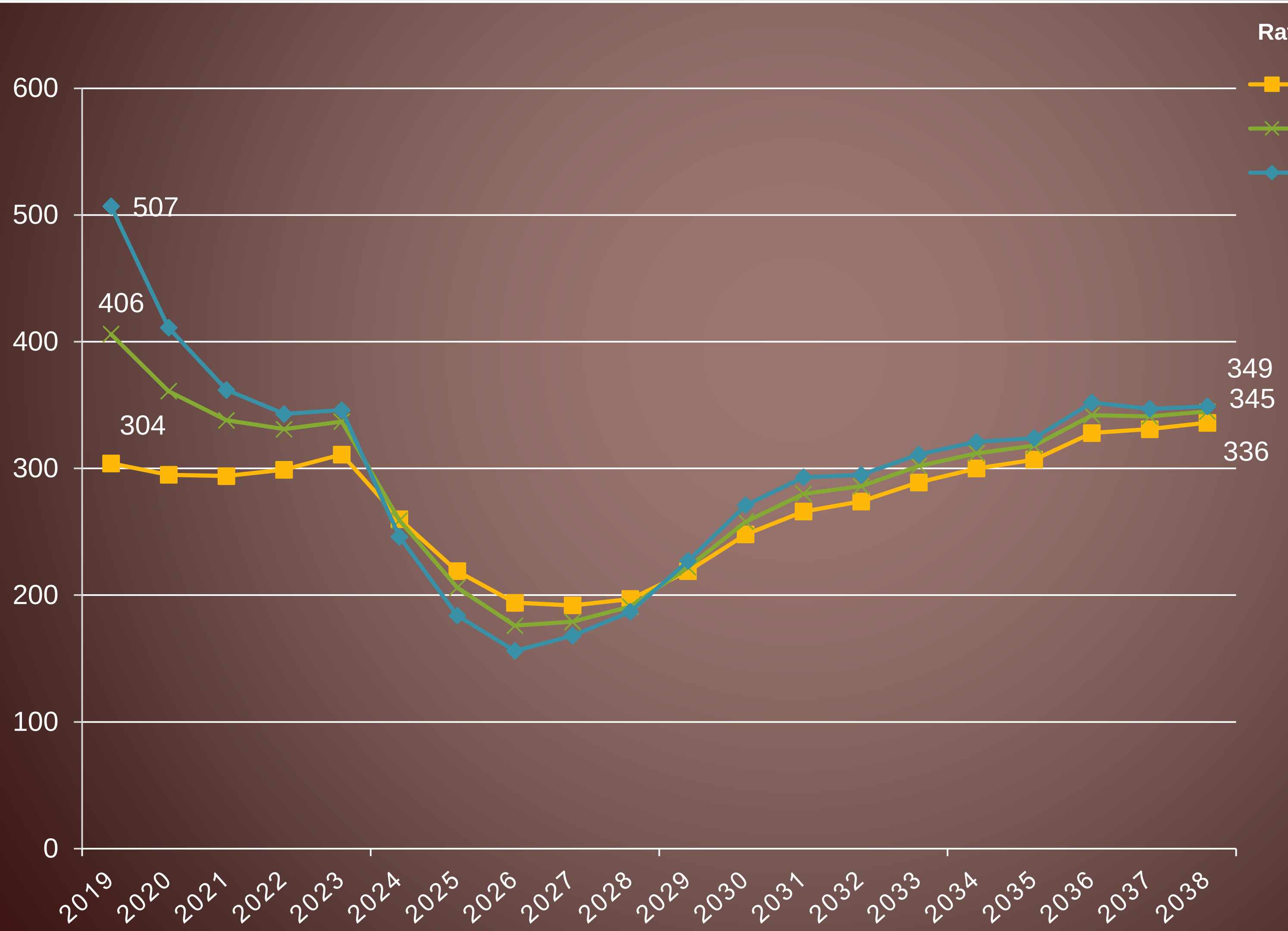
Current Eligible in 2019 by Age



Note: Of the 1,014 total eligible, the youngest is age 52 and the oldest is age 79

Tomorrow???

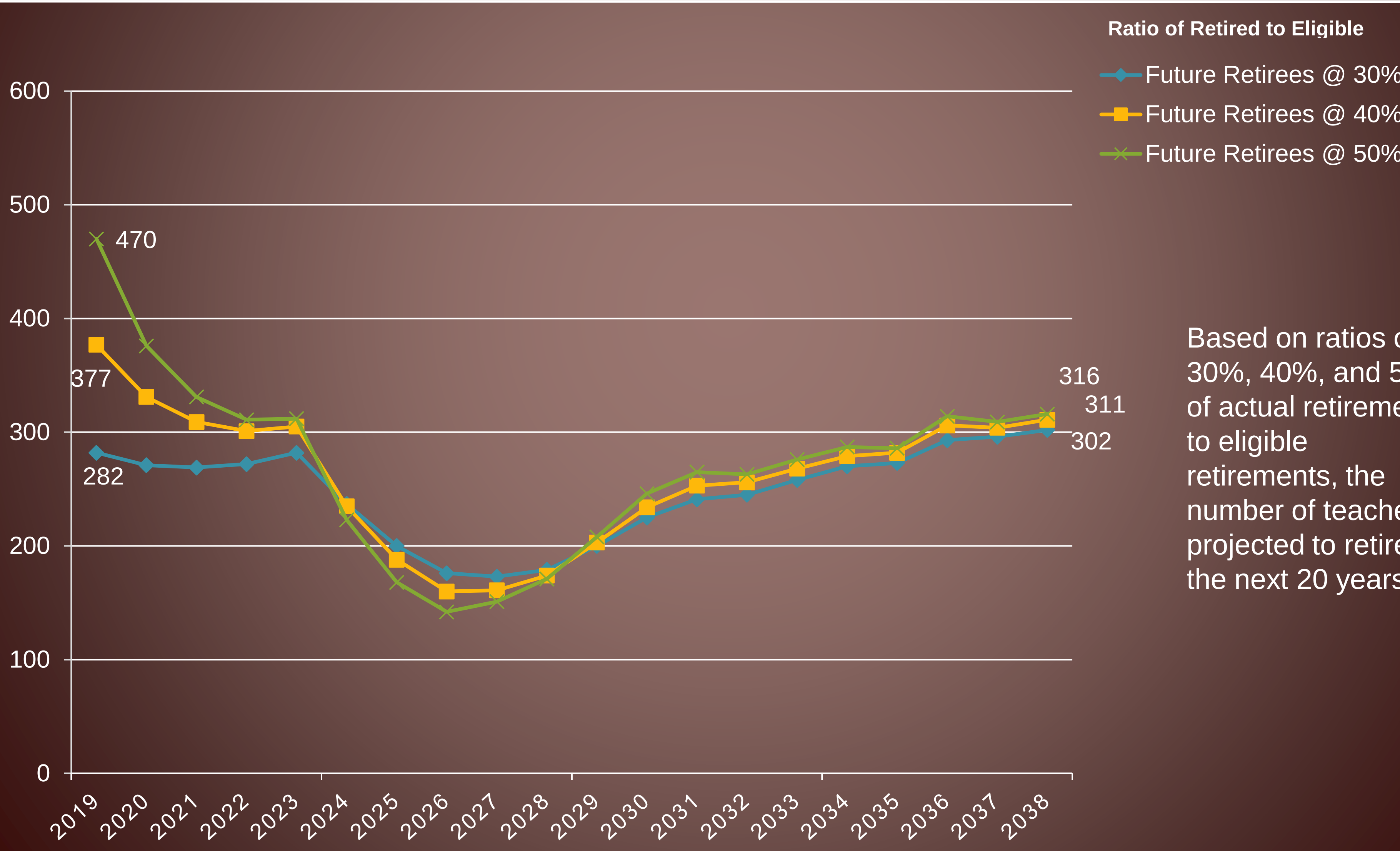
Projected Retirees
All Active



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of active members projected to retire in the next 20 years.

Tomorrow???

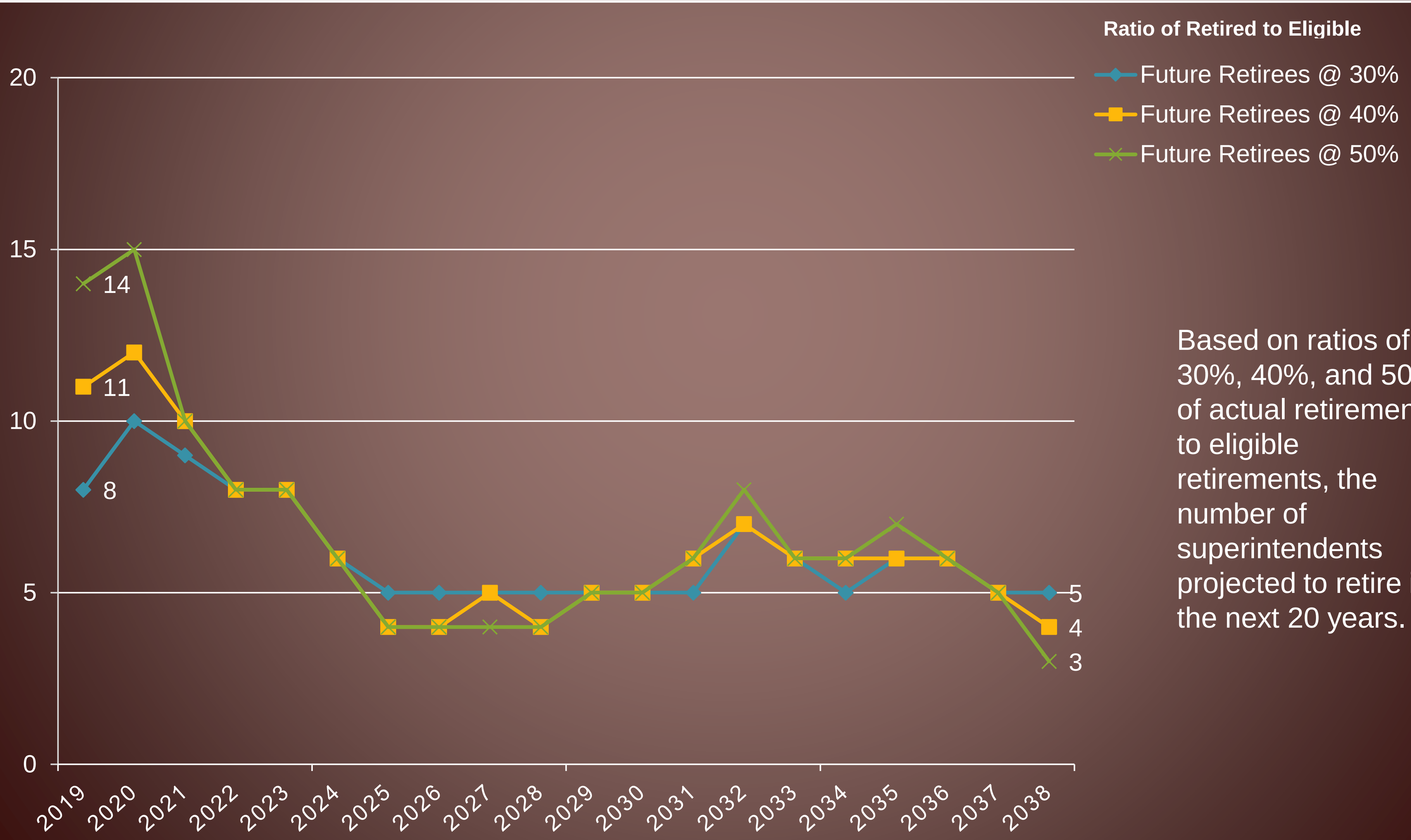
Projected Retirees Teachers



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of teachers projected to retire in the next 20 years.

Tomorrow???

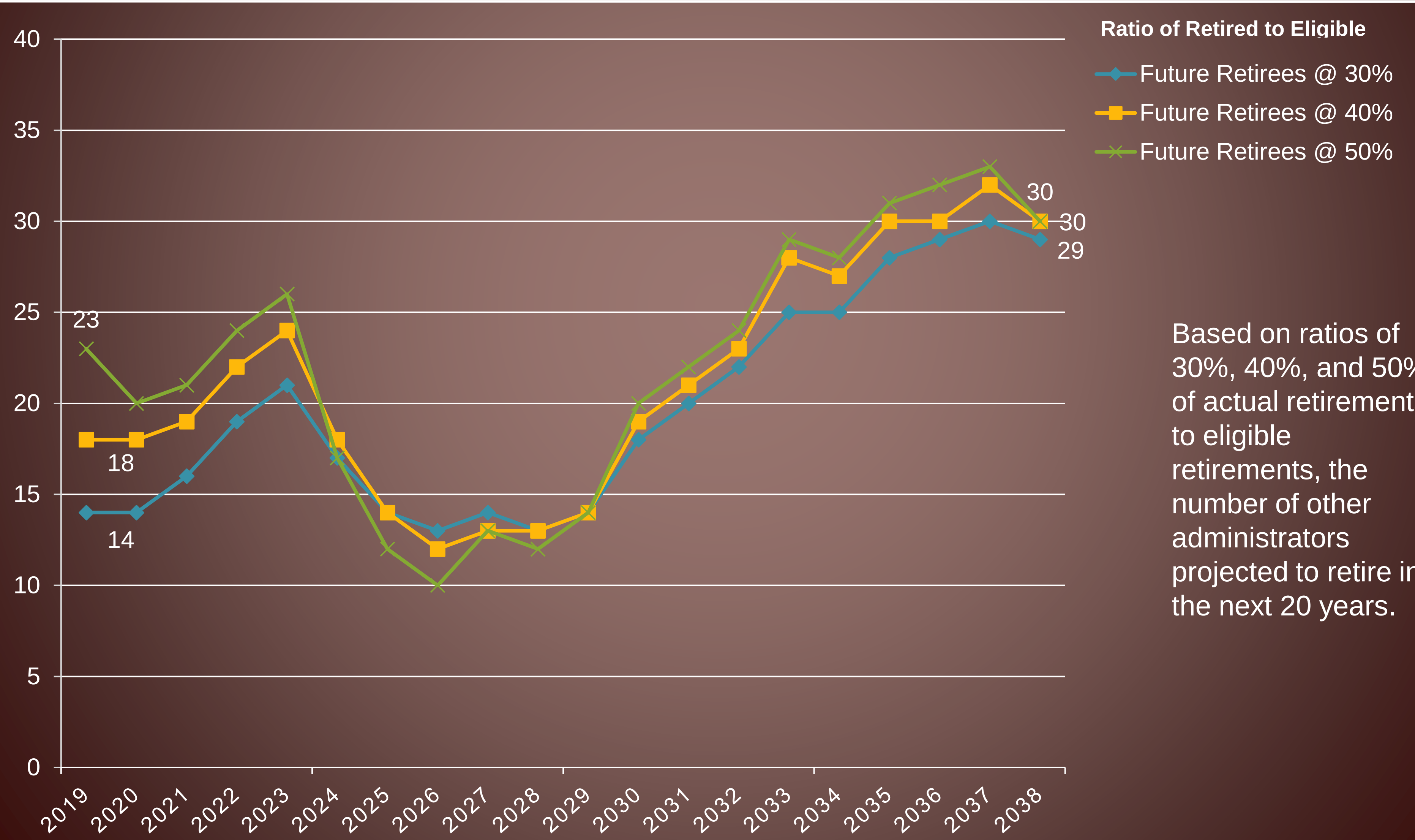
Projected Retirees Superintendents



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of superintendents projected to retire in the next 20 years.

Tomorrow???

Projected Retirees Other Administrators



Based on ratios of 30%, 40%, and 50% of actual retirements to eligible retirements, the number of other administrators projected to retire in the next 20 years.

Summary

Based on ratios of 30% and 40% of actual retirements to eligible retirements, approximately 2,600 to 2,800 active members are projected to retire in the next 10 years which averages about 268 per year.

	Members	# Retire		Avg/Yr	
		30%	40%	30%	40%
Teachers	10,495	2,341	2,541	234	254
Superintendents	134	69	72	7	7
Other Administrators	565	155	171	16	17
Total Active Members	11,194	2,565	2,784	257	278

Note: All retirement projections are estimates only.

North Dakota Teachers' Fund For Retirement

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: March 14, 2019
SUBJ: TFFR Board Policies – Proposed Amendments

Draft amendments to the following board policies are being submitted for TFFR Board consideration.

Introduction and 1st Reading:

- **C-6 Disclosure to Membership**
- **B-6 Membership Data and Contributions**
- **B-8 Account Claims**

At previous Board meetings, RIO staff has discussed plans to transition from paper methods of communicating with members and employers to more electronic methods. You may recall that some of this is limited, or is not feasible due to the outdated pension administration software system we are currently using, however, staff is making changes where possible considering budget, time, and workload constraints.

RIO has already discontinued printing and mailing **member handbooks and newsletters** to active members. Instead, we notify actives (via emails to employers) that member handbooks and newsletters are available on the TFFR website. Member handbooks and newsletters do not contain any personal member information, therefore notifying members that the materials are available on the TFFR website is a reasonable course of action. Active members already have easy access to computers and are using technology on a daily basis.

However, newsletters continue to be printed and mailed to inactive and retired members because staff has no way of electronically notifying inactive and retired members when new newsletters are produced. Additionally, retired members have provided much feedback and relayed concerns about their strong preference for printed materials, and for some, their inability to access materials electronically. In order to continue providing retirees with good customer services, staff believes RIO should continue mailing retiree newsletters at this time.

Member annual statements contain personalized retirement information and benefit estimates, and are valuable documents for members to receive. Because they contain confidential member information, member statements cannot be posted on the website. Staff suggests that beginning **July 1, 2020**, we discontinue mailing annual statements to active members, and notify them (via member newsletters and emails to employers) that the annual statements will only be available on TFFR Member Online. This time frame will allow us to inform members the 2019 annual member statements will be the last statements mailed to them, and that statements can **ONLY** be accessed via Member Online in the future. TFFR Person ID numbers are also included on member statements, and without this number, members are unable to get logged in unless RIO sends them a separate letter which includes this ID number. Additionally, we have seen a large increase in new member logons in the months following mailings of active and retired annual statements. With limited IT and Retirement Services staff resources, a July 1, 2020 effective date gives us an additional year to work one-on-one with members and provide them the technical assistance/support needed for initial log on.

Because we have no way of electronically notifying inactive and retired members, we suggest continuing to mail annual member statements to inactive and retired members for the time being. Once a new or updated pension administration system with electronic communication capabilities is implemented, we can consider expanding electronic communications to also include inactive and retired members.

<u>Note</u>*: TFFR Member Online went live on February 1, 2018. As of February 28, 2019, there were 3,130 members who have successfully logged on to TFFR Member Online. They are comprised of Active/Inactive/Terminated members (2,237) and Retired/ Beneficiaries (893). As of July 1, 2018 valuation report, there were 22,218 total plan members. Therefore, approximately 14% of all members (3,130 / 22,218 = .14) have logged on to TFFR Member Online. Our first priority is to get active members logged on, recognizing the concerns voiced by many current TFFR retirees.*

In order to continue this transition to more electronic communications, staff has proposed amendments to certain Board policies: TFFR Program Policy C-6, Disclosure to Membership; TFFR Ends Policy B-6, Membership Data and Contributions; and TFFR Ends Policy B-8, Account Claims. The proposed amendments include changes to distribution method from paper to electronic for certain mailings, as well as updates and clarifications to other policies which I will review with the Board at the meeting.

Legal Review

Anders Odegaard, TFFR Legal Counsel, has reviewed the proposed amendments to the Board policies, and has no suggested changes.

BOARD ACTION REQUESTED: Board motion to approve 1st reading of amendments to Board Policy C-6 Disclosure to Membership, B-6 Membership Data and Contributions, and B-8 Account Claims.

Policy Type: TFFR Program

Policy Title: Disclosure to Membership

It shall be the policy of the TFFR Board of Trustees that member handbooks, member statements, member newsletters, and financial reports be prepared and made available for TFFR members. The information, or notification that the information is available, may be provided by mail, email to employers for distribution, RIO website and/or TFFR Member Online. Confidential member information will not be emailed to employers for distribution nor on the RIO website.

- Member Handbooks (Summary Plan Descriptions)

A member handbook will be developed and will include information about membership, contribution rates, service credit, benefit provisions for service retirement, disability retirement, and survivor benefits, eligibility for benefits, and how to apply for benefits. The handbook will be updated within 6 months of adoption of any significant legislative changes made to the plan. Members will be notified ~~in writing~~ that the member handbook is available on the RIO website, and a printed copy can be provided upon request.

- Member Annual Statements

Effective July 1, 2020, ~~All~~ active and inactive members will be ~~mailed a~~ provided an annual statement ~~to their home~~ on TFFR Member Online within six months of fiscal year end reporting the status of their member account as of June 30 of the current year. The annual statement ~~information to be reported annually~~ will include: member's name, address, personal identification number, date of birth, beneficiary on file, value of account, retirement salary reported for current year, service credit earned during the current year, accumulated service credit, date of eligibility for unreduced benefits, retirement benefit estimate, and other information pertinent to the ~~teacher's~~ member's account, unless the member has dual service, a qualified domestic relation order, or other special circumstances requiring nonstandard benefit calculations.

~~All r~~Retired members and beneficiaries receiving monthly benefits will be mailed an annual ~~–~~statement to their home address ~~annually~~ reporting the status of their member account as of December 30 of the current year. The ~~information~~annual statement will include: retired member's name, address, personal identification number, beneficiary on file, value of account, accumulated service credit, retirement date, retirement option, benefits received life-to- date, current monthly benefit, ~~and~~ adjustments to benefit (if applicable), and other information pertinent to the retiree's account.

- Member Newsletters

Member newsletters will be published and distributed to active, inactive, and retired TFFR members four times per year. Two newsletters will contain legislative, actuarial, financial, and plan information (Report Card and Retirement Today), and two newsletters will contain investment information (Vested Interest). Member newsletters will be provided electronically to employers for e-mail distribution to active members, and will be mailed to inactive and retired members.

- Annual Financial Report

A~~n~~ comprehensive annual financial report (CAFR) will be published within six months following every fiscal year end. The report will include financial, actuarial, and investment information about the plan. Members will be notified that the CAFR is ~~It will~~ available on the RIO website, and a printed copy can be provided ~~to any TFFR member, benefit recipient, or the public~~ upon request.

TFFR Board Adopted: July 16, 1998.
Amended: July 18, 2002, September 20, 2007, September 23, 2010, XXXX 2019~~.~~

Policy Type: TFFR Ends

Policy Title: Membership Data and Contributions

Ensure the security and accuracy of the members' permanent records and the collection of member and employer contributions from every governmental body employing a ~~teacher~~TFFR member.

Accordingly, the administrative means will be to:

1. Retain member and employer documents applicable to the retirement program.

2. Safeguard TFFR database files.

3. Protect the confidential information contained in member and employer files.

4. Collect the member and employer contributions from the employers based on retirement salary earned by the member.

5. Monitor the employer reporting process including the timely filing of information, consistency of month-to-month data, and changes in the employer payment plan models.

6. Review the individual member data, salary, and service credit for accuracy.

7. Post and validate the data received from the employer to the individual member accounts.

8. ~~Mail~~Provide annual statements to every member.

9. Summarize the ~~teacher~~member data reported and notify the employers annually of the prior fiscal year~~-to- date~~ information.

10. ~~Ensure~~Perform reviews to monitor whether ~~that~~ individuals employed as "teachers" in North Dakota school districts, political subdivisions, and state institutions are reported to TFFR in compliance with the North Dakota Century Code (NDCC).

11. Provide publications and reporting instructions to employers on TFFR.

12. Transfer member and employer contributions to the investment program in a timely manner.

Policy Type: TFFR Ends

Policy Title: Membership Data and Contributions

Monitoring (Method, Responsibility, Frequency)

1. Internal Report

   a. Disclosure of compliance to the board from RIO's internal auditors. ~~The Internal Audit (IA) program is designed to review participating employers on an eight-year cycle.~~

   b. Compliance for individual accounts is monitored through internal audits of staff compliance with state laws, rules, board policy, and procedures.

2. External Report

   a. Disclosure of compliance to the board by RIO's external auditors as a part of the annual audit.

   b. Disclosure of compliance to members through annual statements.

TFFR Board Adopted: May 25, 1995.

Amended: July 18, 2002, September 20, 2007, September 22, 2016, XXXX 2019.

Policy Type: TFFR Ends

Policy Title: Account Claims

Ensure the payment of benefit claims to members of TFFR.

Accordingly, the administrative means will be to:

1. Pay retirement benefits based on an ~~presumed~~estimated final salary for members retiring upon completion of their teaching contract and whose final salary has not been reported to TFFR.

2. Allow ~~teachers~~retired members receiving an annuity from TFFR to have payroll deductions subtracted from their monthly benefit, including, but not limited to: health, life, and other insurance premiums payable to NDPERS, North Dakota Retired Teachers Association (NDRTA) dues, North Dakota United (ND United) Retired dues, and federal and North Dakota income tax withholdings.

3. Distribute payments for benefit claims (annuities, PLSOs, refunds, and rollovers) once per month. ~~Distributions~~Benefit ~~including~~ payments made by Electronic Funds Transfer (EFT) will be deposited and payable on the first working day of each month. Benefit payments made by check will be mailed on the last working day of the previous month payable on the first working day of each month.

4. Distribute special payments for benefit claims in the event of unforeseen circumstances (i.e. death, disability, ~~QDRO,~~ Court Order, staff processing delay, etc.) if approved by the Deputy Executive Director-Chief Retirement Officer.

5. ~~Send~~Mail new account notices and account change notices to retired members and beneficiaries receiving benefits.

Monitoring (Method, Responsibility, Frequency)

- Internal Report
  - Disclosure of compliance to the board through internal audits on compliance with laws, rules, and policies.
  - Periodic presentations by staff at board meetings.
- External Report
  - Disclosure of compliance to the board through annual audit by RIO external auditors.

TFFR Board Adopted: May 25, 1995.
Amended: July 27, 2000; July 24, 2003, XXXX 2019.

North Dakota Teachers' Fund For Retirement

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: March 14, 2019

SUBJ: BOARD EDUCATION:
TFFR Employer Reporting – Eligible/Ineligible Pension Salary

TFFR participating employers play an important role in administering the retirement program for North Dakota educators. Proper reporting of member information, salary, and service hours, and timely payment of member and employer contributions, is vital and helps to ensure the accurate calculation of retirement, disability, survivor, and refund benefits.

Shelly Schumacher, Retirement Program Manager, and Tami Volkert, Employer Services Coordinator, work closely with school district business managers and payroll staff. They receive high marks for their friendly assistance and expertise on TFFR reporting issues.

Shelly and Tami will provide an overview of the TFFR Employer Reporting process, with special emphasis on eligible/ineligible pension salary.

Board information Only. No board action is requested.

TFFR EMPLOYER REPORTING OVERVIEW

TFFR Board
March 21, 2019

Shelly Schumacher and Tami Volkert

Teachers' Fund for Retirement (TFFR)

TFFR - Topics to Cover

- Background
- Employer Responsibilities
- Employer Models
- Reporting Requirements

TFFR Employer Background

TFFR Participating Employers

School Districts/REAs	178
Special Ed Units	19
Vocational Centers	4
Counties	6
State Agencies/Institutions	5
Other – Closed groups	1
2018-19 Total Employers	**213**

Employer Responsibilities

Employer Responsibilities

1. Identify Employees Eligible for TFFR
2. Report Eligible Salary
3. Collect and Pay Contributions

Employer Responsibilities

- Identify Employees Eligible for TFFR
  - Licensed by ESPB
  - Under Contract or Written Agreement

Employer Responsibilities

- Report Eligible Salary in Correct Fiscal Year
  - Earnings for Performance of Duties
    - Teaching, Supervisory, Administrative, Extra-curricular
    - Performance or Merit Pay
    - Advisor/Director/Monitor/Supervisor
    - Adult education
    - Assessments for hearing and speech
    - Classroom set up (only your own)
    - Information Technology coordination
    - In-staff subbing
    - Professional Development (not reimbursement for expenses or tuition)
    - Mentoring
    - Music accompanist
    - Paid leave
    - REA, consortium type work
    - Summer school/summer programs
    - Travel time between schools (not mileage)
    - Curriculum writing
    - Drivers Ed
    - Dual credit classes
    - Grant writing (not if % of grant)

Employer Responsibilities

- Do not Report Ineligible Salary
  - Benefits or payments converted to salary
  - Bonuses
  - Computer tech support (unless technology coordinator duties)
  - Early retirement incentive pay, severance pay, or other payments conditioned on or made in anticipation of retirement or termination
  - Equipment maintenance and repair, jobsite prep and finish work, construction project management and similar nonteaching duties (if not included on member’s regular teaching contract)
  - Fringe benefits including insurance programs, annuities, transportation allowances, housing allowances, meals, lodging and expense allowances
  - Teacher’s aide, ticket taking, janitorial, bus driving, referee
  - Unused leave
  - Back loaded salary structures
  - Other benefits or payments not defined above that the TFFR Board determines to be ineligible TFFR salary

Employer Responsibilities

- Collect & Pay Contributions

	Employer	Member	Total
7/1/12	10.75%	9.75%	20.5%
7/1/14	12.75%	11.75%	24.5%

Note: 2011 legislation increased rates effective 7/1/12 and 7/1/14 to improve TFFR funding level. Increased rates will be in effect until TFFR reaches 100% funded ratio; then rates will be reduced to 7.75% each.

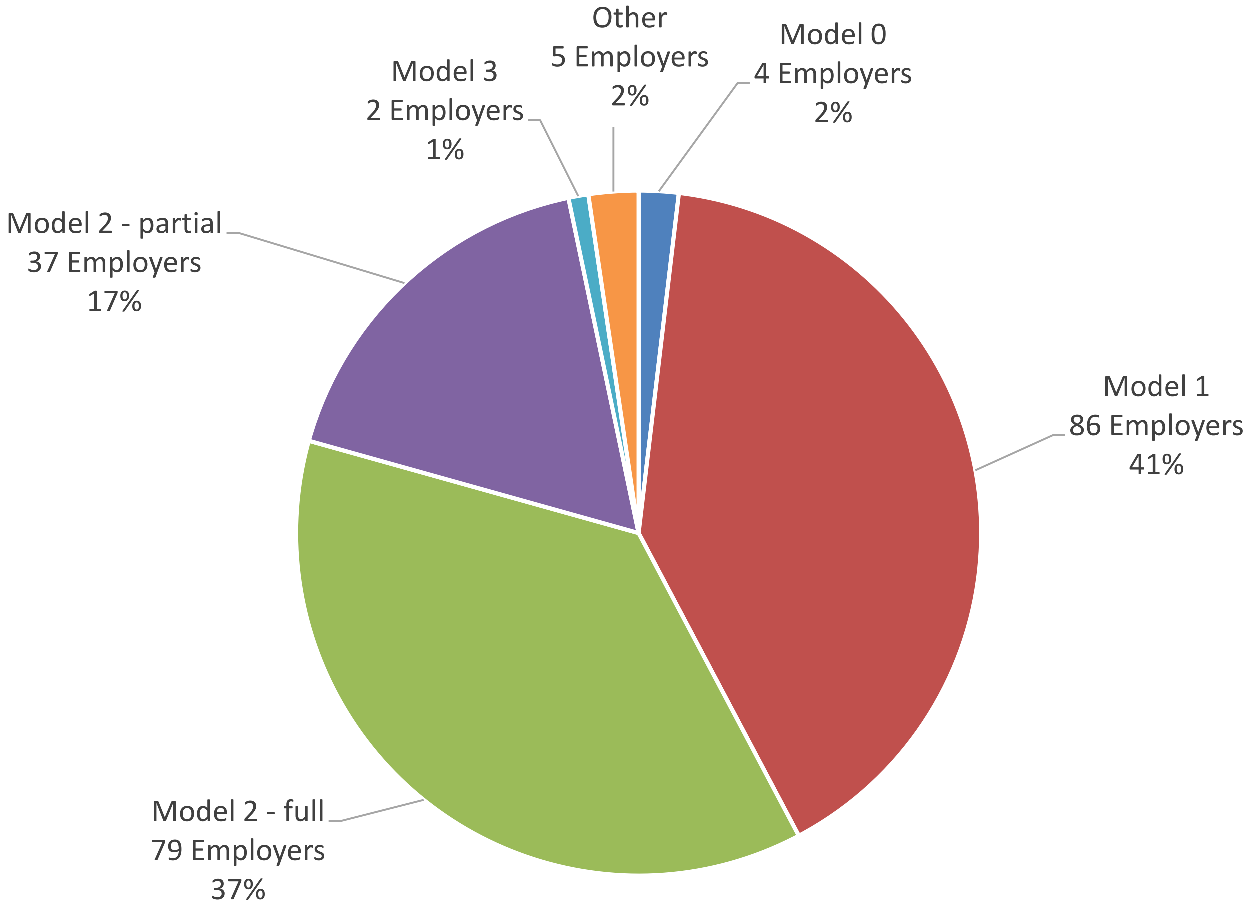
TFFR Employer Models

TFFR Employer Models

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

- **No Model:** Member/employee contribution is paid by employee and remitted by employer as **taxed** dollars.
- **Model 1:** Member/employee contribution is paid by employee as a salary reduction and remitted to TFFR by employer as **tax deferred** dollars.
- **Model 2 All:** Member/employee contribution is paid by employer as a salary supplement and remitted to TFFR by employer as **tax deferred** dollars.
- **Model 2 Partial %:** A portion of the member/employee contribution is paid by employer as a salary supplement and remitted by employer as **tax deferred** dollars. The remaining employee contribution is paid by employee as a salary reduction and remitted by employer as **tax deferred** dollars.
- **Model 3 $:** Option is no longer used effective 7-1-2019.
- **Other:** Includes state agencies

TFFR Employer Models
2018-19



Model 1 - Employer Remittance of ALL the Member Contributions as a Salary Reduction

Contract/Additional TFFR Salary Earned by Member	$20,000.00
Retirement Salary	$20,000.00
Employer Contributions	$2,550.00 (Retirement Salary of $20,000 x 12.75%)
Tax-Deferred Member Contributions Withheld from Member's Pay and Remitted by the Employer as a Salary Reduction	$2,350.00 (Retirement Salary of $20,000 x 11.75%)
Taxable Salary Reported for Income Tax Purposes	$17,650.00 (Contract Salary of $20,000 less $2,350 Tax-Deferred Member Contributions)
Taxable Salary Reported to Social Security	$20,000.00

Model 2 (ALL) – Employer Payment of ALL the Member Contributions as a Salary Supplement

Contract/Additional TFFR Salary Earned by Member	$20,000.00
Retirement Salary	$22,662.89 (Contract Salary of $20,000/.8825[1-.1175])
Employer Contributions	$2,889.52 (Retirement Salary of $22,662.89 x 12.75%)
Tax-Deferred Member Contributions Paid by the Employer as a Salary Supplement	$2,662.89 (Retirement Salary of $22,662.89 x 11.75%)
Taxable Salary Reported for Income Tax Purposes	$20,000.00
Taxable Salary Reported to Social Security	$20,000.00

Model 2 (Partial) – Employer Payment of A PERCENTAGE of Member Contributions as a Salary Supplement

Example: Employer agrees to pay 7.75% of member contribution as a salary supplement. The remaining 4% will be deducted from the member's pay. All contributions will be tax-deferred.

Contract/Additional TFFR Salary Earned by the Member	$20,000.00
Retirement Salary	$21,680.22 (Contract salary $20,000/.9225[1-.0775])
Employer Contributions	$2,764.23 (Retirement Salary of $21,680.22 x 12.75%)
Tax-deferred Member Contributions Paid by Employer as a Salary Supplement	$1,680.22 (Retirement salary $21,680.22 x 7.75%)
Tax-Deferred Member Contributions Withheld from Member's Pay and Remitted by the Employer as a Salary Reduction	$867.21 (Retirement salary $ 21,680.22 x 4%)
Taxable Salary Reported for Income Tax Purposes	$19,132.79 (Contract Salary of $20,000 less $867.21 Tax-Deferred Member Contributions)
Taxable Salary Reported to Social Security	$20,000.00

Model Comparison

Model 1

Contract TFFR Salary	$22,662.89
<u>Retirement Salary</u>	**<u>$22,662.89</u>**
Employer Contributions (Retirement salary of $22,662.89 x 12.75%)	$2,889.52
Tax-Deferred Member Contributions Withheld from Member's Pay (Retirement salary of $22,662.89 x 11.75%)	$2,662.89
Taxable Salary Reported for Income Tax Purposes (Contract salary $22,662.89 less $2,662.89 Tax-Deferred Member Contributions)	$20,000.00
Taxable Salary Reported to Social Security	$22,662.89

Model 2 (ALL)

Contract TFFR Salary	$20,000.00
<u>Retirement Salary</u> (Contract salary of $20,000/1.0 - .1175)	**<u>$22,662.89</u>**
Employer Contributions (Retirement salary of $22,662.89 x 12.75%)	$2,889.52
Tax-Deferred Member Contributions Paid by the Employer (Retirement salary of $22,662.89 x 11.75%)	$2,662.89
Taxable Salary Reported for Income Tax Purposes	$20,000.00
Taxable Salary Reported to Social Security	$20,000.00

Model Change Effect on Individual Payroll
Compares Model 2 @ 11.75% to Model 1

Federal Tax	**Y**	[Enter **Y** if yes, N if no]		
State Tax	**Y**	[Enter **Y** if yes, N if no]		
Withholding Status	**M**	[**S** for single, **M** for married]		
# of exemptions	**0**			
	Proposed Model 1 WIth Salary Inc		**Current Model 2 11.75%**	
Yearly Contracted Salary	22,662.89		20,000.00	
TFFR Yearly Retirement Salary	22,662.89		22,662.89	Contract Salary / (1 minus % of pick-up amount)
Pay Periods	12		12	
Monthly Contract Salary	1,888.57		1,666.67	
TFFR Monthly Retirement Salary	1,888.57		1,888.57	
Member Contributions	221.91	Deducted from Pay (tax-deferred)	221.91	Paid by Employer (tax-deferred)
			-	Deducted from Pay (tax deferred)
Taxable Salary (Fed & State)	1,666.67		1,666.67	
Monthly Contract Salary	1,888.57		1,666.67	
Deductions:				
TFFR Contributions	221.91		0.00	
Federal Tax	99.97		99.97	
State Tax	19.61		19.61	
Social Security	117.09	6.2% X Monthly Contract Salary	103.33	
Medicare	27.38	1.45% X Monthly Contract Salary	24.17	
Net Salary	1,402.61		1,419.59	

TFFR Employer Models

- Employer Must Follow Same Model for all TFFR Members
- Model Change Must be Effective July 1

Reporting Requirements

Reporting Requirements

- **Forms Required**
  - Member Action Form (new and returning refunded members)
  - Reemployed Retiree Form (each year retiree is reemployed)

- **Monthly Report of Earnings & Payment of Contributions**
  - Due 15th of Following Month
  - Electronic or Paper
  - Penalty & Interest on Late Reporting

- **Accuracy of Reporting**
  - Member Annual Statements
  - Annual Employer Summary Report
  - School District Compliance Reviews
  - Annual Reasonability Reports
  - Salary/Service Review During Counseling Sessions
  - Review of Salary/Service at Retirement


QUESTIONS

North Dakota Teachers' Fund For Retirement

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **March 14, 2019**

SUBJ: **2019-20 TFFR Board Calendar**

TFFR Board Policy C-2 (Board Meetings) requires the TFFR Board to conduct a minimum of six meetings each year. Board meetings are generally scheduled for the day preceding the SIB meetings beginning in July of each year, unless a different day is determined. Special meetings may also be called, or this schedule may be adjusted if needed. TFFR meetings are typically scheduled for Thursdays at 1 pm, and have not been scheduled in August and May due to potential conflicts with school start and end dates. In the past few years, meetings have been scheduled in July, September, October, January, March and April.

SIB meetings are typically scheduled for the 4th Friday of each month, except for November which is the 3rd Friday due to Thanksgiving. Last year, the SIB met 10 times, but they are considering 8 meetings in the 2019-20 year. The SIB has scheduled 10 meetings for the upcoming fiscal year, but may cancel two meetings if they are not needed (September and March).

Attached are proposed TFFR meeting dates for 2019-20 **IF** the TFFR Board maintains its past schedule. If the Board is interested in meeting at a different time, day, or month, a different board meeting schedule can be developed. You may wish to discuss this option since some of the meeting months for TFFR may no longer be meeting months for SIB, requiring two separate trips for out-of-town TFFR trustees who are also on the SIB.

I am also working on the 2019-20 Board 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:

2017-18

- Callan College Investment Overview (Callan)
- Actuarial Valuation Process (Segal)
- Public Pension Actuarial Issues (Segal)
- QDRO Benefits (RIO)
- Disability Benefits (RIO)
- Environmental, Social, and Governance Investing (RIO)
- Securities Litigation (RIO)

2018-19

- Investment performance Benchmarks (Callan)
- Investment market Update (Epoch Investment Partners)
- Fiduciary Duties/Ethics (AGO)
- ND Education Demographics (DPI)
- ND Educator Shortages (ESPB)
- Actuarial Valuation Process (Segal)
- New ASOPS and Mortality Tables (Segal)
- DB/DC/Hybrid plans (Segal)
- Pension Risk Analysis and Stress Testing (Segal)
- TFFR Employer Reporting – Eligible Salary (RIO) *March 2019
- Open Records/Open Meetings (AGO) *April 2019

BOARD ACTION: Approve or adjust 2019-20 board meeting schedule. Provide directives for board agenda or board education topics.

2019-20
TFFR and SIB Meeting Schedule

July 2019
25 TFFR - 1:00 pm
26 SIB - 8:30 am
(SIB Governance Retreat)

August 2019
-- TFFR - No meeting
23 SIB - 8:30 am

September 2019
26 TFFR - 1:00 pm
27 SIB - 8:30 am tentative?

October 2019
24 TFFR - 1:00 pm
25 SIB - 8:30 am

November 2019*
-- TFFR - No meeting
22 SIB - 8:30 am

December 2019
-- TFFR - No meeting
-- SIB - No meeting

January 2020
23 TFFR - 1:00 pm
24 SIB - 8:30 am

February 2020
-- TFFR - No meeting
28 SIB - 8:30 am

March 2020
26 TFFR - 1:00 pm
27 SIB - 8:30 am tentative?

April 2020
23 TFFR - 1:00 pm
24 SIB - 8:30 am

May 2020
-- TFFR - No meeting
22 SIB - 8:30 am

June 2020
-- TFFR - No meeting
-- SIB - No meeting

<u>Notes</u>:

1) TFFR Board Policy C-2 (Board Meetings) requires TFFR to conduct a minimum of 6 meetings per year, which are generally scheduled for the day preceding the SIB meetings, unless a different day is determined.

2) SIB meetings are scheduled for 4th Friday of each month, except for November* which is 3rd Friday due to Thanksgiving. SIB is scheduled to meet 10 times in 2019-20, but may reduce to 8 meetings (not meet in September and March).

03.01.19

NDTFFR Board Reading
March 2019

- Public Pension Plan Investment Return Assumptions, National Association of State Retirement Administrators (NASRA), February 2019.
- State Hybrid Retirement Plans, National Association of State Retirement Administrators (NASRA), January 2019.
- 2017-18 Comparative Study of Major Public Employee Retirement Systems, Wisconsin Legislative Council, February 2019.
- 2018 NCPERS Public Retirement Systems Study, National Conference on Public Employee Retirement Systems, January 2019.
- Impact of Public Sector Assumed Returns on Investment Choices, Center for Retirement Research at Boston College (CRR), January 2019.
- Do Pension Cuts for Current Employees Increase Separation? Center for Retirement Research at Boston College (CRR), January 2019.
- Retiring Earlier Than Planned: What Matters Most? Center for Retirement Research at Boston College (CRR), February 2019.
- Risk Sharing in Public Retirement Plans, National Association of State Retirement Administrators, December 2018.
- Significant Reforms to State Retirement Systems, National Association of State Retirement Administrators, December 2018.