Agenda

ND Teachers' Fund for Retirement
Board Meeting

Thursday, July 21, 2016
1:00 pm
Peace Garden Room
State Capitol, Bismarck, ND

1. Call to Order and Approval of Agenda – Pres. Gessner (Board action)
2. Approval of Minutes of April 21, 2016 Meeting – Pres. Gessner (Board action) 5 min.
3. Trustee Appointment – Pres. Gessner (Information) 5 min.
4. Election of 2016-17 Officers – Pres. Gessner (Board action) 5 min.
5. Actuarial Audit Report – Brent Banister, Cavanaugh Macdonald Consulting (Board action) 60 min.
6. Retiree Subbing – Fay Kopp, Shelly Schumacher (Board action) 30 min.
7. Quarterly Investment Update – Dave Hunter (Information) 15 min.
8. Quarterly Audit Services Update – Terra Miller Bowley (Information) 10 min.
9. Pension Benefit Comparisons – Fay Kopp (Information) 30 min.
10. Annual TFFR Program Review – Pres. Gessner, Fay Kopp (Board Action) 30 min.
11. Annual TFFR Customer Satisfaction Reports – Pres. Gessner, Fay Kopp (Board action) 15 min.
12. TFFR Communication Enhancements – Fay Kopp (Board information) 10 min.
13. Trustee Education – Fay Kopp (Information) 5 min.
14. Consent Agenda – QDRO application (Board action) 5 min.
    *Executive Session possible if Board discusses confidential information under NDCC 15-39.1-30.
15. Other Business
16. Adjournment

Next Board Meeting: Regular – September 22, 2016

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

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
MINUTES OF THE
APRIL 21, 2016, BOARD MEETING

BOARD MEMBERS PRESENT:	Mike Gessner, President Kirsten Baesler, State Superintendent (teleconference) Mike Burton, Trustee Kim Franz, Trustee Rob Lech, Trustee Mel Olson, Trustee
ABSENT:	Kelly Schmidt, State Treasurer
STAFF PRESENT:	David Hunter, ED/CIO Fay Kopp, Deputy ED/CRO Terra Miller Bowley, Audit Services Supervisor Darlene Roppel, Retirement Assistant Shelly Schumacher, Retirement Program Manager
OTHERS PRESENT:	Kathy Kindschi, NDU-Retired Janilyn Murtha, Attorney General's Office

CALL TO ORDER:
Mr. Mike Gessner, President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the board meeting to order at 1:00 p.m. on Thursday, April 21, 2016, in the Peace Garden Room at the State Capitol in Bismarck, ND.

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

APPROVAL OF AGENDA:
The Board considered the meeting agenda. Mrs. Kopp requested that agenda item 3 follow item 4 to accommodate Ms. Murtha's schedule.

MR. OLSON MOVED AND MRS. FRANZ SECONDED TO APPROVE THE AGENDA AS AMENDED.

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

MINUTES:
The board considered the minutes of the TFFR board meeting held March 17, 2016.

MRS. FRANZ MOVED AND MR. BURTON SECONDED TO APPROVE THE MINUTES OF THE TFFR BOARD MEETING HELD MARCH 17, 2016.

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

ANNUAL PENSION PLAN COMPARISONS REPORT:
Mrs. Kopp presented the annual Public Pension Plan Comparisons report, comparing TFFR to the 2014 Public Fund Survey (PFS) conducted by the National Association of State Retirement Administrators (NASRA). It includes 126 large public retirement plans which represent about 85% of the entire state and local government retirement system community. Most plans, including TFFR, have taken steps of different degrees to improve funding. The report contains information about funding levels, assets and liabilities, membership changes, investment earnings, contribution rates, and actuarial assumptions. Mrs. Kopp also commented on other public pension data bases, reports, and studies available. Board discussion followed.

MR. LECH MOVED AND MR. OLSON SECONDED TO ACCEPT THE ANNUAL PUBLIC PENSION PLAN COMPARISON REPORT.

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

BOARD EDUCATION: FIDUCIARY DUTIES/ETHICS:
Ms. Janilyn Murtha, Attorney General's office, presented board education on the fiduciary duties of TFFR board members which are set forth in the North Dakota Century Code (NDCC)15-39.1-05.1. Fiduciary duties include loyalty, impartiality, prudence, administration, skill, delegation, and prudent investor rule. Ms. Murtha also discussed application of fiduciary duties related to administration of the plan, maintaining the confidentiality of member records, monitoring and suggesting improvements to the plan, conflicts of interest, code of conduct, breach of fiduciary duties, and board member liability. Board discussion followed.

The board recessed at 2:52 p.m. and reconvened at 3:00 p.m.

INELIGIBLE TFFR SALARY POLICY:
Mrs. Kopp presented a draft board policy on Ineligible TFFR Salary, which reflects the board's determination at the March 2016 board meeting. The draft policy provides that effective July 1, 2016, additional payments made by a TFFR participating employer to a licensed TFFR member for equipment maintenance and repair, jobsite prep and finish work, and similar types of nonteaching duties are not eligible salary for TFFR purposes if the duties are not included in the member's regular teaching contract(s).

MR. LECH MOVED AND MRS. FRANZ SECONDED TO APPROVE THE DRAFT BOARD POLICY ON "INELIGIBLE TFFR SALARY".

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

EXPERIENCE STUDY ASSUMPTION CHANGES UPDATE:
Mrs. Schumacher highlighted the implementation that was recently completed to incorporate the assumption changes that resulted from the Experience Study. The ND Administrative Code was updated with revised actuarial factors and became effective April 1, 2016. The revised interest rate and mortality assumptions were incorporated into the CPAS pension administration computer system effective April 1, 2016. The revised interest rate assumption was incorporated into late employer reporting and prior fiscal year corrections effective July 1, 2015. Changes were communicated to members and employers in the July and August 2015 newsletters. The TFFR Member Handbook and the Purchase of Service brochure have been updated to reflect the changes.

ASSET ALLOCATION IMPLEMENTATION UPDATE:
Mr. Hunter reviewed the changes to the TFFR Investment Policy Statement recently approved by the Board. TFFR's new asset allocation in the public markets is expected to be totally implemented by June 30, 2016, with equity increasing from 57% to 58%; fixed income increasing from 22% to 23%; and real assets decreasing from 20% to 18%.

ACTUARIAL AUDIT UPDATE:
Mrs. Kopp reported that the contract between Cavanaugh-Macdonald Consulting and TFFR has been negotiated and signed. The actuarial audit project is on schedule and proceeding as planned. The Actuarial Audit report is scheduled to be delivered at the July 21, 2016, board meeting.

FEDERAL ISSUES:
Mrs. Kopp reviewed some federal issues that could potentially have an impact on public pension plans. She highlighted provisions of: 1) Public Employee Pension Transparency Act (PEPTA), H.R. 4822; 2) Secure Annuities for Employees (SAFE) Retirement Act; 3) Other state based secure retirement proposals to expand private sector retirement coverage.

CONSENT AGENDA:

MRS. FRANZ MOVED AND MR. OLSON SECONDED TO APPROVE THE CONSENT AGENDA WHICH CONSISTED OF QDRO # 2016-03 AND DISABILITY # 2016-3D.

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

MOTION CARRIED.
ABSENT: TREASURER SCHMIDT

BENEFIT OVERPAYMENT:
President Gessner explained that this item must be discussed in Executive Session due to confidential member information under North Dakota Century Code (NDCC) 44-04-19.2(1) and 15-39.1-30. The topic to be discussed in the Executive Session is an overpayment of retirement benefits to a deceased retiree and to consider whether the overpayment should be written off. President Gessner reminded the board to limit discussion to the announced topic.

EXECUTIVE SESSION

Executive session attendees included: Ms. Murtha, Supt. Baesler, Mr. Burton, Mrs. Franz, Mr. Lech, Mr. Olson, President Gessner, Mr. Hunter, Mrs. Kopp, Ms. Miller-Bowley, Mrs. Schumacher and Mrs. Roppel.

Executive session began at 3:25 p.m. and ended at 3:36 p.m.

OPEN SESSION

MR. LECH MOVED AND MR. BURTON SECONDED TO WRITE OFF THE OVERPAYMENT OF BENEFITS IN THE AMOUNT OF $2,150.72 AND CLOSE THE MEMBER'S ACCOUNT.

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

BOARD VACANCY AND RESOLUTION:
Mrs. Kopp reported that Mrs. Franz has resigned from the board effective June 30, 2016. President Gessner's term also ends on June 30, 2016, therefore his position is up for reappointment. As required by state law, names have been submitted by ND United to the Governor's office for consideration on the TFFR Board.

President Gessner recognized Mrs. Franz for her 10 years of distinguished service representing active members on the TFFR board from 2006 to 2016. He read the following resolution:

ND TFFR Board Resolution in Appreciation of Kim Franz

WHEREAS, Kim Franz served as trustee of the ND Teachers' Fund for Retirement Board representing active members with distinction for 10 years, from 2006 to 2016; and

WHEREAS, Mrs. Franz has dedicated 32 years to teaching elementary students and continues to serve the Mandan community as a caring, respected, and outstanding teacher; and

WHEREAS, Mrs. Franz has been a strong voice for both active and retired teachers, and has unequivocally supported initiatives that have been in the best interests of TFFR members; and

WHEREAS, Mrs. Franz has been committed to preserving the defined benefit structure of the retirement plan; to safeguarding the assets TFFR holds in trust to provide lifetime retirement security for ND educators and their beneficiaries; and to protecting the interests of education professionals; and

WHEREAS, Mrs. Franz has provided thoughtful guidance and tremendous insight on educators' pension issues, supported efforts to strengthen TFFR's funding structure and safeguard the financial integrity of the fund, and

WHEREAS, Mrs. Franz has distinguished herself as a knowledgeable and experienced trustee whose commitment to integrity and excellence have earned her the respect of those who have worked with her; now therefore, be it

RESOLVED, that the TFFR Board express its heartfelt thanks to Mrs. Franz for her dedicated and compassionate service to the Board, and for her steadfast commitment to excellence in pension administration; and be it further

RESOLVED, that the Board wishes Kim Franz, and her husband, Mike, good health and happiness; and be it further

RESOLVED, that a copy of this Resolution be presented to Mrs. Franz, printed in the official TFFR Board minutes, and submitted to the National Council on Teacher Retirement, on behalf of the many lives she has so positively touched.

DATED this 21st day of April, 2016

MR. OLSON MOVED AND MR. LECH SECONDED TO APPROVE THE BOARD RESOLUTION HONORING MRS. FRANZ.

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

OTHER BUSINESS:

The next regular board meeting will be held July 21, 2016, in the Peace Garden Room at the State Capitol.

All presentations and reports from this meeting are on file at the Retirement and Investment Office (RIO).

ADJOURNMENT:

With no further business to come before the Board, President Gessner adjourned the meeting at 3:45 p.m. Cake and coffee were served in Mrs. Franz's honor.

Respectfully Submitted:

____
Mr. Mike Gessner, President
Teachers’ Fund for Retirement Board

____
Darlene Roppel
Reporting Secretary

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: July 14, 2016

SUBJ: Trustee Appointment

I am pleased to inform the Board that Governor Dalrymple has appointed Toni Gumeringer to the TFFR Board of Trustees to complete the unexpired term of Kim Franz (July 1, 2016 – June 30, 2019). Toni will represent active members on the Board. She is currently a Speech Language Pathologist at Liberty Elementary School in Bismarck.

We thank Toni for accepting this appointment, and welcome her to the Board.

BOARD INFORMATION ONLY.

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: July 14, 2016
SUBJ: Election of Officers

The TFFR Board is required by state law to elect officers at the first meeting of each fiscal year. Current 2015-16 board assignments are attached.

BOARD ACTION REQUESTED: For the upcoming 2016-17 year, the Board will need to elect the positions of President and Vice President. The Board should also select three trustees to represent TFFR on the State Investment Board (one active administrator, one active teacher, one retired member); the SIB Audit Committee (one SIB member); and an SIB alternate (one non SIB member). The State Treasurer is required by virtue of her position to serve on the State Investment Board, so that is not subject to Board assignment.

Statutory references are included below for your information.

Teachers' Fund for Retirement (TFFR)

15-39.1-05.1. Board composition - Terms - Voting.

1. The authority to set policy for the fund rests in a board of trustees composed as follows:

a. The governor shall appoint, from a list of three nominees submitted to the governor by the North Dakota education association, two board members who are actively employed in full-time positions not classified as school administrators. A board member appointed under this subdivision who terminates employment may not continue to serve as a member of the board.

b. The governor shall appoint, from a list of three nominees submitted to the governor by the North Dakota council of educational leaders, one board member who is actively employed as a full-time school administrator. A board member appointed under this subdivision who terminates employment may not continue to serve as a member of the board.

c. The governor shall appoint, from a list of three nominees submitted to the governor by the North Dakota retired teachers association, two board members who are the retired members of the fund.

d. The state treasurer and the superintendent of public instruction.

2. All current appointees of the board shall serve the remainder of their terms as members of the board until their terms expire and their successors are appointed. The first newly appointed board member under subdivision a of subsection 1 must be appointed to serve an initial term of four years. The first newly appointed board member under subdivision c of subsection 1 must be elected to serve an initial term of five years. Newly appointed board members shall serve a term of five years. Each newly appointed term begins on July first.

3. Each board member is entitled to one vote, and four members constitute a quorum. Four votes are required for resolution or action by the board.

15-39.1-06. Organization of board.

The board may hold meetings as necessary for the transaction of business and a meeting may be called by the president or any two members of the board upon reasonable notice to the other members of the board. The president for the ensuing year must be elected at the first meeting following July first of each year.

15-39.1-07. Vacancies - Rulemaking power.

Vacancies which may occur among the appointed members of the board must be filled by the governor and the appointee shall complete the term for which the original member was selected. The board may adopt such rules as may be necessary to fulfill the responsibilities of the board.

15-39.1-08. Compensation of members.

Members of the board, excluding ex officio members, are entitled to receive one hundred forty-eight dollars as compensation per day and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09 for attending meetings of the board. No member of the board may lose regular salary, vacation pay, vacation or any personal leave, or be denied right of attendance by the state or political subdivision thereof while serving on official business of the fund.

****

State Investment Board
21-10-01. State investment board - Membership - Term - Compensation

1. The North Dakota state investment board consists of the governor, the state treasurer, the commissioner of university and school lands, the director of workforce safety and insurance, the insurance commissioner, three members of the teachers' fund for retirement board or the board's designees who need not be members of the fund as selected by that board, two of the elected members of the public employees retirement system board as selected by that board, and one member of the public employees retirement system board as selected by that board. The director of workforce safety and insurance may appoint a designee, subject to approval by the workforce safety and insurance board of directors, to attend the meetings, participate, and vote when the director is unable to attend. The teachers' fund for retirement board may appoint an alternate designee with full voting privileges to attend meetings of the state investment board when a selected member is unable to attend. The public employee’s retirement system board may appoint an alternate designee with full voting privileges from the public employee’s retirement system board to attend meetings of the state investment board when a selected member is unable to attend. The members of the state investment board, except elected and appointed officials and the director of workforce safety and insurance or the director's designee, are entitled to receive as compensation one hundred forty-eight dollars per day and necessary mileage and travel expenses as provided in sections 44-08-04 and 54-06-09 for attending meetings of the state investment board.

Enclosure

TFFR Board

2015 - 2016 Assignments

Officers of the board

- President Mike Gessner
- Vice President Rob Lech

Board members serving on the SIB

- Mike Gessner
- Rob Lech
- Mel Olson
- State Treasurer Schmidt (ex-officio)

SIB Audit Committee

- Mike Gessner

SIB alternate

- Kim Franz

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **July 14, 2016**

SUBJ: **Actuarial Audit Report**

Attached is the report of the actuarial audit conducted by Cavanaugh Macdonald Consulting (CavMac). Brent Banister, Chief Pension Actuary and Co-Project Leader, will be at the July board meeting to present the report and respond to questions. Unfortunately, Pat Beckham, the other Co-Project Leader, will be unable to attend.

CavMac was asked to express an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, and valuation results in the July 1, 2015 actuarial valuation report and recent experience study conducted by TFFR's current actuary, Segal Consulting (Segal).

The audit report states: ***"We generally find the actuarial valuation results to be reasonable and accurate based on the assumptions and methods used. The valuation was performed by qualified actuaries and was performed in accordance with the principles and practices prescribed by the Actuarial Standards Board."***

The report also noted: ***"Because of the complexity of actuarial work, we would not expect to match Segal's results exactly, nor would we necessarily expect our opinions regarding the selection of assumptions and methods to be the same as the opinions of Segal. While we offer up a number of different ideas, we believe that Segal's work provides appropriate assessment of the health and funding requirements of the NDTFFR."***

CavMac did note a few issues where they believe there are opportunities for improvement. Segal has reviewed the audit report, and has provided comments related to the actuarial review (letter attached). Segal will review their response with the Board at a future meeting.

BOARD ACTION REQUESTED: Board motion to accept the Actuarial Audit Report presented by Cavanaugh Macdonald Consulting.

Attachment

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

North Dakota Teachers' Fund For Retirement Actuarial Audit

Presented by

Brent Banister, PhD, FSA, MAAA, EA, FCA

July 21, 2016

www.CavMacConsulting.com

Overview

- Actuarial audits seek to verify the actuarial work being performed
  - Actuarial calculations are complex and not likely to be exactly replicated
  - While not exactly like an accounting audit, the goal is still to provide assurance of the quality of the work product being delivered

- Key review items:
  1. Are assumptions and methods reasonable?
  2. Are the data processed accurately?
  3. Are calculations performed correctly?
  4. Do the reports communicate the appropriate and necessary information?
  5. Do the projections of the future reflect the likely direction of the Fund’s health?

Overview

- Our goal is to try to evaluate and help improve the actuarial process, not just catalog trivial discrepancies.
- Overall, we believe the approach and the calculations provided by the retained actuary are reflective of generally accepted actuarial practice and present a fair picture of the funding progress and future funding needs.

Actuarial Standards of Practice

- Actuarial Standards of Practice (ASOP's) are issued by the Actuarial Standards Board to govern US practice

- ASOP's tend to be based on principles more than detailed requirements

- ASOP's frequently call for professional judgment, so two actuaries may arrive at different decisions

- ASOP's are binding guidance for credentialed actuaries
  - Failure to comply may bring action from the Actuarial Board for Counseling and Discipline

Actuarial Assumptions

- Setting actuarial assumptions is a blend of art and science
- ASOP's provide guidance
- Assumptions are generally split between:
  - Economic assumptions
  - Demographic assumptions
- We suggest a formal experience study report be produced

Economic Assumptions

- Price inflation
- Wage inflation / payroll growth
- Investment return
- Internal consistency amongst these assumptions is important (required by ASOP 27)

Economic Assumptions

- Price inflation reduced from 3.00% to 2.75%
  - Considered historical as well as anticipated inflation
  - This reduction also led to 0.25% reductions in wage inflation and investment return

- We believe Segal's recommendations are reasonable
  - Need to disclose that salary increases are based on duration from entry rather than years of service

Demographic Assumptions

- Mortality
- Retirement
- Withdrawal
- Disability
- Salary merit increases
- Miscellaneous assumptions

Demographic Assumptions

- Mortality is a key assumption
  - Segal considered the quality of the fit of the actual experience compared to the proposed table, not just the overall ratio
  - Segal weighted the experience based on benefit amounts, not just headcounts
  - Both of these represent the leading edge of actuarial practice and Segal is to be commended
  - We would have considered changing the adjustment factors to get the Actual/Expected ratio closer to 100% (professional judgment only)
- We believe Segal's recommendations are reasonable
  - Need to disclose that salary increases are based on duration from entry rather than years of service

Actuarial Methods

- Actuarial methods are used to measure a plan's funded status and contribution requirements
  - Asset valuation method
  - Actuarial cost (or liability allocation) method
  - UAAL amortization method
- ASOP's provide a great degree of latitude
- Fixed contribution rates may affect selection of methods

Actuarial Methods

- NDTFFR Methods
  - 5-year asset smoothing
  - Entry Age Normal cost method
  - Amortize a single UAAL base as a level % of pay over a closed period
- These are very common and reasonable methods

Amortization Methods

- At some point, a single closed amortization base presents volatility problems, but will not be an issue in the next ten years

- There is some movement in the public plan community toward layered amortization bases
  - Pay off the “legacy” UAAL over the remaining period
  - New gains/losses, assumption changes, etc. can be funded over a 15-20 year period

Entry Age Cost Method

- Segal calculates the entry age as the member's age at the date of initial enrollment in NDTFFR

- Our preferred approach is to calculate the entry age as the attained age less years of service

- About 25% of the actives have a difference because of elapsed time without service

Entry Age Cost Method

- For each person, we prepare calculations as though we were back at the individual “entry age”
  - We determine a hypothetical starting salary assuming the current salary increase assumption has always been met
- From this entry age vantage point, we calculate the present value of all future benefits
- From this entry age vantage point, we calculate the present value of all future pay

Entry Age Cost Method

- The ratio of the Present Value of Benefits at entry age to the Present Value of Future Salary at entry age is the normal cost rate
- Theoretically if the normal cost amount (normal cost rate times pay) was contributed and all assumptions met, benefits would be exactly funded
- The Actuarial Accrued Liability is the accumulation of these theoretical normal costs to the valuation date

Entry Age Cost Method

- Segal uses the initial enrollment date into NDTFFR to determine the entry age
- Our preferred approach is to calculate the entry age as the current age less current service
- For members with a “gap”, Segal’s method calculates a normal cost rate using a denominator with pay for years where there was no employment
  - Lowers the normal cost rate, but increases the UAAL, when compared with our approach

Data Processing

- Very little data preparation is required
  - Data is clean
  - Data contains the needed information to value plan liabilities

- We have no concerns

Valuation Calculations

- We replicated key valuation results
  - Present Value of Benefits
  - Actuarial Accrued Liability
  - Normal Cost
  - Actuarial Value of Assets
  - UAAL Amortization Payment
- We examined individual test cases for additional insight
- We used both Segal's entry age approach and our preferred approach

Valuation Calculations

- Generally matched within reasonable tolerances

Measure	Ratios	Tolerance
Present Value of Benefits	99.6%	98% - 102%
Actuarial Accrued Liability (Segal entry age method)	98.5%	95% - 105%
Normal Cost Amount (Segal entry age method)	97.7%	95% - 105%

- AVA and UAAL amortization calculations were fine

Valuation Calculations

- The deferred vested liability includes a pre-retirement death benefit for those assumed to take an immediate lump sum – very minor

- We suggest some technical adjustments for converting the normal cost amount to a normal cost rate
  - Theoretically, more precise
  - In this case, no meaningful difference in results

Actuarial Valuation Report

- Two Actuarial Standards of Practice (ASOP's) provide guidance for the contents of an actuarial report (ASOP 4 and 41).
- Over 40 specific items which are possibly relevant
  - Recent changes reflect trend toward more disclosure and transparency
- Additionally, our review provides a fresh, outside view of the report

Actuarial Valuation Report

- The report contains the information required in the ASOP's and provides a fair presentation of the Fund's status and contribution needs

- Our report includes some minor enhancements that we believe would be beneficial
  - Segal should review and determine if changes are needed

GASB Information

- We reviewed the GASB information and calculations provided for employers to use
  - Detailed review of some individual school districts
- We reviewed the development of the Single Equivalent Interest Rate (discount rate)
- We found Segal's work to be reasonable and matched their calculations

Funding Projections

- Segal provides the projected funded status under various investment return scenarios
- Their projections are based on modeling the Fund into the future as new members in Tier 2 replace Tier 1 active members (both grandfathered and non-grandfathered)

Funding Projections

- Segal provided us with their new entrant profile
  - We did not audit this profile, but it appeared reasonable
- We independently projected future liabilities and built a model of future funded status
- Results under all of the investment scenarios were comparable
  - Because of differences in software and model building, we would not expect to exactly match Segal's results
- We believe Segal's projections provide valuable information for NDTFFR

Conclusions

- Segal's work complies with the ASOP's in our opinion.
- We would prefer a different approach to the determination of entry age, but Segal's method is acceptable and the effect on results does not change the basic message of the funding progress or contribution needs of the Fund.
- There is a minor overstatement of deferred vested liabilities which has no meaningful impact.
- We offer a variety of suggestions that we believe are useful.
  - Formal experience study report is the most significant.

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

ACTUARIAL REVIEW REPORT FOR

THE NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT

Prepared July 13, 2016

www.CavMacConsulting.com

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

July 13, 2016

Board of Trustees
North Dakota Teachers' Fund for Retirement
1930 Burnt Boat Drive
PO Box 7100
Bismarck, ND 58507

Dear Board of Trustees:

Cavanaugh Macdonald Consulting, LLC has performed an independent review of the July 1, 2015 actuarial valuation of the North Dakota Teachers' Fund for Retirement. As an independent reviewing or auditing actuary, we have been asked to express an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, and valuation results.

Our analysis of the actuarial assumptions and methods was based largely on the most recent experience study prepared in April, 2015. Our opinion on the valuation results was based on a replication valuation of the July 1, 2015 actuarial valuation. The retained actuary for the System is Segal Consulting (Segal). We would like to thank Segal for their cooperation and assistance in providing the required information to us. **We generally find the actuarial valuation results to be reasonable and accurate based on the assumptions and methods used. The valuation was performed by qualified actuaries and was performed in accordance with the principles and practices prescribed by the Actuarial Standards Board.** This report documents the detailed results of our review.

If you need anything else, please do not hesitate to give us a call. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

Sincerely,

Brent A. Banister

Brent A. Banister, FSA, FCA, MAAA, EA
Chief Pension Actuary

Patrice Beckham

Patrice A. Beckham, FSA, FCA, MAAA, EA
Principal and Consulting Actuary

3906 Raynor Pkwy, Suite 106, Bellevue, NE 68123
Phone (402) 905-4461 • Fax (402) 905-4464
www.CavMacConsulting.com
Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

As an independent auditing actuary, Cavanaugh Macdonald Consulting, LLC (CMC) has been tasked to provide a general overview and express an opinion of the reasonableness and soundness of the work performed by Segal Consulting (Segal) for the North Dakota Teachers' Fund for Retirement (NDTFFR). The work to be reviewed includes both the July 1, 2015 actuarial valuation and GASB reports, projection results prepared in conjunction with the valuation, and the most recent experience study dated April 30, 2015.

We requested full member and financial data from NDTFFR along with reports, plan descriptions and applicable statutes pertaining to the plans. We also requested member data, as reconciled for the 2015 valuation, from Segal as well as complete descriptions of assumptions, methods and valuation procedures.

It is our belief that an audit should not focus on finding trivial differences between actuarial processes, procedures, philosophies, and styles utilized by two different actuaries, but rather to verify there are no material errors, and to find improvements to the process and procedures utilized by the System's actuary. Because actuarial work draws on professional judgment, there is a subjective component that must be considered alongside the objective component of matching numerical results. In performing this audit, we attempt to limit discussions concerning stylistic preferences and focus more on the significant philosophical approaches, the accuracy of calculations, the completeness and reliability of reporting, and the compliance with generally acceptable actuarial practices and standards of practice in all of the work reviewed.

As described in our report, we have determined that the actuarial methods, assumptions, processes, and reports are consistent with the applicable Actuarial Standards of Practice and our understanding of GASB Statements 67 and 68. Throughout the report, we have noted a few issues where we believe there are opportunities for improvement.

In Section 2 of our report, we analyze the set of actuarial assumptions used by Segal. The actuarial assumptions are a critical component of the valuation process and, thus, were reviewed as part of the audit. While we offer some minor comments, we find the assumptions recommended by Segal and adopted by the NDTFFR Board to be reasonable and appropriate for their intended purposes.

In Section 3 of our report, we review the actuarial methods that are used to develop the actuarial contribution rate. We point out a concern we have with Segal's application of the Entry Age Normal cost method. As we note, however, this concern is not in conflict with Actuarial Standards of Practice, although we don't believe it follows common pension practice. The other methods are appropriate to help assess the funded status and contribution needs of the Fund.

In Section 4 of our report, we compare the data provided by NDTFFR with the data used by Segal. We find that the data is consistent and appropriate, and have no recommendations.

In Section 5 of our report, we show the results of our independently calculations of the liabilities of NDTFFR compared with the results prepared by Segal. We identified a minor issue with the valuation of liabilities for deferred vested members and also made a recommendation as to how the normal cost rate should be developed. We provide a comparison of our calculations and note that generally our suggested changes have minimal impact on the measurements of funded status. While we would calculate the normal cost rate in a different way that results in a higher rate, this rate would not change the fact that the funded level is expected to improve under a range of scenarios. We note that the close match of the Present Value of Benefits calculation is an indication that the calculations are reliable.

In Section 6, we provide our analysis on the valuation report produced by Segal. We found it to be substantially in compliance with the ASOPs, but we offered some suggestions for improvement.

In Section 7, we discussed our review of the GASB reporting and found it to be reasonable.

In Section 8, we compared results of a model that we independently built to project future valuation results to the projections Segal provided to the NDTFFR. Our results exhibited substantially similar patterns under an array of investment return alternatives, indicating the reasonableness of Segal's approach.

Because of the complexity of actuarial work, we would not expect to match Segal's results exactly, nor would we necessarily expect our opinions regarding the selection of assumptions and methods to be the same as those of Segal. While we offer up a number of different ideas, we believe that Segal's work provides an appropriate assessment of the health and funding requirements of the NDTFFR.

The remainder of this report provides the basis for our findings for each of the requested tasks, including our recommendations.

2. Actuarial Assumptions

Background on Actuarial Assumptions

The actuarial assumptions form the basis of any actuarial valuation or cost study. Since it is not possible to know in advance how each member's career will evolve in terms of salary growth, future service and cause of termination, the actuary must develop assumptions in an attempt to estimate future patterns. These assumptions enable the actuary to value the amount of benefits earned and to reasonably estimate when and how long these benefits will be paid. Similarly, the actuary must make an assumption about future investment earnings of the trust fund. In developing the assumptions, the actuary examines the past experience and considers future expectations to make the best estimate of the anticipated experience under the plan.

There are two general types of actuarial assumptions:

- Economic assumptions – these include the valuation interest rate (expected return on plan assets), assumed rates of salary increase, price inflation, wage inflation, and increases in total payroll. The selection of economic assumptions should conform to ASOP No. 27 *"Selection of Economic Assumptions for Measuring Pension Obligations"*.

- Demographic assumptions – these include the assumed rates of retirement, mortality, termination, and disability. The selection of demographic assumptions should conform to ASOP No. 35 *"Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations"*.

Different actuaries have different philosophies when it comes to evaluating the experience study data and recommending changes to assumptions. Based on the recommendations in the NDTFFR Experience Study report, it appears that Segal's approach is to move partway from the prior assumption towards the recently observed experience. We generally operate under this philosophy as well. When we see significant changes in experience, we consider them carefully and try to discern why the dramatic change occurred. If we believe the observed data is not an aberration and should be seriously considered, we typically recommend rates somewhere between the old rates and the new experience. If experience during the next experience study period shows the same result, we will likely recognize the trend at that point in time or at least move further in the direction of the observed experience. On the other hand, if experience returns closer to its prior level, we will not have overacted, possibly causing unnecessary volatility in the actuarial contribution rates. We would encourage Segal to explicitly outline their philosophy in their report so as to help the readers understand the rationale behind their recommendations.

Segal presents the experience study results in a presentation rather than a formal report. The presentation does include an actuarial certification signed by the actuaries regarding compliance with Actuarial Standards of Practice and their qualifications to prepare the results. We recommend that when Segal prepares the next experience study, they produce a complete formal report as well as the presentation. Although not required by actuarial standards, we believe this is a "best practice", allowing for more complete explanation and justification as to why decisions were made to keep or change a given assumption. It is possible that such reasons were mentioned when the presentation was delivered to the Board, but there is no remaining record of such comments. This is a deficiency that can be eliminated by preparing a formal, written report

ECONOMIC ASSUMPTIONS

Actuarial Standards of Practice (ASOPs) are issued by the Actuarial Standards Board to provide guidance to actuaries with respect to certain aspects of performing their work. As mentioned earlier, ASOP 27 is the standard that addresses the selection of or recommendations regarding economic assumptions for measuring pension obligations (liabilities) under defined benefit plans.

The prior and recommended economic assumptions in the Experience Study report were:

	Segal Recommendation	Prior Assumption
Price inflation	2.75%	3.00%
Real wage growth (productivity)	1.50%	1.50%
Total wage growth	4.25%	4.50%
Adjustment for conservatism	(1.00%)	(1.25%)
Total payroll growth	3.25%	3.25%
Price inflation	2.75%	3.00%
Real rate of return (net of expenses and adjustments)	5.00%	5.00%
Investment return	7.75%	8.00%

Each assumption is briefly discussed in the following narrative:

Price Inflation: Price inflation impacts both the assumption for the rates of salary increase (individual as well as total payroll) and the investment return assumption. The underlying price inflation component in both must be consistent in accordance with the guidance provided in ASOP 27.

Historical patterns of inflation show a long-term average of around 3%. Inflation has varied significantly over time, with some notably high periods in the 1970's influencing the average. In recent years, inflation has been consistently below the long-term average of 3% and the financial markets' pricing of inflation (comparing Treasuries and TIPS) suggests that trend is expected to continue for the next 30 years. However, these results may be partially driven by the recent actions of the Federal Reserve Bank and, therefore, may not be indicative of the long-term estimation that actuaries need for their work. For a longer time frame, actuaries often consider the expected increase in the CPI used by the Office of the Chief Actuary for the Social Security Administration. In the July 2014 report (the latest report as of Segal's experience study), the ultimate projected annual increase in the CPI over the next 75 years was estimated to be 2.7%, under the intermediate cost assumptions. The lower cost assumption used a forecast of 2.0% and the high cost assumption was 3.4%. (For informational purposes, the 2015 Social Security report did not change any of these assumptions.)

While there can be arguments made for assuming inflation will remain low for a very long period of time, we note that inflation can be significantly affected by monetary and fiscal policy, and those policies may change dramatically and rapidly. Consequently, these are also some strong arguments for assuming that inflation could increase at some point in the future.

Segal cites the current market pricing and a comparison of peer retirement systems for their recommendation to lower the inflation assumption from 3.00% to 2.75%. We note that the market pricing can be somewhat volatile, but it is not unreasonable to consider that as a lower bound. We note that the current Social Security Administration estimate is very close to the 2.75% selected rate, adding further credibility. We find the selection of 2.75% for the inflation assumption to be reasonable.

Investment Return Assumption: The investment return assumption (also called the valuation interest rate) should represent the long-term rate of return expected on the plan assets, considering the asset allocation, the real rate of return on each asset class, and the underlying inflation rate, net of investment expenses required to earn that return.

The long-term relationship between price inflation and investment return has long been recognized by economists. The basic principle is that the investor demands a more or less level “real return” – the excess of actual investment return over price inflation. If inflation rates are expected to be high, investment return rates are also expected to be high, while low inflation rates will result in lower expected investment returns, at least in the long run.

The period considered for pension funding represents a very long time horizon. In reviewing this assumption, the actuary should consider asset allocation policy, historical returns, and expectations of future returns. Frequently, asset advisors focus on no more than the next 5 to 10 years since they are most concerned with how to invest the funds currently to maximize returns. The longer term is less relevant to them, but it is, of course, paramount to actuaries who are projecting benefits to be paid for the next 50 to 100 years. This difference in perspective can significantly influence how investment advisors and actuaries derive an investment return assumption.

A common practice, which was used by Segal, is to consider the various asset classes in the portfolio, and then find the expected return that would be anticipated using the target asset allocation. Returns by asset class are most often provided by the system’s investment advisor. For their analysis, Segal looked to the expectations of Segal Rogerscasey, an affiliated company, and the average expectations tabulated in the Horizon Survey of Capital Market Assumptions. Both Segal Rogerscasey and Horizon have assumptions developed for a 20-year time frame, a comparatively long range for investment advisors, although still a somewhat short period from the perspective of actuaries. Ultimately, Segal selected the Horizon Survey results because it represents a number of advisors and they prefer the aggregation of information over a single advisor. We note that they did not discuss the results using the capital market assumptions of Callan Associates, NDTFFR's investment advisor. While we find that unusual and believe that, in general, such analysis is performed and often assigned relatively high credibility, we understand that there was significant discussion between Segal and NDTFFR staff regarding the selection of appropriate capital market assumptions for the purposes involved.

Segal further adjusts the expected returns from the capital markets model for expected investment expenses. This adjustment is not typically made because capital market assumptions are generally based on a passive portfolio with virtually no fees (real estate and private equity are often exceptions since passive investment is not common). To the extent that a fund uses active management, it is assumed that investment returns will be sufficient to offset the additional fees – otherwise active management would not be used. Consequently, an adjustment for investment fees is not normally made to a return estimated from passive benchmarks. The impact of Segal's adjustment is an understatement of the real rate of return. However, this creates some conservatism and we are not opposed to allowing for additional margin for adverse deviation, which is permitted by ASOP 27.

After these adjustments, Segal's real rate of return assumption is 5.00%. We would point out that this is the same underlying real return assumption in the prior investment return assumption; i.e., the reduction in the investment return assumption from 8.00% to 7.75% is the same as the reduction in the assumed inflation rate. In our experience with systems around the country who have adjusted their rate of return assumptions, we have found that the change in inflation assumption is often the key driver of the change. We have no concerns with the ultimate selection of an investment return assumption of 7.75%.

Payroll Growth Assumption (Wage Inflation): The unfunded actuarial accrued liability (UAAL) is amortized as a level percentage of payroll over the amortization period. As a result, a payroll growth assumption is necessary to develop the UAAL contribution rate. The payroll growth assumption consists of price inflation and the real wage growth. In their analysis, Segal considered the change in the National Average Wage Index, as published by the Social Security Administration, a reasonable proxy for wage inflation, along with the actual NDTFFR experience over the past 20 years. They also state an expectation for slightly higher growth in North Dakota when compared to the nation as a whole because of the state's strong economy. Ultimately, they assume that productivity is 1.5%, so total wage inflation (real wage growth plus price inflation) is 4.25%. The payroll growth assumption, however, is set at 3.25%, reflecting a specific adjustment to be conservative.

While we recognize that the North Dakota state economy has been strong over the last few years, we are not convinced that it will be able to remain stronger than the United States over the entire long term (next 30 to 50 years). As a result, we would probably set the productivity assumption somewhat lower than 1.5% to be more in line with long-term national trends, or we might have considered an assumption of 1.5% for, say, 10-15 years and a more moderate long-term assumption thereafter. However, we are not uncomfortable with the selection of 1.5% and find the wage growth assumption of 4.25% and payroll growth assumption of 3.25% to both be reasonable.

Salary Scale: There are several factors that generally affect individual salary increases and are typically reflected in the salary scale. The first of these is price inflation. As the price of goods and services increase, wages are expected to increase as well. The second component, productivity (sometimes called the real wage growth), is a measure of how much wages increase across the whole labor pool in excess of the rate of price inflation. The combination of price inflation and the productivity component is called wage inflation or the total wage growth assumption. The third component, frequently identified as merit, reflects the portion of salary increases provided at the individual level, including promotion, increased skills, longevity pay, and other similar items. The combination of these three components is reflected in the total salary scale.

In developing their recommendation for this assumption, Segal displayed a table showing the actual vs. expected salary increase for all years in the study, net of inflation, for five-year groupings of service. Based on this information, Segal determined that the merit scale was reasonable, and so the proposed total salary scale was the prior total salary scale reduced by 0.25% at all durations due to the reduction in the inflation assumption.

In discussions with Segal, they indicated that they actually based the rates of salary increase on duration from initial system entry date rather than years of completed service. Based on this, we believe that they should change their description of the basis to more accurately reflect the nature of the rates developed.

We acknowledge that the last few years have been a very challenging period in which to analyze salary experience. Many governmental entities have had budget constraints that have resulted in low salary increases. Inflation has also been very low, reducing the size of “across-the-board” increases. Nationally, unemployment and underemployment have likely resulted in downward pressure on wages. Meanwhile, the North Dakota economy has been comparatively strong. These factors all serve to complicate the analysis of salary growth for the study period. We would have expected some mention of some or all of these factors in Segal’s analysis. Again, this might be the result of not preparing a formal report where more narrative and discussion can be included.

On the surface, the results displayed in the table do not make a compelling case for any change. Merit increases in the first 5 years of service were above the expected amount, while in all years after (at least as grouped), they were below expectation. We think it could have been useful to show the results separately for each fiscal year and/or a graph of increases by year of service for the complete 30 years of service over which the assumption is studied. Such analysis might have provided some insight into actual experience, although as noted in the prior paragraph, recent years have been influenced by a number of atypical factors that complicate analyzing and setting the merit scale. While we are comfortable with the recommendation to retain the merit scale, we urge the inclusion of additional analysis in the report the next time an experience study is performed.

The analysis of spiking included by Segal was a nice addition to report. We concur that these results would not indicate a widespread spiking problem. There may be individuals, however, who are able to find ways to substantially increase pay in their final years of employment, thus resulting in a higher benefit amount. The cost of this may be low (as suggested by Segal's analysis), but there may be a public policy issue as well. We would suggest an analysis to determine what portion of individuals had large increases in the final averaging period to see what issues may be arising, rather than simply looking at the average. Of course, the longer averaging period in Tier 2 means that the spiking issue eventually will have an even smaller impact than it currently has.

DEMOGRAPHIC ASSUMPTIONS

The major demographic assumptions are the assumed rates of retirement, withdrawal (with or without a vested benefit), disability, and mortality (death before or after retirement). In the following paragraphs, we make specific comments on the demographic assumptions.

Rates of Mortality: One of the most important demographic assumptions in the pension valuation is mortality because it projects how long benefit payments are expected to be made. The longer retirees live and receive benefits, the larger the liability of the system, thus increasing the contributions required to fund the system. In addition, if members live longer than expected based on the assumption, the true cost of future benefit obligations will be understated and contributions will increase as the unfavorable experience unfolds.

Because of potential differences in mortality, healthy retirees, disabled participants, and active members are usually studied separately. The mortality assumption applies to members both before and after retirement although the post-retirement mortality assumption has a far greater impact on valuation results. Most often, gender distinct rates are used since studies continually show that females live longer than males, although that gap has been shrinking according to recent mortality studies.

It is commonly recognized that rates of mortality have been declining, which means people, in general, are living longer. ASOP 35, "*Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*", requires the actuary to include an assumption as to expected mortality improvement (even if the improvement is assumed to be 0) after the measurement date. It further requires the actuary to disclose what, if any, future mortality improvements are assumed and how the improvements are reflected in the mortality assumption.

There are two approaches to anticipating future improvements in mortality:

(1) setting the mortality assumption so that it includes a "margin", and
(2) using the generational mortality improvements.

The first approach intentionally selects a mortality table with lower mortality rates than are currently being observed, thus providing room for mortality improvements in the future. Under this approach, the AE ratio is well over 100% initially because the actual deaths are higher than expected by the mortality table (creating margin). Under the second approach (generational mortality), the starting mortality rates are set close to the observed experience (with resulting AE ratios around 100%), and then future improvements are directly reflected by applying a mortality improvement scale to the mortality rates in each future year to reduce the probability of death. Under the generational approach, the greatest change in life expectancy is reflected for younger members who have more years of future mortality improvement.

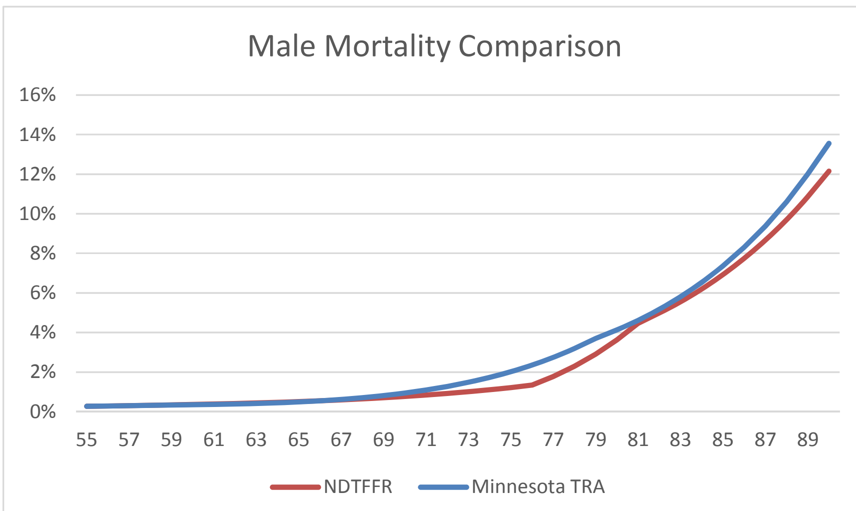
For their analysis of mortality, Segal weighted the mortality experience by the amount of the benefit. Thus, an individual receiving a $1,500 monthly benefit has twice the influence on the study results that an individual with a $750 monthly benefit has. Because there tends to be a correlation between benefit size and longevity, weighting the analysis helps to ensure that the assumption is a good fit for measuring the retiree liability, and not simply estimate the number of retirees dying. The Society of Actuaries' tables (such as the RP-2014 table Segal recommended) are also developed this way so it is appropriate to analyze the actual experience on this basis. We commend Segal for using this approach.

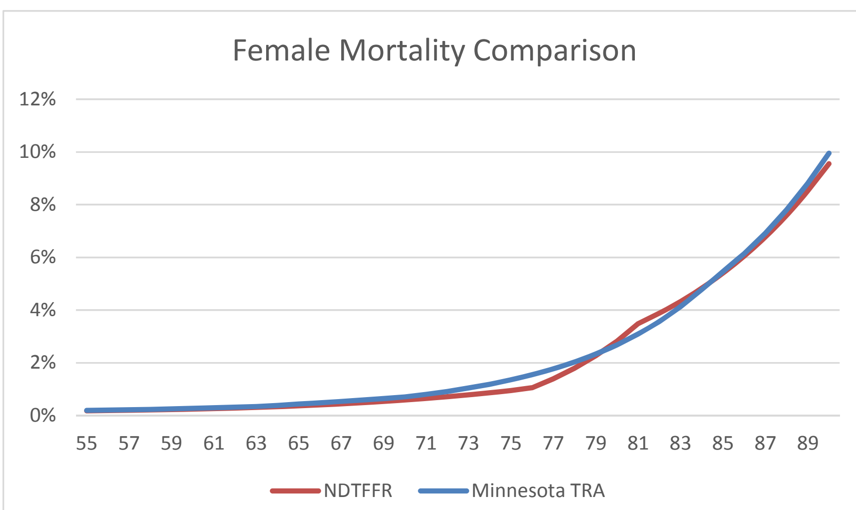
The presentation is lacking in providing a significant description of the process and contains only limited numerical or graphical information. We do believe additional detail, perhaps in a report appendix, would enhance the report particularly for a more technical audience. We would not, however, expect it to change Segal's recommendation.

Segal proposes a variant of the RP-2014 table in which the rates of mortality at ages under 75 are multiplied by 50%, while ages over 80 are multiplied by 100% (i.e. left unchanged), with graded factors from 75 to 80. This approach of applying different scaling factors to different ranges of a mortality table has not been common practice by public plan actuaries. However, we have been using this approach for around 15 years and have found it to be a very useful and appropriate tool in developing mortality assumptions that accurately anticipate the experience of a given system. By using this approach, Segal can blend the general pattern of national mortality in corporate retirement plans with what has been observed in the North Dakota Teachers' Fund for Retirement. After applying the scaling factors, the resulting Actual/Expected (AE) ratios are over 100%, indicating some conservative in the resulting assumption. While we believe it would have been perfectly acceptable to use a slightly larger scaling factor to produce AE ratios closer to 100%, we do not have any concerns with the factors chosen and the resulting mortality assumption. Furthermore, we commend Segal on adopting this methodology for developing the mortality assumption.

We note that along with the RP-2014 table, the Society of Actuaries also produced a "white collar" and "blue collar" version of the table. We did some analysis with these tables which indicated that had Segal started with the white collar version of the RP-2014 table, less scaling would have been required. Such an approach is largely a matter of preference, and Segal's selection of the regular table as a starting point is not inappropriate.

Finally, because of the comparatively small size of NDTFFR compared to other statewide teachers or school retirement systems, there is some value in comparing the results to nearby states. As the following graphs show, the rates proposed by Segal are not very different from those used by the Minnesota Teachers Retirement Association (one of our clients). This is further confirmation that the proposed mortality table is reasonable.





Rates of Retirement: A major factor in how members elect to retire is the set of eligibility conditions for reduced and unreduced retirement. The changes in retirement eligibility beginning in 2008 for the new Tier 2 and many Tier 1 members (except those who were grandfathered) has resulted in a situation in which the retirement eligibility for those included in the study are not the same as the retirement eligibility for future retiring members. In their presentation, Segal notes that there is little experience for anything other than the Tier 1 grandfathered group. However, because approximately 70% of the active liability is due to Tier 1 grandfathered members, the use of rates that are influenced by Tier 1 grandfathered experience is appropriate. Over the next two experience studies, the patterns of the Tier 1 non-grandfathered group should emerge. Because the eligibility provisions for the Tier 1 non-grandfathered and Tier 2 groups are the same, it is likely that there will be similar retirement patterns unfolding.

Segal analyzes the actual retirement rates compared to the current unisex early retirement rates and the sex-distinct unreduced retirement rates. They also study the rates of retirement in the first year in which unreduced retirement benefits are available, recognizing that there are many individuals who elect to retire as soon as the criteria for unreduced retirement is met. Segal makes some updates to the rates of retirement, generally moving from the current rate toward the recently observed experience. This approach seems reasonable to us and we believe the proposed assumptions are reasonable.

As with other parts of the experience study, we believe it would be valuable to provide additional detail beyond the three graphs included in the presentation. In particular, an analysis by fiscal year could have been especially valuable to see if the first year or two of the study period showed lower actual rates of retirement following the market downturn of 2008.

We also believe that it could have been valuable to study the experience with results weighted in proportion to salary or approximate liability. This philosophy is similar to using benefit-weighted analysis in developing the mortality assumption. It has been our experience that frequently the earliest retirees are those with longer service and higher pay, and so larger assumed rates of retirement at younger ages may help minimize losses arising from high liability individuals retiring earlier than others. As a teacher system, NDTFFR is likely to have a more homogeneous population than a general statewide retirement system, and so this type of analysis may not produce markedly different results for NDTFFR, even though it might for a system composed of a wide range of employee types. Still, we would suggest that this type of analysis at least be considered in the next experience study.

Rates of Termination: The termination of employment (withdrawal) assumption is a service-based assumption which is the most commonly used format for termination assumptions in other public retirement systems. Segal recommended some modest adjustments to move part way from the current assumption toward the observed experience. The rates appear reasonable in light of the observed experience. As with retirement, we believe additional detail in the report could be helpful to the reader. We also frequently find that individuals with lower liability have greater termination rates than those with higher liability, and so a weighted analysis for this assumption could also be beneficial.

2. ACTUARIAL ASSUMPTIONS

In discussions with Segal, they indicated that they actually based the rates of termination on duration from initial system entry date rather than years of completed service. Based on this, we believe that they should change their description of the basis to more accurately reflect the nature of the rates developed.

Rates of Disability: There were very few disabilities observed during the study period (46 in this study, 40 in the prior study), so this assumption is very difficult to evaluate, and Segal's election to retain the table certainly makes sense. A graph or table of results would be helpful to determine if the observed pattern roughly had the same shape as the assumption. We believe it might be of value to examine results by gender to determine if there are significant differences. We do not believe there would be much value added by using a weighted analysis, since disability may first manifest itself with a period of time of part time work and lower wages, thereby distorting the weighted analysis.

Rates of Death: Like disability, active death tends to be a rare event. We believe that Segal's decision to use the employee mortality table associated with the retiree mortality table is appropriate.

Miscellaneous Assumptions: In the valuation process, there are some assumptions that are required for programming purposes that are fairly minor in significance and often difficult to measure. In these cases, it is reasonable to use some rough analysis or even simply professional judgment. Segal's presentation identifies several of these assumptions related to spouses and proposes retaining the current assumption. We find their recommended assumptions to be reasonable.

There are some other minor assumptions that are not addressed in the Experience Study. One is the assumption that terminating employees elect the more valuable option (on a present value basis) of a deferred retirement benefit or a refund of member contributions. We suspect that many people do not make the optimal election, but this assumption is conservative. With the current high member contribution rates, this criteria will most often lead to the assumption that the member elects a refund. A second assumption that was not studied is that of the load applied to new retirees to reflect a possible benefit adjustment. It is common in many retirement systems, especially school and teacher systems with July 1 valuation dates, to have a preliminary retirement benefit calculated that is paid for the month of July. Then, when the school district provides final pay information, the benefit amount is revised, most often upward. While this assumption is reasonable, we believe it should be reviewed in each experience study, especially as the transition of the membership moves from Tier 1 to Tier 2 with their different definitions of final average pay.

3. Actuarial Methods

Actuarial Cost Method

For all pension plans, whether defined benefit or defined contribution, the basic retirement funding equation is:

$$C + I = B + E$$

Where:

- C = employer and member contributions
- I = investment income
- B = benefits paid
- E = expenses paid from the fund, if any.

As can be seen from the formula, for a given level of benefits and expenses the greater "I" is, the smaller "C" is. This is the underlying reason for advance funding a pension plan, and historically investment income pays for 60% to 70% of the benefit dollars received by plan members. In other words, for every dollar paid to a member only 30 to 40 cents comes from contributions.

Of course, the problem with the formula is that in order to figure out exactly how much to contribute, the plan would have to be closed to new members and allowed to operate until all retirees were deceased. At that point, the benefits and expenses actually paid out, and the investment income actually earned would be known and, using the equation above, the true cost could be determined. Since the vast majority of plans are ongoing and have no intention of closing, and since even with a closed plan it takes a very long time before all benefits are finally paid out, plan sponsors hire actuaries to estimate the cost of their plans and to create a budget for systematic contributions to meet that cost.

In order to determine the contributions needed, the actuary's first step is to estimate on a given date (the valuation date) the value of all benefits (and expenses) that will be paid to the existing active and retired membership over their remaining lifetimes based on the plan's current benefit structure. This estimation requires the use of assumptions regarding both future events (termination, disability, retirement, death, etc.) and future economic conditions (return on assets, inflation, salary growth, etc.). The NDTFFR assumptions were covered in the previous section.

By combining the assumptions for future events and the salary growth assumption, the actuary generates an expected benefit payment stream. In other words, a string of annual payments expected to be made to the current active and retired members from the valuation date until all members are no longer living. Then the actuary applies the investment return assumption to discount each year's payments to the valuation date, creating the present value of all future benefits or the total liability of the plan.

3. ACTUARIAL METHODS

The difference between the total liability and the current assets of the plan represents the present value of future contributions (PVFC) that have to be made by either members or the employers. Usually the members and employers cannot contribute the entire difference in one year, but rather desire a relatively smooth contribution pattern over time that also meets any external constraints. In order to budget for the PVFC, the actuary applies an actuarial cost method. There are several acceptable cost methods, but it's important to recognize that they are nothing more than budgeting tools.

Different actuarial cost methods can provide for faster funding earlier in a plan's existence, more level funding over time, or more flexibility in funding. The choice of an actuarial cost method will determine the pattern or pace of the funding and, therefore, should be linked to the long-term financing objectives of the system and benefit security considerations.

The actuarial cost method used by Segal for NDTFFR is the entry age normal method. This cost method determines the normal cost as a level percentage of pay which, if paid from entry into the plan to the last assumed retirement age, will accumulate to an amount sufficient to pay the expected benefit. Entry age normal tends to result in reasonably stable contribution rates, a feature that is desirable for many public plans. An additional cost is determined by amortizing the unfunded actuarial accrued liability (discussed later in this section). The entry age normal cost method is also the method specified by GASB for financial reporting under GASB Statements 67 and 68. Entry age normal is the most common cost method used by public plans and we completely agree with its use by NDTFFR.

In our review of Segal's work, we find that their application of some of the technical details of the entry age normal cost method are nonstandard in our experience, and note that this may lead to some distortion of the results. The remainder of this section on cost methods is to explain our concerns. The issues are highly technical in nature, but are presented here for completeness.

At the heart of the entry age normal cost method is the determination of the entry age. All of the cost allocation calculations – and therefore actuarial accrued liability and normal cost – hinge on this key data item (which is often derived from other data elements). Calculations start with current data (amount of service, salary, employee contribution account balance, etc.), and then build a hypothetical history (assuming all current assumptions have always been met) from the present age back to entry age. They also build an expectation for the future, again assuming all current assumptions will be met going forward. Then measuring from the entry age, the calculations determine the ratio of the present value of all benefits that are expected to be paid under the plan provisions over the present value of all future expected pay. This ratio, the normal cost rate, is used in the remaining calculations.

It is important to note that the history between the entry age and the present age is hypothetical. While some recent pay history may be reflected, the historical array of pay rates or amounts is based on the assumed salary growth assumption trended backward. The focus is on the current benefit provisions and assumed pay structure, not the actual history. This makes the normal cost rate a reflection of the value of the plan benefits for a hypothetical individual who begins employment at a given entry age. If a 25-year old is hired this year and another 25-year old is hired in five years, they will have the same normal cost rate provided the benefit provisions and assumptions are unchanged (ignoring the small impact of generational mortality).

Just as historical pay is hypothetically developed, so is historical service. For those individuals who have an uninterrupted career of full time employment, this hypothetical service and the actual service line up exactly – one year of service was earned each year of employment. Roughly 75% of the NDTFFR active members have actual service that corresponds to the difference between the valuation date and the date of enrollment into NDTFFR. However, nearly 25% have less service than would be indicated by the enrollment date, reflecting some period in which there was a break in employment or employment that resulted in less than a full year of service in some years. Our concern is with Segal's approach for these individuals with a "gap". (Note: This gap can arise for a variety of reasons including when members work for a few years in other states or for private schools, when they takes a few years out of the profession for child-rearing or other employment, or in some cases because a refund of contributions was taken when there was a break in service of at least 120 days.)

Consider two individuals who are 45 years old with 15 years of service who have the same current job and pay. Member A initially joined the system at age 30 and has worked full time since then. Member B joined at age 25, worked for 5 years, then took a five year break from age 30 to 35, before returning to full time employment for the last 10 years. Under the most common approach for determining the entry age, the entry age is set as the current age minus the current service. Thus, both members A and B are assigned an entry age of 30 and the hypothetical service and salary array is built from age 30 to age 45 (the present). Future service and salary projections are the same for both members, so they both have the same actuarial accrued liability and normal cost. In all respects, both members are the same in the valuation.

In Segal's approach, however, members A and B are treated differently. This is illustrated in Chart 1. Segal treats member A equivalently to the common method, building a hypothetical service and salary array from age 30 forward. For member B, however, they begin building the array from age 25, the initial date of entry into the system. They assign service from the current age going back, so there are 14 years at age 44, 13 years at age 43, etc., on back to the first year of service being earned between ages 30 and 31. The service array is effectively filled with 0's between 25 and 30. The salary array is filled with hypothetical salaries from age 25 to age 45. Note that because the salary growth assumption is based on duration from entry, the assumed salaries in the past and in the future are different for the two members – only the current salary is the same.

Chart 1

Member A Age	Member A Salary	Member A Service	Member B Age	Member B Salary	Member B Service
			25	$15,814	0
			26	$16,605	0
			27	$17,435	0
			28	$18,307	0
			29	$19,223	0
30	$19,241	0	30	$20,184	0
31	$20,203	1	31	$21,193	1
32	$21,213	2	32	$22,253	2
33	$22,273	3	33	$23,365	3
34	$23,387	4	34	$24,533	4
35	$24,557	5	35	$25,760	5
36	$25,784	6	36	$27,048	6
37	$27,074	7	37	$28,400	7
38	$28,427	8	38	$29,820	8
39	$29,849	9	39	$31,312	9
40	$31,341	10	40	$32,877	10
41	$32,908	11	41	$34,192	11
42	$34,554	12	42	$35,560	12
43	$36,281	13	43	$36,982	13
44	$38,095	14	44	$38,462	14
45	$40,000	15	45	$40,000	15
46	$41,600	16	46	$41,600	16
47	$43,264	17	47	$43,264	17
48	$44,995	18	48	$44,995	18
49	$46,794	19	49	$46,794	19
50	$48,666	20	50	$48,666	20
etc.			etc.		

Note: For simplification, salaries are assumed to grow at 5% for the first 15 years, and 4% thereafter.

When the normal cost rate is calculated for member B (at the age 25 entry age), the denominator includes the present value of future salaries from age 25 to age 75, including five years of salaries for years that were not actually worked. The present value of benefits reflects only benefits from age 30 forward because no service is considered before then. For member A, the present value of benefits at entry age also reflects benefits from age 30 forward (although slightly different benefits from member B because of the differing salary assumption), but the present value of future salaries includes only salaries from age 30 to age 75. Consequently, members A and B have different normal cost rates, different actuarial accrued liabilities, and possibility different values for the present value of future benefits.

Member B has a lower normal cost rate because benefits are assumed to be funded over salary connected with years in which there was no employment. This means that there will be less funding for member B than for member A in the future, even though they have the same job, pay, and service. However, because less will be funded for member B in the future, a higher actuarial accrued liability is assigned to member B than member A. Of course, contributions were not collected on member B's pay from age 30 to 35 (when member B wasn't working), so there are no corresponding assets, resulting in a higher unfunded actuarial accrued liability for member B, and therefore higher UAAL amortization payments. A comparison of the numerical results in Section 5 shows that Segal's approach results in a lower normal cost rate, but a higher accrued liability, as would be expected.

While it might seem like trading off a lower normal cost amount for a higher amortization amount is simply a matter of timing, there is another implication of this approach that is not simply an allocation issue. Because member B was assumed to have started employment five years earlier, the duration based salary increases and termination rates being used are five years further along. This means that member B is expected to have lower future salaries, but also a lower likelihood of terminating employment in the future. These factors change the calculation of the Present Value of Benefits (PVB), although each factor works in a different direction: Lower future salaries means lower expected retirement benefits and PVB, while lower termination rates means a greater likelihood of retiring (rather than terminating and taking a refund of contributions) which results in a larger PVB. We estimate the combined impact is no more than 0.25% of active liability, so the net impact of the factors is small.

We wish to stress that this method is, in our opinion, not a common approach in the public sector. Actuarial Standards of Practice do not provide any precise requirements on how entry age is to be determined, nor do they even define specific cost methods. However, we believe most actuaries would agree that best practices would apply the entry age normal cost method as we recommend. While the approach used by Segal is not common and creates some odd results in certain situations, it is not inconsistent with governing actuarial standards. The main implication of the two different entry age methods is how the past and future pieces of the liability are allocated. The total expected payouts in the future are virtually unchanged, and thus the Present Value of Benefits is also virtually unchanged. Segal's approach, when compared to ours, will lead to a lower normal cost payment and a higher amortization payment.

3. ACTUARIAL METHODS

ASSET VALUATION METHOD

Since the purpose of actuarial funding is to build up an asset pool (remember the importance of "I" in "C + I = B + E") actuaries need to value the current asset pool on each valuation date. The market value could be used, but it would tend to create too much volatility from valuation date to valuation date, and a single day's measurement is not necessarily indicative of the true underlying value of the investments held by the plan. Thus, most actuaries use an asset valuation method which smoothes out these fluctuations in pursuit of achieving more stable funding measures and (when relevant) developing more level contributions. A good asset valuation method places values on a plan's assets which are related to current market value, but which will also produce a smooth pattern of costs. This is a question of balancing fit (measured against market value) and smoothness.

Neither book nor market value of assets is generally felt to be appropriate in determining the actuarial contribution rate for an ongoing pension plan. Book value produces smooth predictable employer contributions, but it ignores sizeable appreciation and is not a good measure of the fund's true value (i.e., a poor fit to market value). On the other hand, market value is a realistic current measure of the fund but, on a long-term basis, one day's market value may not be a very meaningful figure for a pension fund. Furthermore, sharp short-term swings in market value can result in large fluctuations in the computed employer contributions required to fund the plan (i.e., not very smooth).

The goal of the actuarial asset valuation method is to smooth or reduce investment market fluctuations. This is particularly important during periods of volatile capital markets in which abrupt changes in asset values, when factored into the funding valuation, produce sudden unnecessary changes in contribution levels. In this case, "unnecessary" implies that the change in asset values is not necessarily a true revaluing of the assets involved, but rather a fluctuation reflecting a current economic climate or a short-term reaction to specific news.

In our opinion, desirable characteristics of an actuarial asset valuation method include the following:

- The method should be simple to operate. It should be readily calculable from financial statements.

- The method should be easy to explain to all interested parties.

- The theoretical underpinnings should be solid and not produce a long-term lag to the fair value of assets. The value produced should account for market values.

- The method should smooth the effect of market fluctuations.

- Investment decisions should not be affected by the actuarial asset valuation method, and vice versa.

- The value produced should be realistic; the price tag placed on assets should be sensible and should not cause other variables to be adjusted to account for unrealistic asset values.

NDTFFR Asset Valuation Method: The asset valuation method used by Segal in the valuation is a method commonly used by other public sector retirement systems. The smoothing method finds the difference between the actual investment return and the expected investment return (using the actuarial assumed rate of return) on the market value of assets. This dollar amount of difference is then recognized 20% per year over five years. Additionally, there is a corridor applied to keep the actuarial value of assets within 20% of the market value of assets.

Compliance with ASOP 44

Actuarial Standard of Practice Number 44, *"Selection and Use of Asset Valuation Methods for Pension Valuations"*, provides guidance to the actuary when selecting an asset valuation method for purposes of a defined benefit pension plan actuarial valuation. When considering the use of an asset valuation method other than market value, ASOP 44 states the actuary should select an asset valuation method that is designed to produce actuarial values of assets that bear a reasonable relationship to the corresponding market values. Further guidance states that the asset valuation method must satisfy both of the following criteria:

(a) The asset values fall within a reasonable range around the corresponding market value, AND
(b) Any differences between the actuarial value of assets and the market value of assets are recognized within a reasonable period of time.

In lieu of satisfying both (a) and (b) above, an asset valuation method meets ASOP 44 requirements if, in the actuary's professional judgment, the asset valuation method either:

(i) Produces values within a sufficiently narrow range around market value, OR
(ii) Recognizes differences from market value in a sufficiently short period.

Several of the terms in the criteria of ASOP 44 such as "reasonable" and "sufficiently narrow" are not well defined. As a result, actuaries can differ in their opinion on these matters. As we consider the current asset valuation method used by NDTFFR in light of ASOP 44, we believe it satisfies these requirements. The inclusion of the corridor by NDTFFR is not needed to comply with ASOP 44 in our opinion because of the five year recognition of gains and losses, and, in fact, could actually increase volatility. However, it is an acceptable and widely used feature and we are fine with its inclusion.

We find the asset valuation method to be reasonable and in accordance with actuarial standards.

3. ACTUARIAL METHODS

AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY METHOD

The unfunded actuarial accrued liability is amortized over a 30-year closed period effective July 1, 2013 as a level percentage of payroll. As of the July 1, 2015 valuation, 28 years remain. Each year, the gains or losses arising from liability and asset experience, along with any assumption or benefit provision changes are added to the existing base. This method has been widely used in the public sector, although in recent years there has been a movement toward using layers of bases. Under this approach, the initial UAAL is amortized over a closed period. Annual changes in the UAAL due to experience or assumption and benefit changes are amortized over a separate base (typically 15 or 20 years). Such an approach prevents volatility in the actuarially determined contribution rates that will arise when the amortization period becomes shorter. We believe this is something that NDTFFR may wish to consider at some point, but because the current period is still relatively long, there is no urgent need to act. ***We believe the NDTFFR amortization method is generally reasonable.***

4. DATA REVIEW

Segal and NDTFFR supplied CMC with active, terminated vested, retired member and beneficiary data as of June 30, 2015. We compared the records and generally agreed with the processing being performed by Segal. For those active members who earned less than one year of service credit in the year prior to the valuation, Segal annualizes the reported pay so that it reflects an annual rate of pay. Otherwise, Segal's processing remains fairly limited.

We tested the counts by status and the totals of selected fields to be sure they matched. We note that while the data files provided from NDTFFR to Segal require only minimal processing, Segal does retain several years of salary history that it uses to supplement the valuation calculations. We considered the data supplied by NDTFFR and did not identify any additional information that we believe would improve the ability of Segal to perform its work. ***Overall, we are comfortable that the data Segal uses to perform its valuation is consistent with the data supplied by NDTFFR.***

REASONABLENESS OF THE ACTUARIAL VALUATION RESULTS

This section of our review discusses the reasonableness and accuracy of the liabilities and costs developed in Segal's July 1, 2015 actuarial valuation.

Generally accepted actuarial standards and practices provide actuaries with the basic mathematics and the framework for calculating the actuarial results. When it comes to applying those actuarial standards to complex calculations, differences may exist due to individual opinion on the best way to perform those calculations. Differences may also arise from the actuarial software used to make these calculations, especially in the allocation of liabilities between past and future service for active members. Although these factors may lead to differences in the calculated results, these differences should not be material. Generally, differences in the present value of benefits of 1% to 2% or less and differences in the actuarial liabilities of 5% or less are considered reasonable. The normal cost rate should generally be within 5% as well.

As part of the actuarial audit, CMC used the data provided by Segal to reproduce the valuation liabilities thus ensuring that any differences were not due to data issues. A summary of results is included at the end of this section. While the aggregate results are generally very close, we also looked at some individual detailed sample lives. This allowed us to identify some minor issues that would not otherwise be apparent from the summarized results. However, the reasonable match of the summarized results emphasizes that the differences discussed in the remainder of this section are indeed minor. ***Based on the results of our review, overall, we find the actuarial liabilities, contribution rate calculations, and the GASB disclosures to be reasonable.*** As noted in the cost method section, we believe the application of the entry age cost method is atypical, but if we mirror that same approach, we arrive at similar liability measures.

One issue we noted is in the calculation of the liability for deferred vested members. Segal values the benefit by comparing, on an individual member basis, the present value of the member's deferred benefit and the value of the member's account balance with interest. To the greater of these two numbers, they also add a liability for death prior to benefit commencement. Because electing a refund of member contributions would eliminate the obligation for the pre-commencement death benefit, it would be more appropriate to first add the present value of the death benefit to the present value of the deferred benefit and compare that to the member's account balance with interest. Segal acknowledges that technically this approach is not correct, but they explained that the approach was taken because of programming simplicity. We agree with Segal that it has a minimal impact on results. ***We believe that Segal should review this item and make any needed correction in the next valuation.***

A second issue noted involves calculating the normal cost rate. For this calculation, Segal divides the dollar amount of normal cost, adjusted with interest, by the total annual pay for all active members at the start of the year. However, the dollar amount of normal cost is developed using assumptions which reflect a partial year's pay in the final (partial) year of employment. This leads to a mismatch in the conversion of the normal cost amount to the normal cost rate. Segal is essentially calculating the contribution rate for all members – both current members and those who will be hired in the current year - to pay the dollar amount of normal cost of those who were members at the start of the year. This means the contributions for new hires in their first year are not applied to fund their benefits, resulting in an actuarial loss at the year-end valuation. We prefer a normal cost rate that is developed by dividing the dollar amount of normal cost for the members at the start of the year by the pay expected during the year for those same members. This would result in a slightly higher normal cost rate, but would also mean that contributions on behalf of new hires are immediately being applied toward the new hire benefits, thereby eliminating the actuarial loss for new members. Because the contributions are set by statute, the only impact this difference has is to understate the contribution rate deficiency. ***We believe that Segal should review this and determine if any changes are appropriate.*** We have seen Segal's approach used by other systems, but believe our recommended approach is technically more appropriate.

A third issue, perhaps more theoretical than practical, involves the retrospective projections used in the entry age calculations. Segal uses actual historical salaries for the past six years, then assumed salaries from that point back to the assumed entry age. They also determine the member account balance with interest using these actual salaries (for the last six years) and the actual member contribution rates that were in effect at that time. We generally prefer to use the assumed prior salaries for all years and the current member contribution rates so as to get a normal cost rate that reflects the current plan provisions rather than being affected by past benefit structures or actual pay patterns. We do note that it is not uncommon in actuarial practice to use historical salaries. However, we do not often see a reflection of historical benefits reflected in the normal cost calculation. We believe the present value of benefits appropriately reflect actual history, and only propose changing the normal cost rate along with the corresponding impact on actuarial accrued liability. We wish to emphasize that our proposal is to value the current provisions that are applicable to each member, not the provisions applicable to new members. ***We would suggest Segal consider changing at least the method of calculating the retrospective member account balances to better measure the current benefit structure's underlying normal cost rate.***

Finally, there are several places in the report where intermediate asset or liability amounts are adjusted to the middle of the year. Segal performs these calculations by using simple interest, or 3.875%, for half a year. While this is reasonable, we note that many actuaries would use half a year reflecting compound interest of 7.75% per year and thus use an interest adjustment of 3.803%. In some cases, Segal has apparently reflected additional information regarding timing, but has not clearly explained the timing. This combination makes it difficult to replicate the interest, although we are very close. This is very minor and we point it out only for Segal's consideration.

5. Actuarial Valuation Results Review

The appendix includes key items for the individual calculation reviewed. On the following pages, we show summarized results for the entire replication. The first exhibit reflects our attempt to replicate Segal's results as closely as possible. To do so, we included the additional liability for deferred vesteds and used six years of historical pay. We also calculated the entry age based on the first enrollment date in the System. The second exhibit reflects our preferred approaches on these issues, as discussed earlier. The ratios indicate that we match reasonably well for the present value of benefits and actuarial accrued liability, but the normal cost rate is noticeably different, especially when our method for calculating entry age is used. As discussed earlier, our calculation of entry age essentially changes only the allocation of the liability to past and future service, so the increased normal cost rate also coincides with a decrease in actuarial accrued liability.

Comparison of June 30, 2015 Liability Measures

Matching Segal Methodology

	Segal	CMC	CMC/Segal
Present Value of Benefits			
Active Members			
Retirement	2,028,241,599	1,998,782,593	0.985
All other decrements	198,032,167	203,628,990	1.028
Total active	2,226,273,766	2,202,411,583	0.989
Retirees	1,874,669,272	1,876,824,197	1.001
Inactives	85,198,880	86,102,526	1.011
Total	4,186,141,918	4,165,338,306	0.995
Actuarial Accrued Liability			
Active Members	1,489,907,830	1,435,695,298	0.964
Retirees	1,874,669,272	1,876,824,197	1.001
Inactives	85,198,880	86,102,526	1.011
Total	3,449,775,982	3,398,622,021	0.985
Normal Cost Amount (No Interest Adjustment)			
Retirement	53,893,070	50,595,292	0.939
All other decrements	14,346,370	16,089,751	1.122
Total	68,239,440	66,685,043	0.977
Payroll for Normal Cost Rate	625,774,379	582,715,468	0.931
Normal Cost Rate (no expenses included)			
Retirement	8.94%	8.68%	0.971
All other decrements	2.37%	2.76%	1.165
Total	11.31%	11.44%	1.011

Includes using Segal's method for determining Entry Age, inclusion of historical salaries, and the inclusion of a death benefit for current deferred vested members who are expected to elect a lump sum.

Comparison of June 30, 2015 Liability Measures

CMC Preferred Methodology

	Segal	CMC	CMC/Segal
Present Value of Benefits			
Active Members			
Retirement	2,028,241,599	1,993,518,145	0.983
All other decrements	198,032,167	207,947,960	1.050
Total active	2,226,273,766	2,201,466,105	0.989
Retirees	1,874,669,272	1,876,824,197	1.001
Inactives	85,198,880	83,559,677	0.981
Total	4,186,141,918	4,161,849,979	0.994
Actuarial Accrued Liability			
Active Members	1,489,907,830	1,388,080,871	0.932
Retirees	1,874,669,272	1,876,824,197	1.001
Inactives	85,198,880	83,559,677	0.981
Total	3,449,775,982	3,348,464,745	0.971
Normal Cost Amount (No Interest Adjustment)			
Retirement	53,893,070	54,505,294	1.011
All other decrements	14,346,370	17,946,898	1.251
Total	68,239,440	72,452,192	1.062
Payroll for Normal Cost Rate	625,774,379	582,864,941	0.931
Normal Cost Rate (no expenses included)			
Retirement	8.94%	9.35%	1.046
All other decrements	2.37%	3.08%	1.300
Total	11.31%	12.43%	1.099

6. Valuation Report Review

Content of the Actuarial Reports

The American Academy of Actuaries has issued a number of Actuarial Standards of Practice which provide guidance on measuring pension obligations and communicating the results (ASOP No. 4, 23, 27, 35, 41 and 44). Those standards list specific elements to be included, either directly or by reference to other documents, in pension actuarial communications. Some of the elements would not be pertinent in all communications, but since an actuarial valuation report is the most complete picture of the actuarial status of the plan, all of the elements listed should be covered in the report, even if only briefly.

The July 1, 2015 actuarial valuation report for NDTFFR generally provides sufficient information for another actuary to understand the process and to assess the reasonableness of the results. We compared the contents of the report to over 30 specific items detailed for pension actuarial work in ASOPs 4 and 41. ***In our review of the report, we found it to be substantially in compliance with the applicable ASOPs***. We identified three items as areas where some clarification or enhancement might be helpful. These suggestions, admittedly very fine points, are made not to fix a problem, but to enhance the report and be sure that all ASOPs are fully met:

- ASOP 4, Paragraph 4.1.k requires disclosure of the outstanding amortization base(s), the amortization payment, and the years remaining. All of this information is included in the report, but it is not all provided in one place in the report. We suggest considering having all of this information presented together in one exhibit.
- ASOP 4, Paragraph 4.1.m calls for a qualitative assessment of the contribution policy and plan funding. While these concepts are commented on to some degree, we suggest adding a brief sentence or paragraph to directly discuss the issue.
- ASOP 4, Paragraph 4.1.q requires disclosure of information regarding the funded status. We did not find a clear discussion of whether the funded status can be used for contribution determination, so we suggest adding some clarifying language that this ratio will ultimately be used in lowering contribution rates.

As noted in the discussion on the experience study, because the salary increase and termination assumptions are based on duration from entry date rather than simply completed years of service, the description of how those rates are used in Section 4, Exhibit X should be modified.

In addition to the requirements of the ASOPs, we also reviewed the reports to determine if there are changes that might improve the communication of the results. We have tried to avoid suggestions that are merely stylistic, recognizing that the current report reflects the influences, over time, of the retained actuary, the NDTFFR staff, and the Board. Nonetheless, we have identified one item that we believe could enhance the report:

The asset gain or loss to be recognized (see page 6, item 2a) is not otherwise developed in the report. We were able to independently calculate the amount and concur with its accuracy, but we think the derivation of this amount could be useful in helping readers better understand the method.

7. GASB REPORTING REVIEW

With the recent implementation of GASB Statements 67 and 68, the complexity of reporting for accounting has increased for governmental retirement plans. The recent introduction also means that there are a range of approaches in providing the information. To evaluate the GASB section of the report, we first reviewed the development of the Single Effective Interest Rate (SEIR), then reviewed the calculations required to measure and allocate the pension liability and expense. Finally, we reviewed the presentation of these numbers.

SEIR DETERMINATION

One of the new concepts introduced in GASB 67 and 68 is the SEIR. The basic concept is that when a plan is funded, the assets can be presumed to earn investment return that helps pay benefits, and so future benefit payments are discounted to the present at the assumed investment return. If the plan has exhausted its assets, then the future benefit payments are discounted back at a municipal bond rate. GASB calls for finding a single rate that produces the same value for liabilities when applied to either the funded or unfunded periods of time and then using this rate for various calculations.

The development of the SEIR is not directly presented in any of Segal's reports (and is not required to be), but they provided us with a spreadsheet justifying the selected rate of 7.75%. The spreadsheet largely followed the model in the GASB 67 and 68 illustrations whereby projections of the Fiduciary Net Position (FNP) are made for the remaining life of all current members. Since the FNP is projected to be positive in all years, the long-term expected return on assets may be used as the SEIR. This development is largely a technical exercise and frequently does not reasonably illustrate future funding expectations. Consequently, the SEIR development is often not included in any formal reporting, but provided to the auditors to assist in their review.

Our review of the report indicated that the calculations were reasonable. We used our valuation results in some cases to confirm the reasonableness of the input items. Because NDTFFR is funded with statutory contribution rates and has a new, lower cost tier being implemented, we fully expected that the projections would show the FNP staying positive for all years, just as it did. As a minor observation, Segal indicated that had the FNP been exhausted, they would have discounted future cash flows at a high quality tax-exempt general obligation municipal bond rate of 3.73%. They did not indicate the source of this rate (there is not a unique source), but we found the rate plausible in light of rates published by the Federal Reserve Bank of St. Louis. We would suggest Segal include a source or derivation of this rate for completeness.

GASB 67 AND 68 CALCULATIONS

We were generally able to verify all of the calculations presented in the GASB disclosure information, including a sampling of calculations related to the allocation of expense to individual employers. It should be noted that the liability amounts used for GASB calculations are the same as the liability amounts used in the funding calculations, so if minor changes are made to the calculation of funding results in the future, there will be minor changes to the GASB numbers as well.

There were some cases in which we were not able to exactly match interest calculations made by Segal. We recognize that sometimes these calculations reflect the fact that the timing of certain cash flows is not the middle of the year, and so a different factor is used. The differences were all minor, however, and seem reasonable.

GASB DISCLOSURES

The GASB standards contains substantial detail that must be publicly disclosed by the System and/or the participating employers. Segal's report provides sufficient information for the interested parties to prepare the needed disclosures.

In Exhibit 4 of the GASB report, a historical schedule of employer contributions is provided. In the notes to Exhibit 4, the assumptions and methods disclosed are those used for the July 1, 2015 valuation. We believe it would be more appropriate to display the assumptions used for the July 1, 2014 valuation since that valuation developed the actuarial contribution shown in the Schedule for the 2015 fiscal year.

8. Projection Model Review

As part of their annual work, Segal prepares projections of future funding results under various market value return scenarios. To replicate these results, we used a hypothetical profile of new entrants provided to us by Segal. While not auditing this profile, we did review it to make sure that it appeared reasonable for NDTFFR.

We then independently projected future liabilities and other valuation results for 30 years into the future. With these, we built a model to provide results similar to what Segal provides in their projection work. Since we did not have Segal's model, our replication of the model results was developed in a completely independent manner. As a result, the threshold for the replication to be reasonable is broader than that of the actuarial valuation.

We compared funded ratios for 10 different investment scenarios at five-year intervals over the 30-year period and found our results to be comparable to Segal's. Because our starting valuation results were slightly different, we would expect differences to persist throughout the projection period. However, the proportionate difference did not materially change, indicating that the two models were predicting similar results. Because of the wide array of possible scenarios that can be modeled, we cannot comment on the accuracy or the reliability of the model in broad general terms, but we can verify that the projections provided in the presentation to the NDTFFR Board are reasonable.

APPENDIX

Comparison of actives lives

Sample Life	Segal Calculation NC	AL	PVB	Replication of Segal's Method NC	AL	PVB	CMC Preferred Method NC	AL	PVB
1	6,922	541,771	565,683	7,815	529,000	561,853	9,506	516,470	556,432
2	6,230	56,553	167,790	5,953	59,243	167,893	7,464	34,079	166,430
3	1,608	26,399	50,674	1,634	25,282	50,566	2,878	8,702	50,932
4	7,782	7,316	109,604	7,153	7,220	109,143	7,153	7,220	109,143
5	3,681	29,808	93,502	3,775	26,862	94,073	4,580	13,869	91,065
6	1,124	97,983	103,580	1,055	99,348	105,281	4,468	83,811	109,485
7	2,222	222,541	232,151	2,398	223,966	235,924	10,174	191,997	243,759
8	6,992	66,946	155,266	7,078	63,296	155,530	4,306	96,783	153,638

Note: These sample lives were selected to allow Cavanaugh Macdonald to test certain aspects of Segal’s calculations and are not a representative sample of the actual membership.

Comparison of inactives lives

Sample Life	Status	Segal Calculation PVB	CMC Preferred Method PVB
1	Deferred	39,461	38,130
2	Deferred	73,286	71,133
3	Retiree	798,540	798,540
4	Retiree	196,134	196,134
5	Retiree	344,457	344,457
6	Retiree	546,802	546,802
7	Retiree	302,747	302,747
8	Beneficiary	41,808	41,808
9	Beneficiary	104,601	104,601

Note: These sample lives were selected to allow Cavanaugh Macdonald to test certain aspects of Segal's calculations and are not a representative sample of the actual membership.

Segal Consulting

101 North Wacker Drive Suite 500 Chicago, IL 60606-1724
T 312.984.8500 www.segalco.com

July 14, 2016

Ms. Fay Kopp
Deputy Executive Director
ND Retirement and Investment Office
1930 Burnt Boat Drive
Bismarck, ND 58507-7100

Re: **Comments Related to Actuarial Review of Segal Work for TFFR**

Dear Fay:

Earlier in 2016, the North Dakota Teachers' Fund for Retirement (TFFR) Board of Trustees retained Cavanaugh Macdonald Consulting, LLC (CMC) to perform an independent review of our July 1, 2015, actuarial valuation. As part of this process, CMC also reviewed projection results prepared in conjunction with the valuation, as well as the most recent experience study dated April 30, 2015.

CMC has completed their review and we have received a copy of their report dated July 13, 2016. The Executive Summary states: "While we offer up a number of different ideas, we believe that Segal's work provides appropriate assessment of the health and funding requirements of the NDTFFR." We are pleased that the auditor was able to validate our work. CMC has made a number of comments and suggestions related to their review. They are not indicative of any type of substantive error or omission in the work product and we will consider those suggestions very carefully during the coming actuarial work cycle.

Following are the comments and suggestions raised by CMC in their report (paraphrased, where appropriate), as well as our responses.

Section 2. Actuarial Assumptions

1. **We would encourage Segal to explicitly outline their philosophy [related to recommending changes in demographic assumptions] in their [experience study] report so as to help the readers understand the rationale behind their recommendations.** We will consider providing this type of description in our next experience study report.

2. **We recommend that when Segal prepares the next experience study, they produce a complete formal report as well as the presentation.** This approach was discussed with TFFR staff at the conclusion of the prior experience study and we will prepare a "formal" report format as part of our next experience study.

3. **[W]e believe that [Segal] should change their description of the basis [i.e., that rates of salary increase are based on duration from initial system entry date rather than years of completed service] to more accurately reflect the nature of the rates developed.** We will add this clarification in our next experience study report.

4. **[Related to the salary scale assumption], while we are comfortable with the recommendation to retain the merit scale, we urge the inclusion of additional analysis in the report the next time an experience study is performed.** This additional analysis will be included in our next experience study report.

5. **[Related to the analysis of pension spiking], we would suggest an analysis to determine what portion of individuals had large increases in the final averaging period to see what issues may be arising.** We will consider including this additional analysis related to our review of possible pension spiking as part of the next experience study.

6. **We also believe that it could have been valuable to study the [retirement] experience with results weighted in proportion to salary or approximate liability. […we] would suggest that this type of analysis at least be considered in the next experience study.** We will plan to study weighted retirement experience as part of the next experience study.

7. **While [the assumption related to the load applied to new retirees to reflect a possible benefit adjustment] is reasonable, we believe it should be reviewed in each experience study, especially as the transition of the membership from Tier 1 to Tier 2 with their different definitions of final average pay.** We will plan to study the load applied to new retirees as part of the next experience study.

Section 3. Actuarial Methods

1. **In our review of Segal's work, we find that their application of some of the technical details of the entry age normal cost method are nonstandard in our experience, and note that this may lead to some distortion of the results.** CMC indicates that each member's "entry age" should be the hypothetical date equal to attained age on the valuation date, less years of service credit. We appreciate this comment and understand the issues raised by CMC. However, TFFR covers employees that have earned for a few years less than 1 year of service or took a refund of contributions in the past. By revising their entry age to equal attained age less years of service, we believe we would be misstating the entry age normal cost method for these individuals. We will review the methodology in connection with the upcoming valuation cycle to determine if a

compromise solution is available, and if the additional time and expense of modifying the valuation software is worth it relative to the materiality of the change.

2. **[Because Segal's valuation software bases entry age on original date of hire,] the duration based salary increases and termination rates being used are [X] years further along [relative to the more common approach of setting entry age equal to attained age less years of service.] [As a result, members with breaks in service are] expected to have lower future salaries, but also a lower likelihood of terminating employment in the future.** While we understand the point that CMC is making, we believe there is an argument to be made that the salary scale and decrements should operate on the basis of the earlier "actual" hire age instead of the "artificial" entry age based on attained age less years of service.

3. **We believe [a UAAL amortization method using layers of bases] is something that NDTFFR may wish to consider at some point, but because the current period is still relatively long, there is no urgent need to act.** The approach described by CMC is something we discussed with the TFFR Board in 2013 when developing the current funding policy. Ultimately, Segal, the TFFR Board, and TFFR staff settled on an approach that involved using a closed-period amortization of UAAL for simplicity, with the understanding that the approach would be revisited in the future.

Section 5. Actuarial Valuation Results Review

1. **[With respect to the calculation of the liability for deferred vested members,] because electing a refund of member contributions would eliminate the obligation for the pre-commencement death benefit, it would be more appropriate to first add the present value of the death benefit to the present value of the deferred benefit and compare that to the member's account balance with interest.** We agree with this comment and will work with our valuation software engineering team to develop programming code to handle this.

2. **[For the calculation of the normal cost rate,] Segal divides the normal cost by the total pay rate at the start of the coming year. However, the normal cost is developed considering only pay expected to be paid, so there is a mismatch in the calculation of the normal cost rate.** This approach is standard across Segal public sector actuaries and we have seen it used by other public sector actuaries as well. We believe this boils down to a difference in methodology among various actuaries and agree that the difference is minor, particularly since the fixed contribution rate to TFFR is set by statute.

3. **[Regarding retrospective projections used in the entry age calculations, we] do not often see a reflection of historical benefits reflected in the normal cost calculation. We believe the present value of benefits appropriately reflect actual history, and only propose changing the normal cost rate along with the corresponding impact on actuarial accrued liability. We wish to emphasize that our proposal is to value the current provisions that are applicable to each member, not the provisions applicable to new members.** As CMC points out in their report, there is no clear guidance on the

precise way to implement the entry age actuarial cost method with respect to funding a plan (or determining an Actuarially Determined Contribution, or ADC). The GASB 67 and 68 statements do, however, provide guidance and our interpretation of the language in GASB Statement 67, paragraph 46(e) is that each member's normal cost should be determined based on the benefits that were earned during their career. Following the CMC approach for purposes of the ADC calculation would require the use of two sets of actuarial liability numbers, one for funding and the other for accounting, which we believe would result in confusion.

4. **We note that Segal applies a timing adjustment to the normal cost rate to reflect the timing of contributions. In our calculations, the mid-year adjustment is effectively included in the rate by the valuation software, and so we would not have an adjustment for that. We encourage Segal to review their valuation software to confirm that this timing adjustment is indeed needed.** Segal's proprietary actuarial valuation software determines present values, liabilities and normal cost as of the beginning of the year on the valuation date. Therefore, we confirm that the timing adjustment as shown in our valuation report is appropriate.

5. **In some cases, Segal has apparently reflected additional information regarding [middle of the year] timing, but has not clearly explained the timing.** We will review these areas of the valuation report and clarify when necessary.

Section 6. Valuation Report Review

1. **In our review of the report, we found it to be substantially in compliance with the applicable ASOPs. We identified three items as areas where some clarification or enhancement.** We will review these items and incorporate into our valuation report as necessary.

2. **[Because] the salary increase and termination assumptions are based on duration from entry date rather than simply completed years of service, the description of how those rates are used in Section 4, Exhibit X should be modified.** We will review the language in Section 4, Exhibit X of our report to make sure that our descriptions are not misleading related to the application of the salary increase and termination rates.

3. **The asset gain or loss to be recognized (see page 6, item 2a) is not otherwise developed in the report. We were able to independently calculate the amount and concur with its accuracy, but we think the derivation of this amount could be useful in helping readers better understand this method.** We will review this section of our report and determine where this calculation can be added.

Section 7. GASB Reporting Review

1. **We would suggest Segal include a source or derivation of [the high quality tax-exempt general obligation municipal bond rate] for completeness.** We will include the source of this rate in our report.

2. **In the notes to Exhibit 4 [of the GASB report] … [w]e believe it would be more appropriate to display the assumptions used for the July 1, 2014 valuation since that valuation developed the actuarial contribution shown in the Schedule for the 2015 fiscal year.** In future reports, we will show all relevant assumptions as suggested and footnote when changes have occurred.

We are very pleased with the results of the audit, and, in particular, we are pleased that the auditor has successfully validated both our July 1, 2015, actuarial valuation and the 2015 experience study. We certainly appreciate the thorough work, professional demeanor, and helpful suggestions and recommendations that the auditors have made. We will continue to review them throughout the production of the July 1, 2016, actuarial valuation process and the experience study to be completed in 2020, and will implement those that seem to be in the best interest of TFFR .

Please contact us if you have any questions or comments.

Sincerely yours,

Kim M. Nicholl, FSA, EA, FCA
Senior Vice President & Actuary

Matthew A. Strom, FSA, MAAA, EA
Vice President & Actuary

5603414V1/13475.001

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: July 14, 2016

SUBJ: TFFR Retiree Substitute Teaching

The challenges school districts are experiencing in hiring both regular teachers and substitute teachers in recent years has put added pressure on retired teachers and administrators to return to covered employment in both full and part time capacities. Recently, some employers are questioning TFFR's current interpretation of "contracted" in-staff subbing, particularly when it pertains to re-employed retirees, and would like TFFR to consider changing its practice.

Attached is background material on TFFR retiree re-employment provisions and information about retiree substitute teaching concerns raised by some school districts. I have also included comments from Jan Murtha, TFFR legal counsel, related to her review of the issue, whether or not changes could be made to the current practice, and if so, what would need to be done. Finally, I have provided staff's review of the issue, options for Board consideration, and factors to consider. Please review this information for discussion at the meeting.

BOARD ACTION REQUESTED: BOARD MOTION OR DIRECTIVE FOR STAFF TO (1) DRAFT BOARD POLICY TO REFLECT CURRENT PRACTICE; (2) DRAFT BOARD POLICY TO REFLECT CHANGED PRACTICE; (3) DRAFT LEGISLATIVE BILL TO CHANGE PROVISIONS; OR (4) OTHER BOARD DIRECTIVE.

TFFR RETIREE SUBSTITUTE TEACHING

Here is background material on TFFR retiree re-employment provisions followed by additional information about retiree substitute teaching concerns raised by some school districts.

Retiree Re-employment Provisions Background Information

Current law (NDCC 15-39.1-19.1) allows public school teachers and administrators, after a minimum 30-day break in service, to return to TFFR covered employment after retirement and continue receiving their TFFR benefits under certain employment limitations.

The maximum annual hour limit under the General Rule is based on the length of the re-employed retiree's contract: 9 month or less contract = 700 hours; 10 month contract = 800 hours; 11 month contract = 900 hours; 12 month contract = 1,000 hours. If the re-employed retiree stays under the annual hour limit, they continue receiving their monthly TFFR pension benefit. If the re-employed retiree exceeds the annual hour limit, their monthly TFFR benefit is suspended and they are then treated like an active employee with their benefit possibly recalculated upon subsequent retirement if they meet certain other conditions outlined in state law. For some re-employed retirees, having their benefit suspended may also have IRS tax reporting implications.

Employment as a non-contracted substitute teacher does not apply to the annual hour limit. Professional development and extracurricular duties do not apply to the annual hour limit.

Under the Critical Shortage Area exemption, retirees can return to TFFR covered employment in an approved critical shortage area and exceed the annual hour limitation (work full time) and continue receiving their monthly TFFR pension benefit. A one-year waiting period is required. Critical shortage areas are determined each year by the Education Standards and Practices Board (ESPB). For the current school year, ESPB has designated all areas as critical shortage areas.

Initially, employer contributions were paid by the employer on the eligible salary earned by retirees who returned to covered employment under the General Rule annual hour limit and the Critical Shortage Area exemption. The payment of member contributions was not required. The 2011 Legislative Assembly subsequently passed HB1134 which required the payment of member contributions on the eligible salary earned by re-employed retirees effective 07/01/2012. The re-employed retiree's pension benefit does not increase as a result of the additional contributions being paid (unless their benefit was suspended because they exceeded the annual hour limit and did not qualify for the Critical Shortage Area exemption). The member contributions are included in the retiree's guaranteed account value.

Here is an example to help clarify the General Rule, which is the method under which most retirees return to covered employment:

> ***Example***: *John Jones is age 58, has 30 years of TFFR service, and receives an average annual salary of $50,000 as an active teacher. John is eligible for retirement, so he resigns from his full time teaching position and retires from the school district. (Note: There must be complete cessation of employment in order to begin collecting TFFR benefits.) John's TFFR benefit would be calculated as follows: $50,000 final average salary X 30 years X 2.0% multiplier = $30,000 annual TFFR benefit. After John resigns from his position, retires and begins receiving benefits, a 30 day break in service is required before he may return to covered employment on a limited basis while still receiving his annual benefit from TFFR. John decides to return to covered employment as a re-employed retiree under the General Rule annual hour limit. As a 9-month teacher, John is allowed to work up to 700 hours (part time), earn salary and benefits from the school district, and receive his annual benefit from TFFR. Working part time, John will earn $25,000 for teaching duties from the school district plus $30,000 in annual benefit payments from TFFR for a total of $55,000. Under current law, employer and retiree contributions are required to be paid. Retiree contributions would total $2,938. (25,000 X 11.75% = $2,938) and would be added to John's guaranteed account value. Employer contributions would total $3,187 (25,000 X 12.75% = $3,187). John's retirement benefit does not increase as a result of returning to teach, however it is important to note that John can continue receiving his annual benefit from TFFR while earning a salary for part time teaching duties.*

See Working After Retirement Brochure
See NDCC 15-39.1-19.1 and 15-39.1-19.2
See NDAC 82-05-06-01

<u>Retiree Re-employment Statistics</u>

During the 2014-2015 school year (FY 2015) there were 314 re-employed retirees working for 135 employers with an average age of 63 and an average salary of $25,600.

- Of the 314 re-employed retirees, 290 (92%) worked part time under the General Rule annual hour limit, 22 (7%) worked full time under the Critical Shortage Area exemption, and 2 (1%) worked full time under the Benefit Suspension and Recalculation option.
- Of the 314 re-employed retirees, 268 (85%) were teachers, 22 (7%) were principals or other administrators, and 24 (8%) were superintendents.

Re-employed retirees earned approximately $8,000,000 in eligible salary in 2014-2015. Total retiree ($8 m x 11.75% = $940,000) and employer ($8 m x 12.75% = $1,020,000) contributions received by the plan were approximately $1,960,000.

Preliminary figures for the 2015-16 show about 325 re-employed retirees returned to covered employment during the past school year.

See Attachment 1 – TFFR Reemployed Retiree Statistics

Substitute Teaching Reporting Requirements

In general, substitute teachers are not reportable to TFFR since they are not contracted teachers. The only time a substitute teacher, including a re-employed retiree who substitute teaches, is reportable is if:

- The teacher is contracted to perform substitute teaching duties only.

  Example: A teacher is contracted as a long term substitute teacher to fill in for a regularly contracted teacher who is on maternity leave.

- The teacher is contracted to perform regular teaching duties, and also performs in-staff substitute teaching duties during the contract term. For TFFR purposes, in-staff subbing, while not defined in the century or administrative code is defined in the TFFR employer guide as a licensed contracted teacher, including a re-employed retiree, who performs substitute teaching duties for the contracting district. Employers are instructed to report the substitute teaching pay earned during the contract period only.

  Example 1: A full time contracted teacher performs in-staff subbing duties during the teacher's prep period.

  Example 2: A part time contracted teacher performs coaching duties under a seven week time certain contract, and also performs in-staff subbing duties during the contracted seven weeks. Subbing done outside of the seven weeks is not reportable.

  Example 3: A part time contracted teacher performs regular teaching duties in the morning under a time certain contract, and also performs in-staff subbing duties in the afternoon.

Employer and retiree contributions are required to be paid on salary earned by re-employed retirees who perform in-staff subbing duties while under contract with a TFFR participating employer. Retirees who perform substitute teaching duties and are not under contract with the TFFR participating employer are not subject to the annual hour limit and employer and retiree contributions are not required to be paid.

See TFFR Employer Guide, pg. 34

Retiree Substitute Teaching Concerns Raised by Employers

The difficulties school districts are experiencing in hiring both regular teachers and substitute teachers in recent years has put added pressure on retired teachers and administrators to return to covered employment in both full and part time capacity. School districts indicate that it is difficult to hire retirees for three reasons:

1) General Rule annual hour limit restricts the number of hours a retiree may return to covered employment to a maximum of 700 – 1000 hours. The number of allowable hours is based on the length of the retiree's contract. Therefore, most retirees are restricted to 700 hours or about half time employment since most teaching contracts are for the 9-month school year.

2) Critical Shortage Area exemption for full time retiree employment requires a one-year waiting period between retirement and re-employment.

3) Member and employer contributions are required to be paid on re-employed retiree's salary which creates added budget pressure, particularly with regards to retiree in-staff subbing.

Some employers are questioning TFFR's current interpretation of "contracted" in-staff subbing, particularly when it pertains to re-employed retirees. For both active members and re-employed retirees TFFR uses the calendar dates indicated on the teacher's contract to determine the teacher's contract period for in-staff subbing. Some employers are requesting that TFFR consider revising its current interpretation by considering the retiree's work schedule (for example number of days and/or working hours instead of calendar dates) when determining the contract period for in-staff subbing. This would allow retirees to do additional subbing. Due to the fact that the subbing would be considered non-contracted, the employer and retiree would not pay retirement contributions on the subbing salary. Here are a few examples to help describe the issue:

- ***Example 1:*** *Teacher has a part-time contract to work 8 hours a day for 76 days from August 27 – May (end of school year).*

  Current practice: *TFFR would define the contract period to be August 27 – May (end of school year). Any subbing done during this time frame for this employer would be considered in-staff subbing and reported to TFFR. If the teacher is a re-employed retiree, the in-staff subbing hours would be counted toward the retiree return to work annual hour limit (700 hours) and contributions would be paid.*

  Requested practice: *Some employers only want to consider the actual 76 days worked to be "contracted" and do not want to report and count hours for subbing done on the other days. For example, the contract could say the teacher will only work Mondays and Wednesdays, or could list the actual 76 days to be worked, so those are the days that would be considered as contracted days. The other days would be considered to be non-contracted so unlimited subbing could be done on those days.*

- ***Example 2:*** *Teacher has a part-time contract for nine months to work mornings from August 27 – May (end of school year).*

  Current practice: *TFFR would define the contract period to be August 27 - May (end of school year). Any subbing done during this time frame for this employer would be considered in-staff subbing and reported to TFFR. If the teacher is a re-employed retiree, the in-staff subbing hours would be counted toward the retiree return to work annual hour limit (700 hours) and contributions would be paid.*

  Requested practice: *Some employers only want to consider the actual mornings worked to be "contracted" and do not want to report and count hours for subbing done in the afternoons. For example, the contract could say the teacher will only work mornings from 8 - 11:30 am, so those are the hours that would be considered as contracted hours. The afternoons would be non-contracted hours, so unlimited subbing could be done in the afternoons.*

- ***Example 3:*** *Teacher has a part-time contract to coach from August 27 – November 10 and March 2 – May 30.*

  Current practice: *TFFR would define the contract periods to be August 27 – November 10 and March 2 – May 30. Any subbing done during these time frames for this employer would be considered in-staff subbing and reported to TFFR. If the teacher is a re-employed retiree, the in-staff subbing hours would be counted toward the retiree return to work annual hour limit (700 hours) and contributions would be paid. Any subbing done November 11 – March 1 would not be considered in-staff subbing and would not be reported and subject to retiree return to work hour limits.*

  Requested practice: *While employers generally follow the current guidelines in this example without question, some employers may only want to consider the actual hours spent coaching to be "contracted" and may not want to report and count hours for subbing done during the regular school day. In this case, the regular school day would be considered non-contracted hours, so unlimited subbing could be done.*

Legal Review of Retiree Substitute Teaching Issue

Staff asked TFFR's legal counsel, Jan Murtha, to review TFFR's current practice and consider whether changes could be made to the current practice, and if so, what would need to be done.

1) Is TFFR's current practice of determining when "contracted in-staff subbing" occurs reasonable and supported by state statutes and administrative rules?

Jan indicated that TFFR's current practice appears to be reasonable. ND Century Code discusses retiree reemployment in terms of a contract period comprised of months and hours (15-39.1-19.1); however the example teacher contracts which have been provided for the purpose of this discussion set up the contract term based on months or days, without any reference to hours. It is reasonable, therefore, for TFFR to take the position that any "worked hours" accumulated during the total number of days or months within the identified contract term must be applied toward the annual hour limit. It was also noted, however, that the more specific the "contract term" (ie, designating the specific days and hours of the week worked), the more reasonable an employer argument that subbing by re-employed retirees outside of the contract term should not be considered in-staff subbing.

2) Does TFFR have any latitude in determining when "contracted in-staff subbing" occurs?

- The Board could develop a policy or employer guidance regarding how TFFR intends to interpret the "length of the reemployed retiree's contract" as defined under 15-39.1-19.1. Any policy could still be challenged and reviewed by the Board on appeal by an individual member so no member rights would be impaired by the policy.

  Example: *A board policy could be developed stating that if a part-time contract details the exact hours/times/days worked for the purposes of defining the contract term, then "contracted in-staff subbing" would only occur for re-employed retirees (or policy could apply to both actives and re-employed retirees), when done within the contracted term. Employers could be instructed to be very specific in their contracts with regard to work schedule and add a phrase to the contracts which states that any subbing done by the individual outside of the specific contracted hours or days will not be covered by the terms of the contract, and need not be reported to TFFR.*

- A statutory change would be required to allow in-staff subbing to be excluded from the retiree return to work annual hour limit like professional development and extra-curricular hours (but the earnings still reported to TFFR and contributions paid), since the exclusions for professional development and extra-curricular hours are currently set forth in statute (15-39.1-19.1(1)(b).

- A statutory change would also be required to allow all subbing (including in-staff subbing) to be excluded from the retiree return to work annual hour limit, since the statute makes a point of excluding employment as a "non-contracted" substitute teacher. If the subbing is reasonably being interpreted as being done under contract (ie within the contract term), the Board does not have the discretion to exclude.

Staff Review of Retiree Substitute Teaching Issue

After review of the re-employed retiree substitute teaching issue, including input from employers, legal counsel, audit, and retirement services staff, we have identified the following options for Board consideration.

1) **Continue current practice** – Develop board policy to clarify current practice.
   For both active members and re-employed retirees TFFR uses the calendar dates indicated on the teacher's contract to determine the length of the teacher's contract period for in-staff subbing.

   Factors to consider:

   - Current practice treats in-staff subbing consistently for both active and retired members which is simpler to communicate to employers and members and simpler for the plan to administer.
   - Relatively broad interpretation of "contracted" vs "non- contracted" based on start and end calendar dates or term of contract.
   - Restricts the amount of subbing that can be done by re-employed retirees if they are already under contract with the school district.
   - Seeks to offset the potential negative public perception of "double dipping" by balancing the opportunity for retired teachers to work part time and collect full pension benefits with school districts need to hire both regular and substitute teachers due to the teacher shortage.
   - Ensures contributions will be paid into the TFFR plan on all eligible salary for duties performed by re-employed retirees, including in-staff substitute teaching. If contracted retiree in-staff subbing is:
     1% of $8 million annual salaries (8 mil X 24.5% X 1%) = est. $20,000
     3% of $8 million annual salaries (8 mil X 24.5% X 3%) = est. $60,000
     5% of $8 million annual salaries (8 mil X 24.5% X 5%) =est. $100,000
   - Re-employed retirees and school districts must pay contributions on in-staff subbing which causes additional strain on limited funds available to retirees and school districts (budget impact).

2) **Modify current practice** – Develop new board policy to clarify future practice.
For re-employed retirees only OR for both active members and re-employed retirees, TFFR will use the teacher's work schedule (for example specific days and/or working hours instead of calendar dates) to determine the length of the teacher's contract period for in-staff subbing. This would allow re-employed retirees to do additional subbing beyond the annual hour limit. Re-employed retirees and school district will not be required to pay retirement contributions on the subbing salary earned during those "noncontract" hours.

Factors to consider:

- Decide whether to interpret re-employed retiree in-staff subbing different from active in-staff subbing. If in-staff subbing is not treated consistently for active and retired members, it will be more difficult to communicate to employers and members. It will also be more difficult for the plan to administer.
- More narrow interpretation of contracted in-staff substitute teaching which is strictly tied to the work schedule defined in the contract.
- Re-employed retiree substitute teaching would be almost unlimited which would help school districts deal with teacher shortages. Re-employed retirees could be contracted for 700-1000 hours for regular teaching duties and also substitute teach during the remainder of the day/week/school year.
- Potential for increased negative public perception of "double dipping" since re-employed retirees would be able to work full time (contracted teaching plus non contracted subbing) and collect full pension benefits.
- Reduces the amount of contributions which will be paid into the TFFR plan on substitute teaching performed by re-employed retirees. If contracted retiree in-staff subbing is:
  1% of \$8 million annual salaries (8 mil X 24.5% X 1%) = est. \$20,000 less
  3% of \$8 million annual salaries (8 mil X 24.5% X 3%) = est. \$60,000 less
  5% of \$8 million annual salaries (8 mil X 24.5% X 5%) = est. \$100,000 less
- Reduces the amount that must be paid by re-employed retirees and school districts (budget impact).

3) **Draft legislative bill -** Change retiree-re-employment provisions in state law. Various retiree re-employment provisions could be changed relating to retiree in-staff subbing, general eligibility requirements, annual hour limits, waiting periods, contribution requirements, etc.

As it relates to re-employed retiree in-staff subbing, a statutory change would be required to allow in-staff subbing to be excluded from the re-employed retiree return to work annual hour limit like professional development and extra-curricular hours (but the earnings still reported to TFFR and contributions paid), since the exclusions for professional development and extra-curricular hours are currently set forth in statute.

A statutory change would also be required to allow all subbing (including in-staff subbing) to be excluded from the re-employed retiree return to work annual hour limit, since the statute makes a point of excluding employment as a “non-contracted” substitute teacher. If the subbing is reasonably being interpreted as being done under contract, the Board does not have the discretion to exclude.

Factors to consider:

- Depending upon the type and magnitude of the change(s), there could be either a positive or negative financial or administrative impact on the TFFR fund and/or school districts. Modifications should be considered carefully and seek to balance the needs of the TFFR fund with the needs of the school districts. Care should be taken to ensure that changes do not incentivize active teachers to retire earlier than they would have in order to take advantage of retiree re-employment provisions.

- April 1, 2016 deadline for filing bill drafts with Legislative Employee Benefits Programs Committee has passed. A request for late submission for interim study would be required.

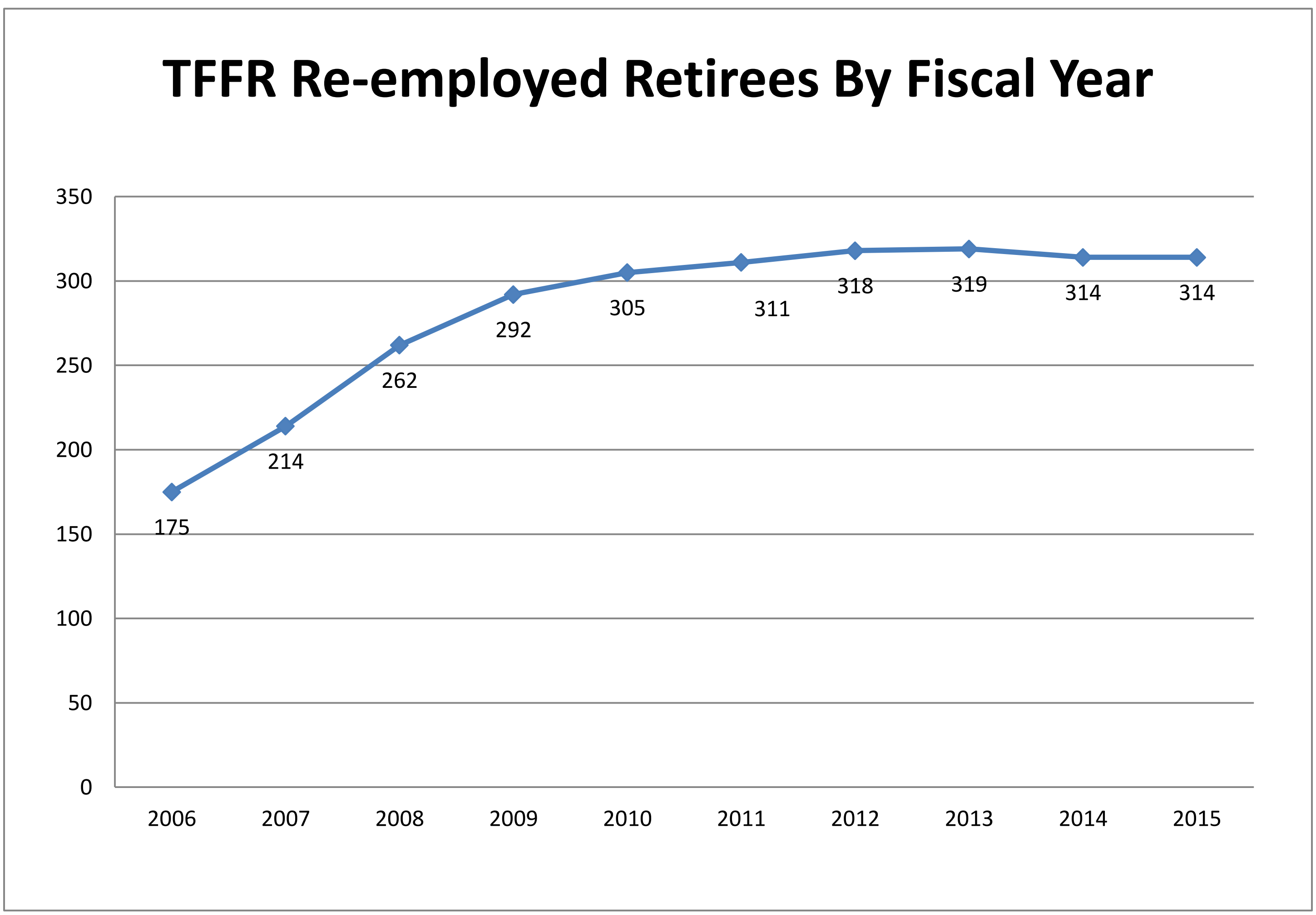
<u>Next Steps</u>

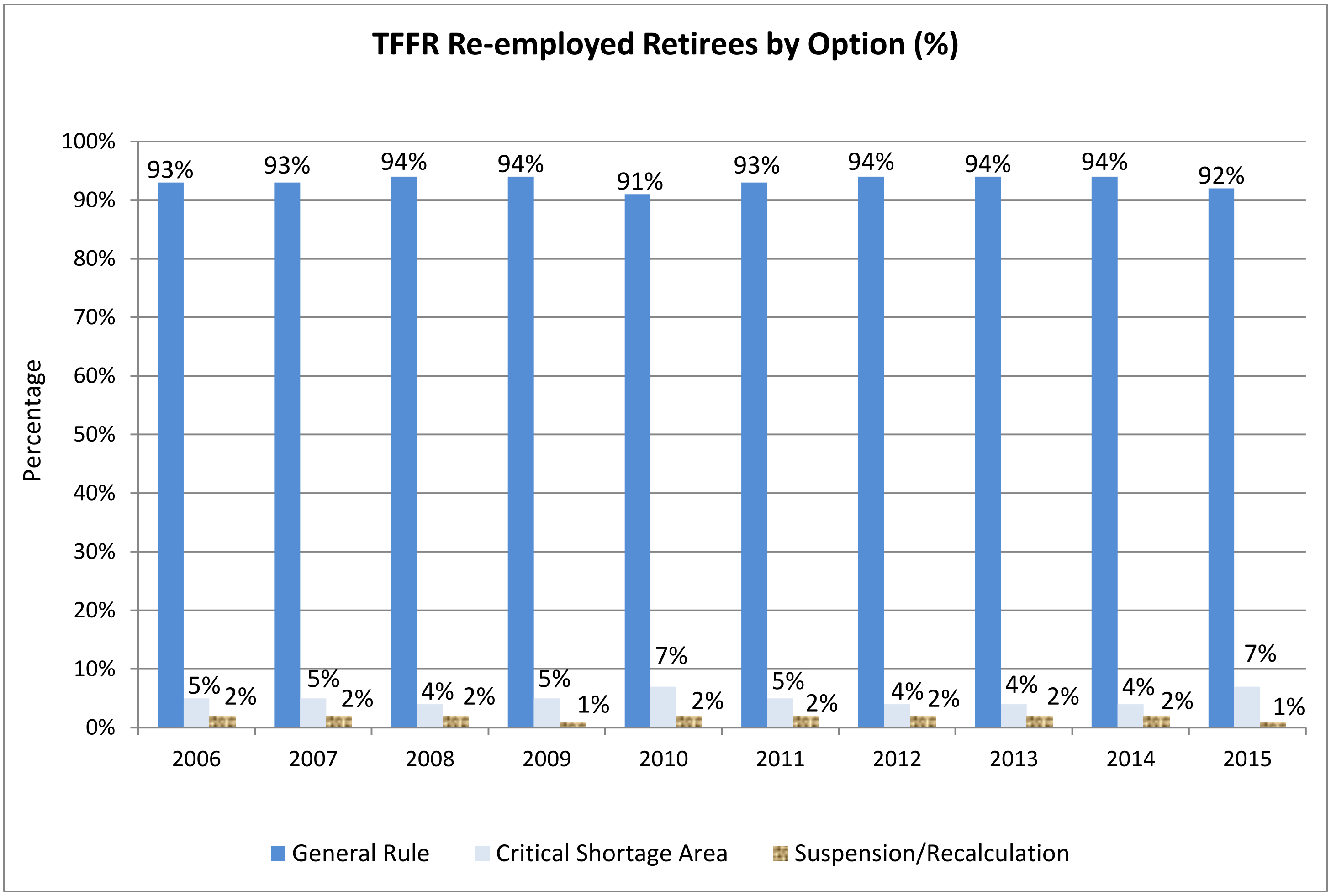
The TFFR Board will review the issue of retiree substitute teaching at the July 2016 meeting. Unless more information is needed, the Board will be asked to select one of the three options to move forward: 1) continue current practice; 2) change current practice; 3) draft legislative bill.

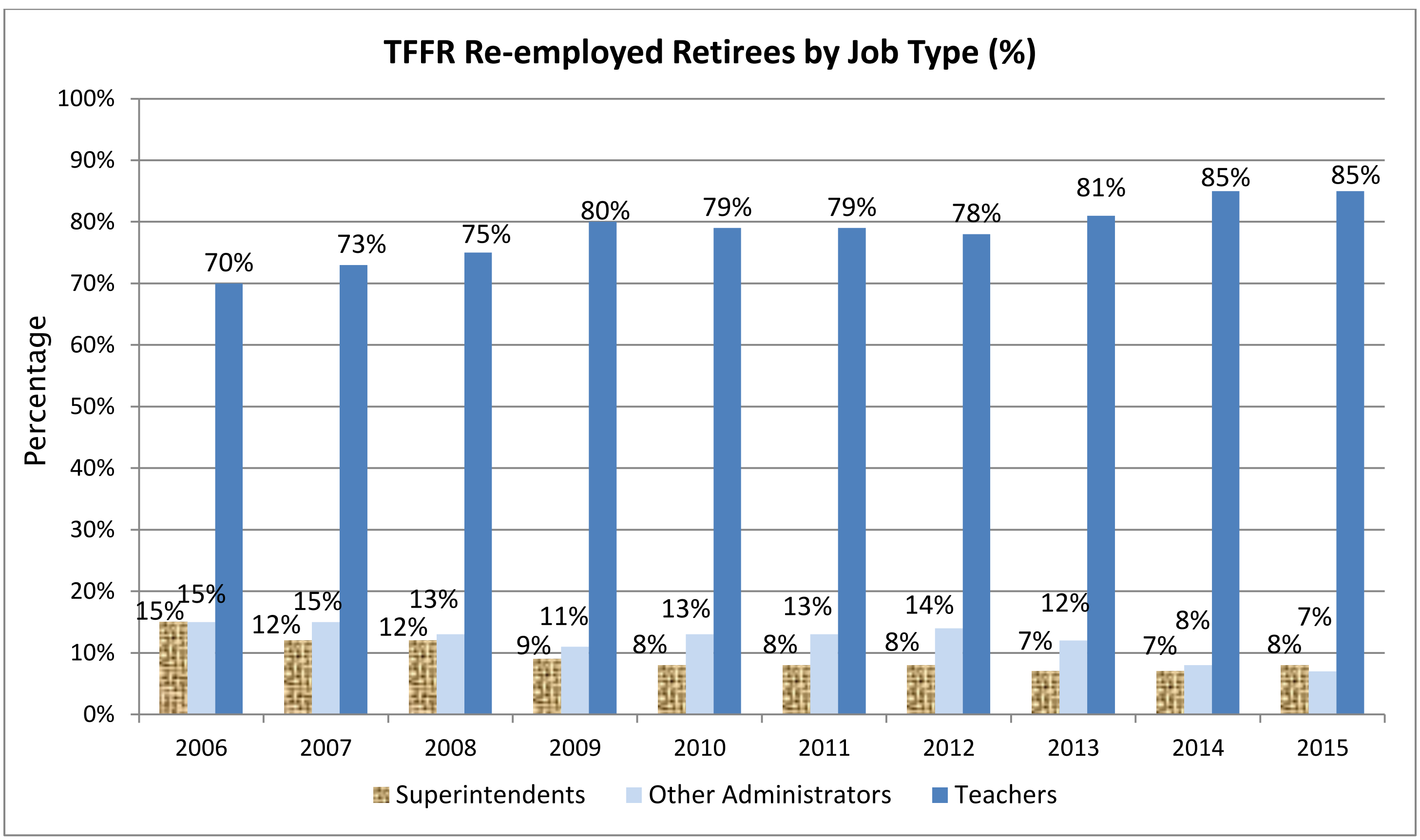
Based on the Board’s directive, staff will draft a board policy or legislative bill draft for consideration at the September TFFR board meeting.

TFFR RE-EMPLOYED RETIREE STATISTICS

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Number of Re-employed Retirees	175	214	262	292	305	311	318	319	314	314
Average Age	60	59	60	60	61	61	62	62	62	63
Average Salary	$21,000	$22,000	$22,151	$21,000	$23,400	$24,700	$24,500	$24,500	$24,200	$25,600
General Rule	163	199	246	273	278	290	298	299	295	290
Critical Shortage	9	11	11	15	20	15	13	13	14	22
Suspend & Recalc	3	4	5	4	7	6	7	7	5	2
Foundation Donation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Superintendents	27	26	32	26	24	24	26	24	23	24
Other Administrators	27	32	35	32	40	42	44	37	25	22
Teachers	121	156	195	234	241	245	248	258	266	268
Number of Employers	101	117	135	132	132	127	132	132	133	135




TFFR Re-employed Retirees by Option (%)
Percentage
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
93% 5% 2%
93% 5% 2%
94% 4% 2%
94% 5% 1%
91% 7% 2%
93% 5% 2%
94% 4% 2%
94% 4% 2%
94% 4% 2%
92% 7% 1%
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
General Rule
Critical Shortage Area
Suspension/Recalculation


TFFR Re-employed Retirees by Job Type (%)
Percentage
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
15% 15% 70%
12% 15% 73%
12% 13% 75%
9% 11% 80%
8% 13% 79%
8% 13% 79%
8% 14% 78%
7% 12% 81%
7% 8% 85%
8% 7% 85%
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
Superintendents
Other Administrators
Teachers

TFFR RE-EMPLOYED RETIREES
BY SUBJECT/POSITION (2014-2015)

Subject or Position	Re-employed Retirees Full Time CSA/SR	Part Time Gen Rule	Total
Art	1	6	7
Business	1	13	14
Counseling	3	9	12
Elementary Ed	5	16	21
English/Reading	2	12	14
Extra-Curricular		23	23
FACS		7	7
Foreign Language	1	5	6
Health/Phy Ed		5	5
Library/Media		11	11
Math		9	9
Mentors, Strategists, Prof. Dev.		17	17
Music		8	8
Science	2	11	13
Social Studies/History		7	7
*Special Ed/Title/LD/Speech	4	42	46
Summer School/Driver's Ed		23	23
Tech Coordination/Tech Ed	1	4	5
Voc Ed/Adult Ed		8	8
Other Teachers	2	10	12
Total Retired Teachers	22	246	268
Superintendent	1	23	24
Principal/Asst Supt	1	13	14
Director/Coordinator		8	8
Total Retired Admin	2	44	46
Total Re-Employed Retirees	**24**	**+ 290**	**= 314**

(9 teaching in 2 school districts)

*Special Ed:

LD	1
Psychologist	1
Speech Path/Ther	10
Spec Ed	15
Title	14
Vision Impair	4
Autism	1

CSA = Critical Shortage Area
SR = Suspend & Recalc

TFFR Investment Update

For the Periods Ended March 31, 2016

July 13, 2016

Note: This update contains unaudited results for the current fiscal year, which are subject to change, but deemed to be materially accurate.

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Executive Summary – March 31, 2016

Investment Performance –

- **TFFR's overall investment returns have been disappointing in the past year largely as a result of nearly every major asset class (in which TFFR invests) materially underperforming long-term return assumptions. A slowing global recovery including continuing concerns about China, escalating political uncertainty, and an unclear path as to future interest rates in the U.S. and abroad, have raised investment volatility and dampened overall returns. Despite these weak absolute returns, TFFR's net return of -0.35% exceeded the policy benchmark of -0.83% by 0.48% (or $10 million) for the 1-year period ended March 31, 2016.**
- **TFFR's two largest asset allocations are U.S. Equity (21%) and U.S. Fixed Income (17%). Unfortunately, both of these asset classes materially underperformed long-term expectations posting net returns of less than a half of 1% for the last year. In contrast, Callan expects U.S. Equity to return nearly 7.5%, and U.S. Fixed Income to return from 3% to 5%, over the next decade.**
- **TFFR's next two largest asset classes are World Equity (16%) and International Equity (15%). Again, both of these sectors under-performed 10-year assumptions posting -6% returns for the last year. Callan's capital market expectations for these two sectors exceed 7.5% from 2016 to 2025. (Target asset allocation percentages are shown in parentheses on this page.)**
- **On a positive note, TFFR's fifth largest allocation is Real Estate (10%) which had a great year generating 15% returns, far exceeding Callan's long-term expectation of 6%.**
- **TFFR's four remaining investment sectors each have an approximate 5% target asset allocation. Timber posted a 6% return in the last year, although these returns benefitted from a one-time fee reversal in October of 2015. International Fixed Income performed modestly with a net return of approximately 2%, while Infrastructure returns were flat and Private Equity was down 9% for the year ended March 31, 2016.**
- **Asset allocation is the primary driver of returns over the long-term. During the last 5-years, TFFR generated a net investment return of 6.27%, which exceeded the policy benchmark (of 5.60%) by 0.67%. As a result, asset allocation was responsible for $520 million of TFFR's investment income for the five years ended March 31, 2016, while active management enhanced TFFR's net returns by over $60 million (or 12%) during this five year period.**
- **The above market returns have been achieved while adhering to prescribed risk controls noting that TFFR's risk level, as measured by standard deviation, has remained well within approved policy levels (at 105% versus a policy limit of 115%). During this same time frame, the TFFR investment portfolio generated 0.39% of positive risk adjusted excess return.**

Footnote 1: The market value of TFFR's assets have exceeded $1.8 billion for the five-years ended March.31, 2016 ($1.85 billion x 0.67% = $12 million x 5 years = $60 million).

TFFR Investment Ends – March 31, 2016

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

	Quarter Ended 3/31/2016	Current FYTD 3/31/2016	1 Yr Ended 3/31/2016	3 Yrs Ended 3/31/2016	5 Yrs Ended 3/31/2016	Risk 5 Yrs Ended 3/31/2016	Risk Adj Excess Return 5 Yrs Ended 3/31/2016
Total Fund Return - Net	1.31%	-0.06%	**-0.35%**	6.45%	**6.27%**	**8.2%**	**0.39%**
Policy Benchmark Return	0.93%	0.47%	-0.83%	5.50%	5.60%	7.9%	
Excess Return	0.37%	-0.53%	**0.48%**	0.95%	**0.67%**	**105%**	

Net Return: TFFR's net investment rate of return for the 5-years ended March 31, 2016 was **6.27%** versus a policy benchmark of **5.60%** resulting in an **Excess Return of 0.67% (or 67 bps)**.

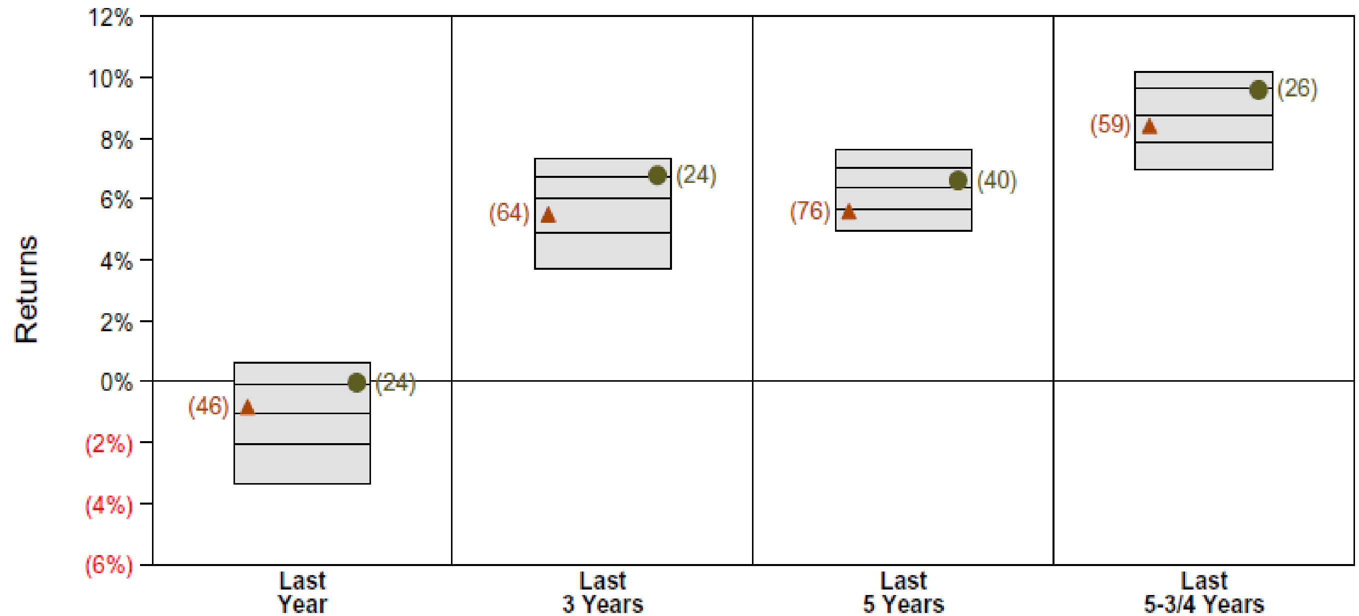
Risk: TFFR's standard deviation for the 5-years ended December 31, 2015 was 8.2% versus a policy benchmark of 7.9% resulting in a **portfolio risk ratio of 105%**. This is within TFFR's stated risk tolerance which indicates this ratio should **not exceed 115%**.

The Risk-Adjusted Excess Return of TFFR's portfolio (net of fees and expenses) was **0.39%** for the 5-year period ended December 31, 2015.

TFFR Return History –
Unadjusted Peer Comparison using Callan's "Gross" Returns

Source: Callan "Public Fund Sponsor Database" for U.S. public pension plans with $1 billion or more in assets under management.

Public Fund Sponsor Database

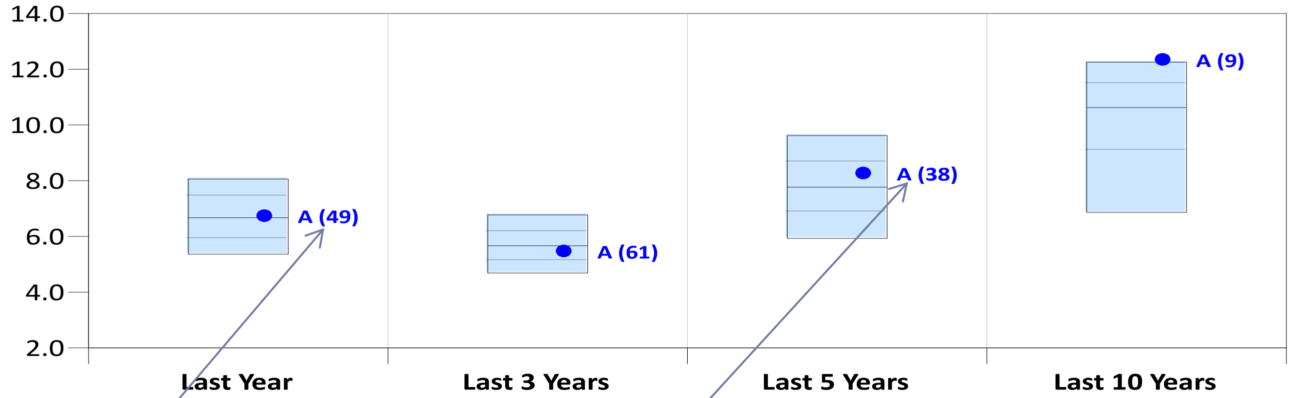


	Last Year	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	0.61	7.33	7.65	10.20
25th Percentile	(0.08)	6.76	7.01	9.64
Median	(1.03)	6.02	6.41	8.76
75th Percentile	(2.05)	4.92	5.69	7.85
90th Percentile	(3.35)	3.69	4.94	6.95
Total Fund ●	(0.03)	6.78	6.61	9.59
Policy Target ▲	(0.83)	5.50	5.60	8.41

TFFR's returns have consistently outperformed other public pension plans ranging from the 24th to 40th percentile over the last 1-to 5-year periods.

Pension “Risk” has declined as measured by Standard Deviation

Standard Deviation
for Periods Ended March 31, 2016
Group: CAI Public Fund Sponsor Database



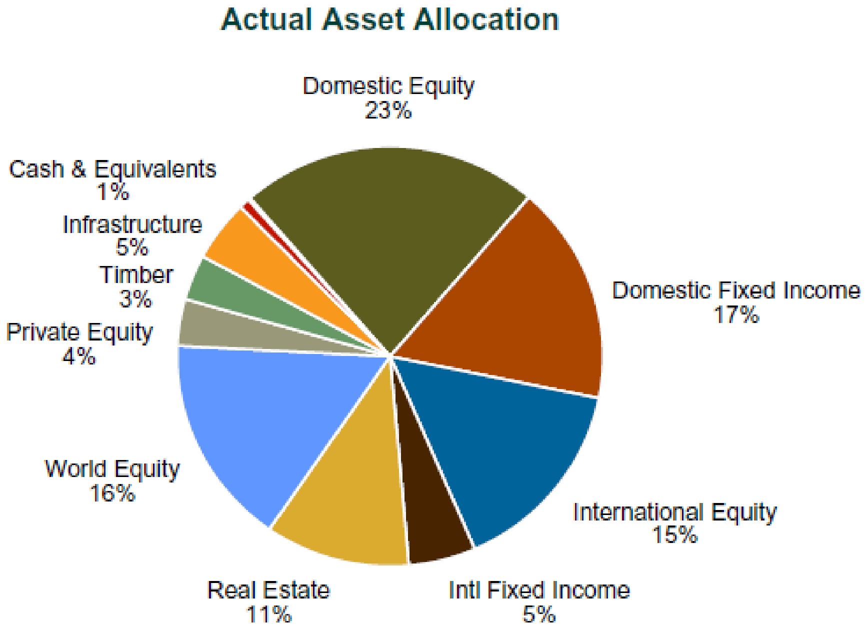
	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	8.1	6.8	9.6	12.3
25th Percentile	7.4	6.2	8.7	11.5
Median	6.7	5.7	7.8	10.6
75th Percentile	5.9	5.1	6.9	9.1
90th Percentile	5.4	4.7	5.9	6.9
Member Count	259	243	223	200
Total Fund-TFFR ● A	**6.7**	**5.4**	**8.2**	**12.3**

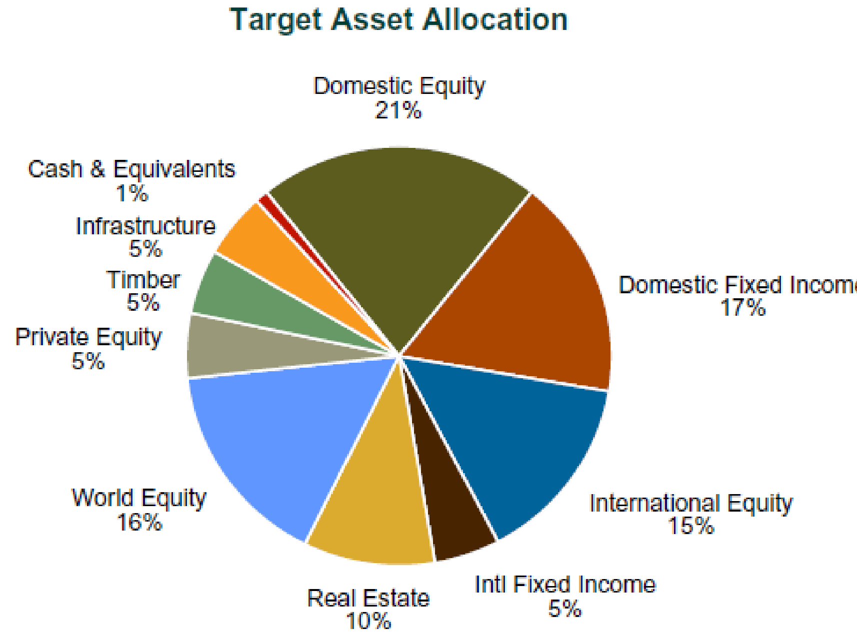
Portfolio risk, measured by Standard Deviation, has declined materially in the last 5-to-10 years and resides in the 49th percentile “Last Year” and 38th percentile for the “Last 5 Years” (versus the 9th percentile for the “Last 10 Years”). The absolute level of volatility increased “Last Year” to 6.7% versus 5.4% for the “Last 3 Years”.

TFFR Investment Review

As of March 31, 2016

Actual Allocations were within 1% to 2% of Approved Targets





Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	467,358	22.7%	21.4%	1.3%	27,076
Domestic Fixed Income	348,194	16.9%	17.0%	(0.1%)	(1,564)
International Equity	315,365	15.3%	14.6%	0.7%	14,985
Intl Fixed Income	105,630	5.1%	5.0%	0.1%	2,760
Real Estate	227,060	11.0%	10.0%	1.0%	21,321
World Equity	333,046	16.2%	16.0%	0.2%	3,862
Private Equity	75,064	3.6%	5.0%	(1.4%)	(27,805)
Timber	71,518	3.5%	5.0%	(1.5%)	(31,352)
Infrastructure	97,394	4.7%	5.0%	(0.3%)	(5,476)
Cash & Equivalents	16,767	0.8%	1.0%	(0.2%)	(3,807)
Total	2,057,395	100.0%	100.0%		

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI EM and 1.0% 3-month Treasury Bill.

TFFR - Actual vs. Target Returns – March 31, 2016

Actual Returns were disappointing last year but outperformed Target Returns

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 Equity	22%	21%	0.01%	(1.83%)	0.40%	(0.02%)	0.38%
Domestic Fixed Income	18%	17%	0.37%	0.33%	0.00%	0.01%	0.01%
Real Estate	11%	10%	15.42%	11.84%	0.33%	0.01%	0.35%
Infrastructure	5%	5%	0.55%	0.50%	0.01%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.13%	(0.06%)	0.07%
International Equity	15%	15%	(5.51%)	(8.89%)	0.53%	(0.07%)	0.47%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.02%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.03%) =**	**(0.83%) +**	**0.87% +**	**(0.08%)**	**0.80%**

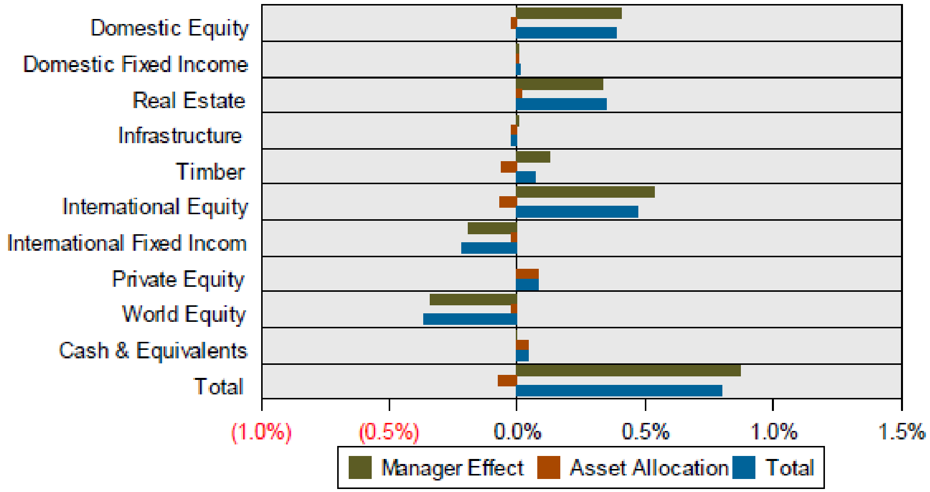
- **TFFR generated an "Actual (Callan Gross) Return" of -0.03% for the year ended Mar. 31, 2016.** Actual Returns of most asset classes exceeded their benchmark with notable exceptions for International Fixed Income and World Equity with negative Manager Effects of (0.19%) to (0.34%). Asset allocations were within 1% to 2% of approved targets. Strong absolute returns in Real Estate (+15%) and Timber (+6%) along with modest returns in International Fixed Income (+2%) were materially offset by disappointing results in nearly all other sectors including International and World Equities (-6%) along with Private Equity (-9%). Timber results were positively impacted by unusual items including a fee reversal in the last calendar quarter of 2015.

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World Index, 12.0% Barclays Aggregate Index, 11.8% MSCI EAFE Index, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB TFFR - Private Equity, 5.0% Global Agg ex USD, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 2.8% MSCI Emerging Mkts - Net and 1.0% 3-month Treasury Bill.

TFFR Performance and Attribution

As of March 31, 2016

One Year Relative Attribution Effects



1 Year Ended 3/31/16	
Gross:	-0.03%
Net:	-0.35%
Target:	-0.83%
Net Added:	0.48%

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 Equity	22%	21%	0.01%	(1.83%)	0.40%	(0.02%)	0.38%
Domestic Fixed Income	18%	17%	0.37%	0.33%	0.00%	0.01%	0.01%
Real Estate	11%	10%	15.42%	11.84%	0.33%	0.01%	0.35%
Infrastructure	5%	5%	0.55%	0.50%	0.01%	(0.02%)	(0.02%)
Timber	4%	5%	6.65%	2.90%	0.13%	(0.06%)	0.07%
International Equity	15%	15%	(5.51%)	(8.89%)	0.53%	(0.07%)	0.47%
International Fixed Incom	5%	5%	2.64%	6.69%	(0.19%)	(0.02%)	(0.21%)
Private Equity	4%	5%	(9.27%)	(9.27%)	0.00%	0.08%	0.08%
World Equity	16%	16%	(5.56%)	(3.45%)	(0.34%)	(0.02%)	(0.36%)
Cash & Equivalents	1%	1%	0.19%	0.12%	0.00%	0.04%	0.04%
Total			**(0.03%) =**	**(0.83%) +**	**0.87% +**	**(0.08%)**	**0.80%**

TFFR Five Year Return Attribution – March 31, 2016

Actual Returns materially exceeded Target Returns over the last 5-years

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 Equity	26%	25%	11.35%	10.52%	0.14%	0.10%	0.25%
Domestic Fixed Income	18%	17%	5.03%	3.99%	0.17%	(0.00%)	0.16%
Real Estate	10%	10%	14.35%	11.93%	0.23%	0.04%	0.27%
Timber	4%	5%	-	-	(0.25%)	(0.01%)	(0.26%)
Infrastructure	4%	5%	-	-	0.17%	0.12%	0.29%
International Equity	17%	17%	2.87%	1.08%	0.30%	(0.02%)	0.28%
International Fixed Incom	5%	5%	2.42%	0.39%	0.11%	(0.01%)	0.10%
Private Equity	5%	5%	0.86%	0.86%	0.00%	(0.04%)	(0.04%)
World Equity	11%	12%	-	-	0.01%	(0.05%)	(0.04%)
Cash & Equivalents	1%	1%	0.10%	0.08%	0.00%	(0.00%)	(0.00%)
Total			**6.61% =**	**5.60% +**	**0.88% +**	**0.13%**	**1.01%**

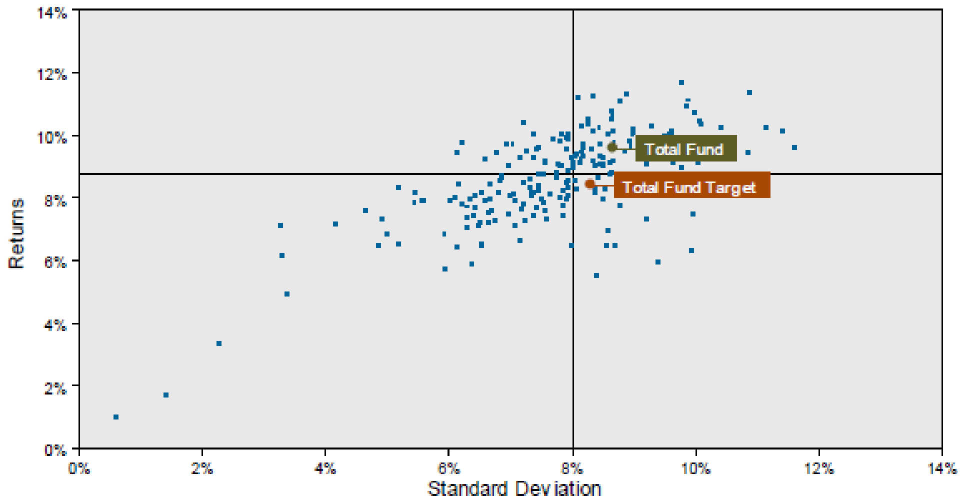
- **TFFR generated an "Actual (Callan Gross) Return" of 6.6%** for the 5-years ended Mar. 31, 2016. Actual Returns of every Asset Class exceeded their performance benchmark excluding Timber and Private Equity. After adjusting Callan's gross "Actual Return" for investment management and performance fees, the net return for TFFR was 6.27% over the last five-years.

* Current Quarter Target = 16.6% Russell 1000 Index, 16.0% MSCI World, 12.0% Barclays Aggregate Index, 11.1% MSCI EAFE, 10.0% NCREIF Total Index, 5.0% CPI-W, 5.0% Barclays HY Corp 2% Issue, 5.0% NDSIB PERS - Private Equity, 5.0% Barclays Global Agg ex-US, 5.0% NCREIF Timberland Index, 4.8% Russell 2000 Index, 3.5% MSCI EM and 1.0% 3-month Treasury Bill.

TFFR Performance and Attribution

As of March 31, 2016

Five and Three-Quarter Year Annualized Risk vs Return



Squares represent membership of the Public Fund Sponsor Database

5.75 Years Ended 3/31/16	
Gross:	9.59%
Net:	9.23%
Target:	8.41%
Net Added:	0.82%

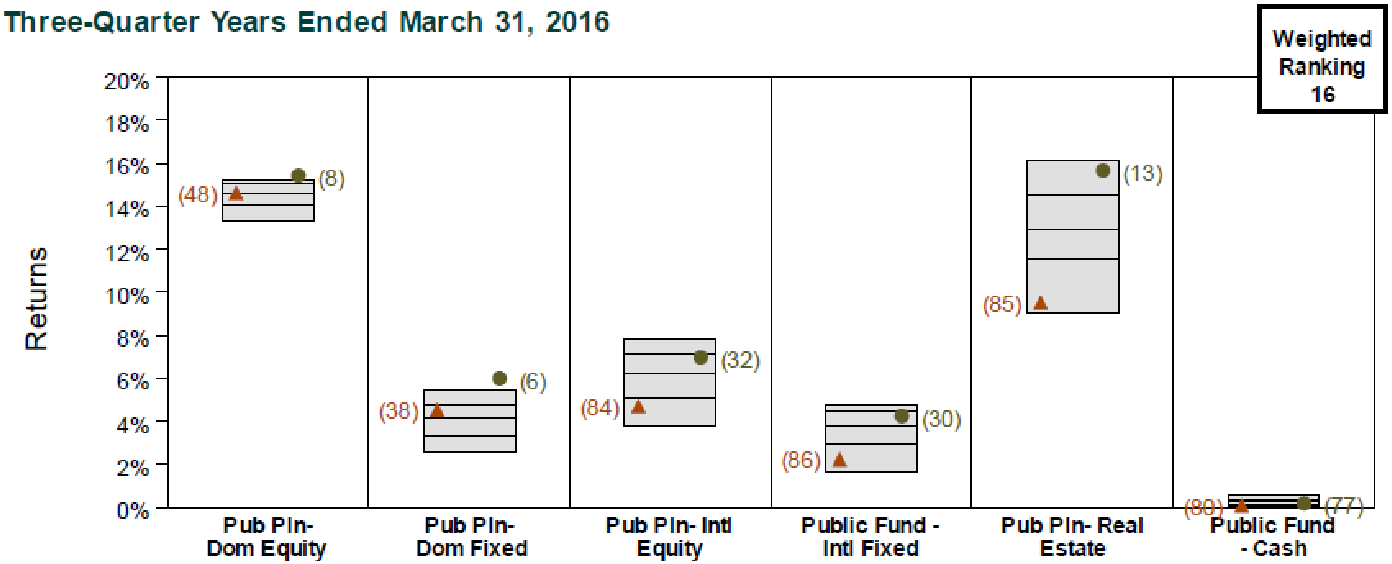
Five and Three-Quarter Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	27%	27%	15.36%	14.63%	0.12%	0.09%	0.21%
Domestic Fixed Income	18%	17%	5.92%	4.54%	0.23%	(0.02%)	0.22%
Real Estate	10%	10%	15.59%	12.54%	0.28%	0.03%	0.31%
Timber	4%	4%	-	-	(0.22%)	(0.01%)	(0.23%)
Infrastructure	3%	4%	-	-	0.16%	0.11%	0.26%
International Equity	18%	17%	6.90%	4.71%	0.41%	(0.03%)	0.38%
International Fixed Incom	5%	5%	4.17%	2.23%	0.10%	(0.01%)	0.09%
Private Equity	5%	5%	2.88%	2.88%	0.00%	(0.03%)	(0.03%)
World Equity	10%	10%	-	-	0.01%	(0.04%)	(0.04%)
Cash & Equivalents	1%	1%	0.11%	0.09%	0.00%	(0.01%)	(0.01%)
Total			**9.59% =**	**8.41% +**	**1.09% +**	**0.09%**	**1.18%**

Asset Class Composite Results

TFFR's asset class results vs other Public Pension Funds

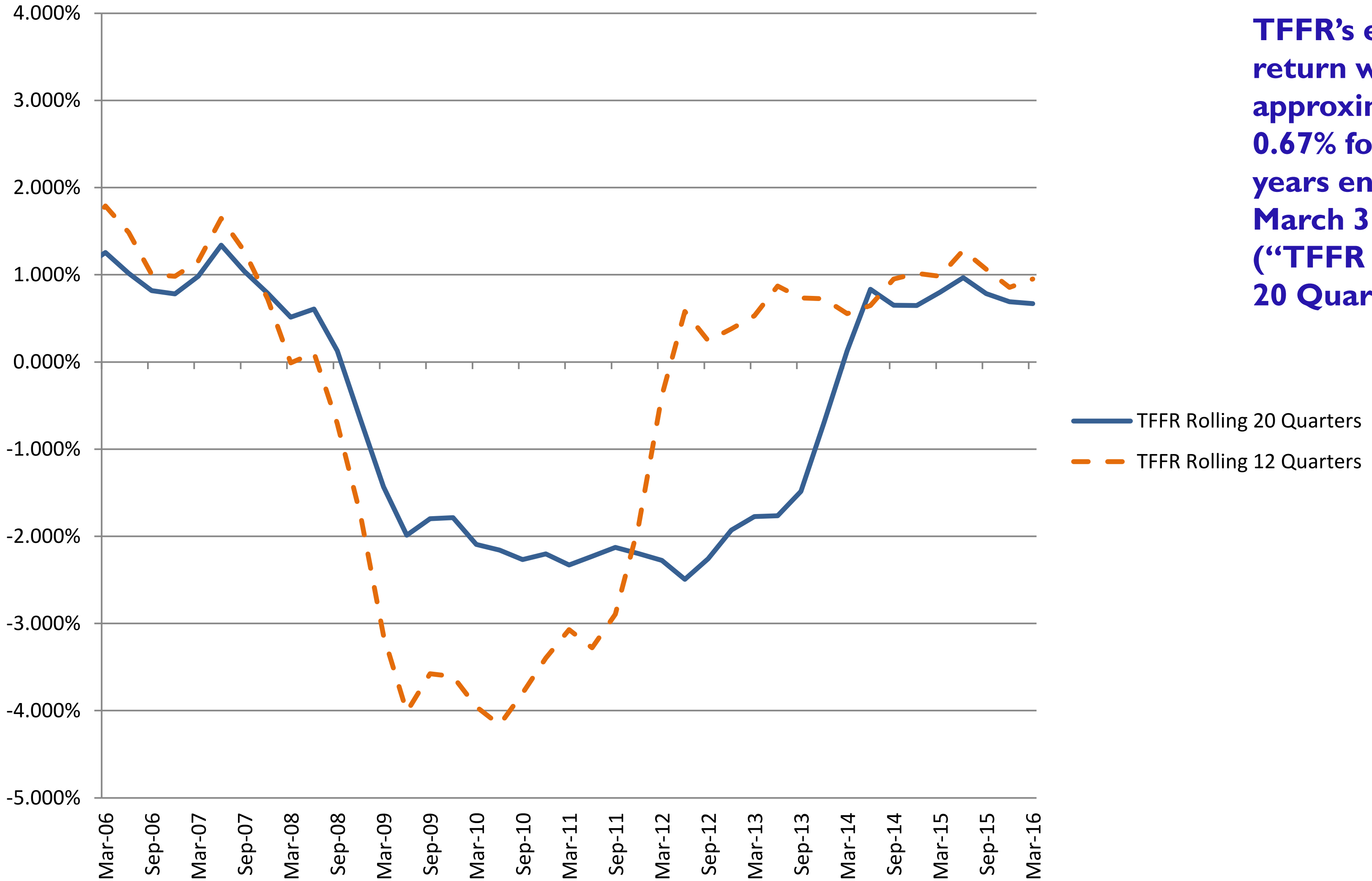
Total Asset Class Performance
Five and Three-Quarter Years Ended March 31, 2016



	Pub Pln- Dom Equity	Pub Pln- Dom Fixed	Pub Pln- Intl Equity	Public Fund - Intl Fixed	Pub Pln- Real Estate	Public Fund - Cash
10th Percentile	15.25	5.49	7.84	4.80	16.12	0.59
25th Percentile	15.05	4.80	7.11	4.44	14.52	0.36
Median	14.59	4.19	6.21	3.76	12.95	0.31
75th Percentile	14.04	3.33	5.10	2.98	11.55	0.11
90th Percentile	13.32	2.59	3.75	1.68	9.05	0.03
Asset Class Composite ●	15.36	5.92	6.90	4.17	15.59	0.11
Composite Benchmark ▲	14.63	4.54	4.71	2.23	9.52	0.09

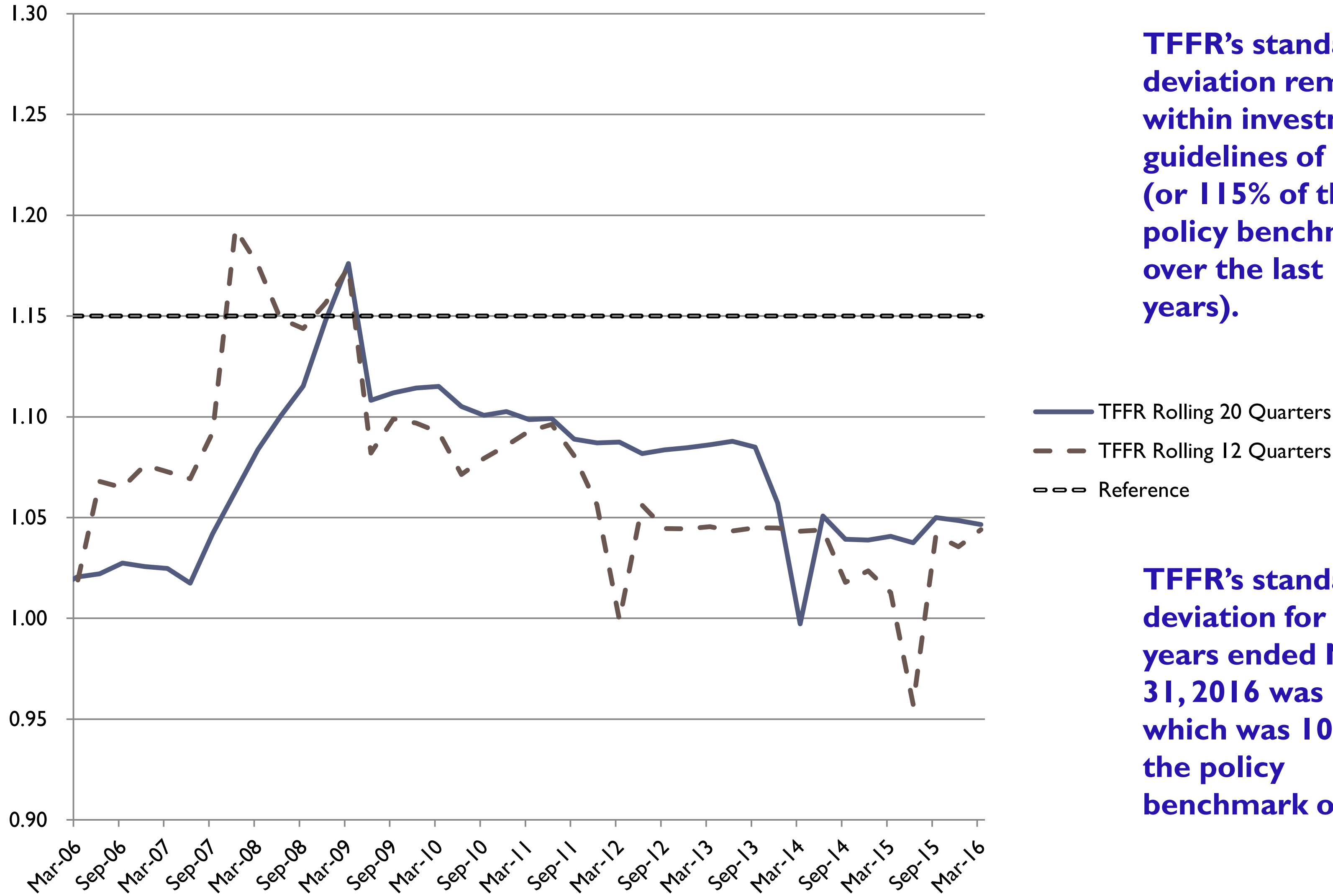
- Public market asset classes are all above their respective medians except cash
- U.S. equity, fixed income, and real estate returns in top quartile

Excess Return Relative to Policy Benchmark
10 Years Ended 3/31/2016



TFFR's excess return was approximately 0.67% for the 5-years ended March 31, 2016 ("TFFR Rolling 20 Quarters").

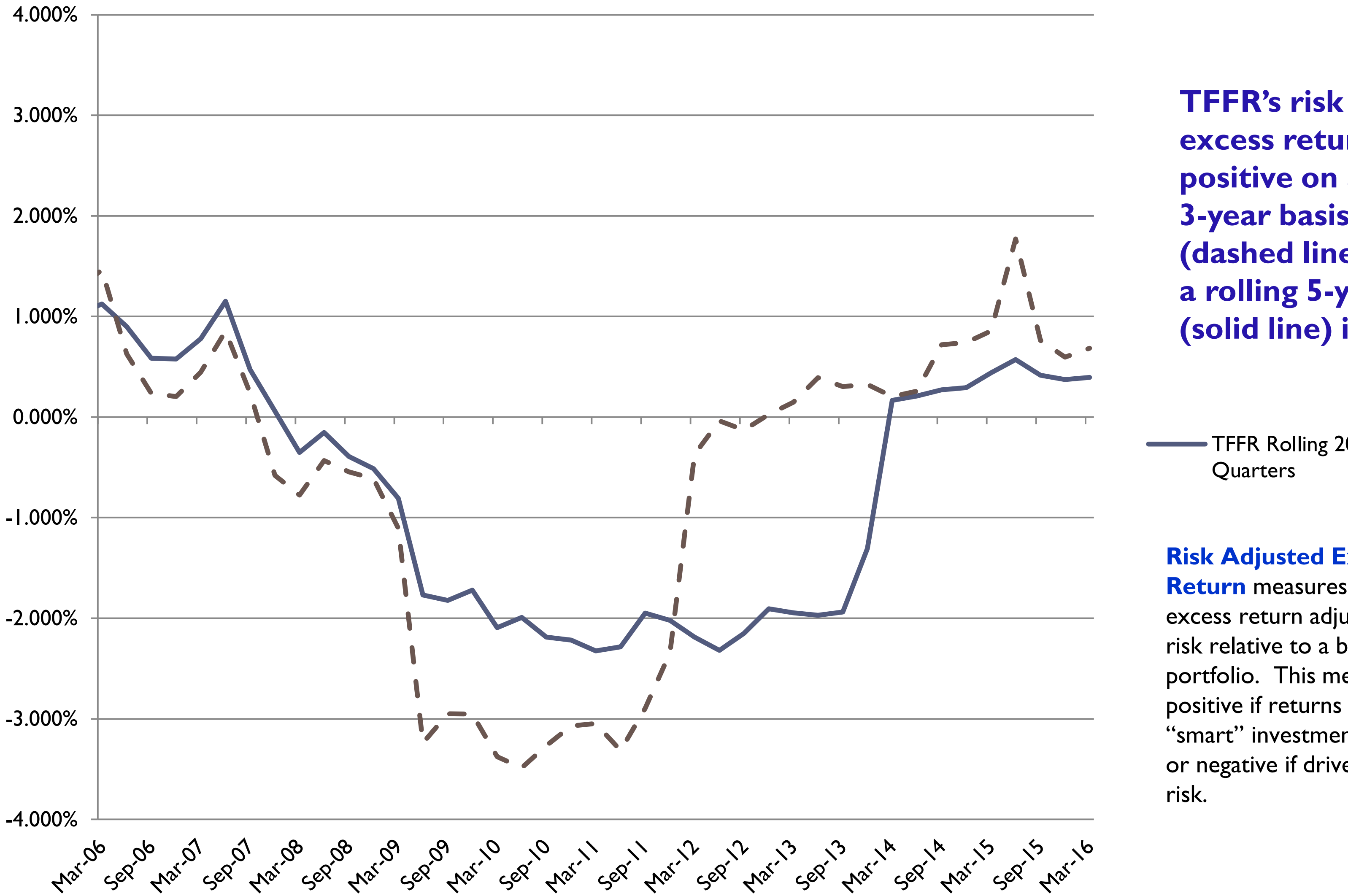
Relative Standard Deviation Relative to Policy Benchmark
10 Years Ended 3/31/2016



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

TFFR's standard deviation for the 5-years ended March 31, 2016 was 8.2%, which was 105% of the policy benchmark of 7.9%.

Risk Adjusted Excess Return
10 Years Ended 3/31/2016



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

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

TFFR Investment Policy Statement

Approved by the TFFR Board on January 21, 2016

This section was previously reviewed and approved by the TFFR board in connection with the Asset Liability Study completed by Callan Associates earlier this year.

Dave Hunter, Executive Director/CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

2015 Capital Market Expectations: Return and Risk

Summary of Callan's Long-Term Capital Market Projections (2015-2024)

- Most capital market expectations represent passive exposure (beta only); however, return expectations for private market investments such as real estate and private equity reflect active management premiums.
- Return expectations are net of fees.
- Shaded rows represent current asset classes.

Summary of Callan's Long-Term Capital Market Projections (2015 - 2024)

Asset Class	Index	Projected Return*	Projected Risk
Equities			
Broad Domestic Equity	Russell 3000	7.60%	19.00%
Large Cap	S&P 500	7.50%	18.30%
Small/Mid Cap	Russell 2500	7.85%	22.95%
International Equity	MSCI World ex USA	7.50%	20.20%
Emerging Markets Equity	MSCI Emerging Markets	7.90%	27.95%
Global ex-US Equity	MSCI ACWI ex USA	7.80%	21.45%
Fixed Income			
Short Duration	Barclays 1-3 Yr G/C	2.40%	2.25%
Domestic Fixed	Barclays Aggregate	3.00%	3.75%
Long Duration	Barclays Long G/C	3.20%	11.40%
TIPS	Barclays TIPS	3.00%	5.30%
High Yield	Barclays High Yield	5.00%	11.10%
Non-US Fixed	Barclays Global Aggregate ex-USD	2.30%	9.40%
Emerging Market Debt	EMBI Global Diversified	4.70%	10.00%
Other			
Private Equity	TR Post Venture Capital	8.50%	33.05%
Hedge Funds	Callan Hedge FoF Database	5.25%	9.30%
Real Estate	Callan Real Estate Database	6.15%	16.50%
Timberland	NCREIF Timberland	6.30%	17.50%
Infrastructure	S&P Global Infr/JPM Infr	6.65%	19.00%
Real Assets (Private)	60 Real Est, 15 Timber, 25 Infrastr	6.60%	15.60%
Commodities	Bloomberg Commodity	2.75%	18.50%
Cash Equivalents	90-Day T-Bill	2.25%	0.90%
Inflation	CPI-U	2.25%	1.50%

** Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).*

TFFR Investment Policy Statement
Summary of TFFR and SIB Approved Revisions

- RIO and Callan recommended relatively minor revisions to TFFR's existing investment policy statement noting the vast majority of the changes are conforming in nature:

1. Reducing the actuarial rate of return on assets to 7.75% from 8.00%; and
2. Adopting the asset class terminology used in Callan's "Asset Liability Study".

As example, Global Equity allocations are segmented into Public and Private, while Global Fixed Income allocations are segmented into Investment Grade and Non-Investment Grade.

TFFR engaged Callan to conduct an asset liability study which resulted in the following asset allocation recommendation after review and discussion with RIO staff.

Asset Class	Current Target	TFFR Board Approved
Global Equity	57%	58%
Public	52%	52%
Private	5%	6%
Global Fixed Income	22%	23%
Investment Grade	17%	19%
Non-Investment Grade	5%	4%
Global Real Assets	20%	18%
Real Estate	10%	10%
Other	10%	8%
Global Alternatives	0%	0%
Cash Equivalents	1%	1%
Totals	100%	100%
Expected Return	7.1%	7.1%
Standard Deviation	14.7%	14.7%

The SIB approved TFFR's new asset allocation on February 26, 2016. The new allocation includes a 1% increase to both Global Equity and Fixed Income and a 2% decrease to Global Real Assets (Timber) while maintaining a consistent profile for Expected Return and Risk (as measured by Standard Deviation).

TFFR Investment Policy Statement Implementation Update

RIO will implement TFFR's new asset allocation in the public markets by June 30, 2016, with:
1) Equity increasing from 57% to 58%;
2) Fixed Income increasing from 22% to 23%; and
3) Real Assets decreasing from 20% to 18%.

Asset Class	Prior Target	TFFR Board Approved
Global Equity	57%	58%
Public	52%	52%
Private	5%	6%
Global Fixed Income	22%	23%
Investment Grade	17%	19%
Non-Investment Grade	5%	4%
Global Real Assets	20%	18%
Real Estate	10%	10%
Other	10%	8%
Global Alternatives	0%	0%
Cash Equivalents	1%	1%
Totals	100%	100%
Expected Return	7.1%	7.1%
Standard Deviation	14.7%	14.7%

Real Assets consists of Real Estate (10%) and Other (8%). The "Other" component includes target allocations of 5% to Infrastructure and 3% to Timber.

As of March 31, 2016, the Timber allocation (within Global Real Assets) approximates 3% which is consistent with the "TFFR Board Approved" policy.

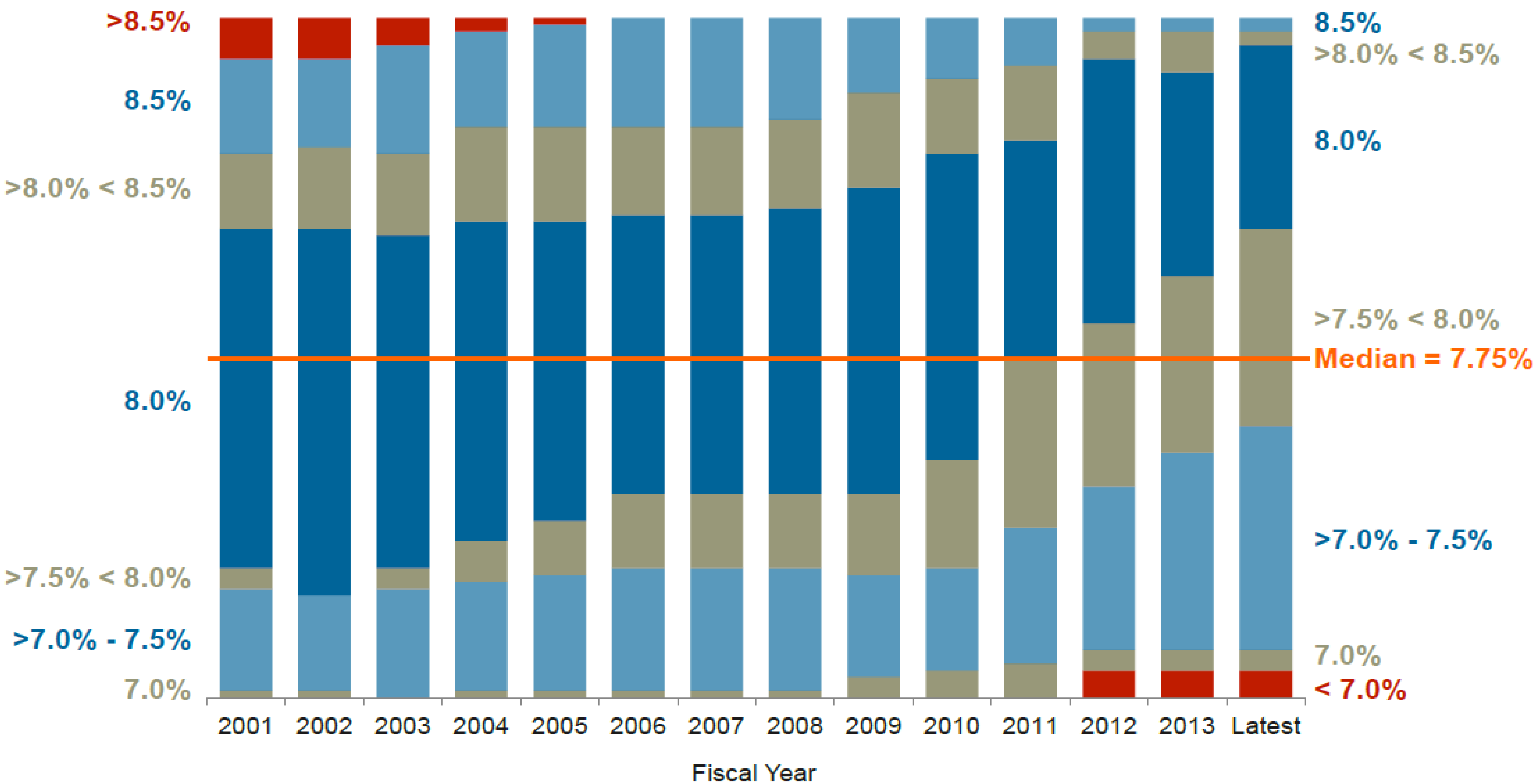
Callan's "Expected Return" does not incorporate "active management premiums" and "are below longer-term expectations" with a lower inflation assumption.

- While the Fund's expected return over the next 10 years falls short of the 7.75% return assumption, there are a few key items not factored into the 7.1% projection.
  - Callan's public market return projections do not incorporate active management premiums.
    - *Active management premiums accrue when investment firms selected by the State Investment Board outperform their passive benchmarks. It is important to note, though, that investment firms will at times underperform their passive benchmarks. The Plan's returns have benefitted from active management by approximately 50 basis points over the past five years.*
  - Callan's 10-year numbers are below longer-term expectations due to the current economic environment and the forecast for the next several years.
    - *Callan's 10-year return projections are approximately 50 to 200 basis points below longer-term (30+ years) expectations depending on the asset class.*
  - The actuary assumes 2.75% price inflation versus Callan's 2.25% assumption which means the liability return is closer to 7.4% rather than 7.75%.
    - *The 7.75% return is not reduced by a full 50 basis points since retirees do not receive an automatic COLA (100% CPI) every year.*
  - The Plan still has a reasonable chance of achieving a 7.75% return over 10 years (46% probability).
- In general, the efficient mixes suggest greater allocations to private equity and fixed income in lieu of real assets.

Source: Callan's *Asset Allocation and Liability Study* for the North Dakota Teachers' Fund for Retirement dated January 21, 2016.

Public Funds

Historical Changes to Long-Term Return Assumptions



Source: Compiled by NASRA based on Public Fund Survey

Callan Database of Median and Index Returns - March 31, 2016

Callan Database Median and Index Returns** for Periods ended March 31, 2016

Fund Sponsor	Quarter	Year	3 Years	5 Years	10 Years	15 Years
Public Database	**1.17**	**-1.03**	**6.02**	**6.41**	**5.39**	**6.09**
Corporate Database	**1.42**	**-1.91**	**5.47**	**6.41**	**5.54**	**6.17**
Endowments/Foundations Database	**0.54**	**-2.72**	**4.79**	**5.48**	**5.11**	**5.85**
Taft-Hartley Database	**1.02**	**-0.13**	**6.56**	**6.73**	**5.27**	**5.76**
Diversified Manager	**Quarter**	**Year**	**3 Years**	**5 Years**	**10 Years**	**15 Years**
Asset Allocator Style	**0.76**	**-2.12**	**6.00**	**6.41**	**5.72**	**6.48**
U.S. Balanced Database	**1.46**	**-1.59**	**5.78**	**6.33**	**5.57**	**6.12**
Global Balanced Database	**0.45**	**-4.20**	**3.11**	**4.60**	**5.08**	**7.30**
60% Russell 3000 + 40% Barclays Agg	1.79	0.73	7.73	8.35	6.53	6.27
60% MSCI World + 40% Barclays Glbl Agg	2.15	-0.11	4.51	4.77	4.58	5.38

* The peer group includes funded ratio measures provided by large, institutional investment and actuarial consultants, as well as investment management firms.

**Returns less than one year are not annualized.

Sources: Callan, Barclays, MSCI, Russell Investment Group.

RETIREMENT AND INVESTMENT OFFICE
AUDIT SERVICES
2015 - 2016 3rd Quarter Audit Activities Report
January 1, 2016 – March 31, 2016

The audit objective of Audit Services is twofold: first, to provide comprehensive, practical audit coverage of the Retirement and Investment Office (RIO) programs; second, to assist RIO management and the State Investment Board (SIB) by conducting special reviews or audits.

Audit coverage is based on the July 1, 2015 through June 30, 2016 work plan approved by the SIB Audit Committee. The audit activities undertaken are consistent with the Audit Services charter and goals, and the goals of RIO. To the extent possible, our audits are being carried out in accordance with the International Standards for the Professional Practice of Internal Auditing. Audit effort is being directed to the needs of RIO and the concerns of management and the SIB Audit Committee.

Retirement Program Audit Activities

- **TFFR Compliance Audits and Not In Compliance (NIC) Reviews**

We examine employer reporting to the Teachers' Fund for Retirement (TFFR) to determine whether retirement salaries and contributions reported for members of TFFR are in compliance with the definition of salary as it appears in NDCC 15-39.1-04(9). Other reporting procedures reviewed during the audit process are calculation of service hours and eligibility for TFFR membership. A written report is issued after each audit examination is completed.

In the third quarter two previously completed TFFR Compliance Audits were re-opened upon receipt of additional information from the auditees. In both instances the additional information was evaluated and amended reports were issued. No additional employer audits were completed during the third quarter. A total of fifteen employer audits have been completed year to date including fourteen TFFR Compliance Audits and one Not in Compliance (NIC) Review. Eight TFFR Compliance Audits are currently in progress. The eight audits currently in progress represent the end of the third audit cycle. It is the intention of Audit Services to focus available recourses on concluding the third audit cycle prior to the close of the current calendar year.

It was initially anticipated that the third audit cycle may conclude sooner than expected, therefore six audit notifications were sent to employers in the fourth audit cycle. Information has been received and as a result six employer audits are currently pending but not yet started. Given that available resources are being focused on concluding the third audit cycle, all six employers have been notified that a delay has occurred and contact will be made once their audit is underway.

This is an area that requires special emphasis due to the level of risk identified through previous audit results. Our long-range plans include auditing each employer over a five year period.

- **TFFR File Maintenance Audits**

Audit Services tests changes made to TFFR member account data by RIO employees on a quarterly basis. Audit tables are generated and stored indicating any file maintenance changes made to member accounts. The TFFR File Maintenance Audit for the second quarter of fiscal year 2016 is underway and will be concluded prior to the close of the fiscal year.

- **Annual Salary Verification Project**

Each year during the third quarter Audit Services undertakes an effort to verify the accuracy of retirement salaries, contributions, and service hours reported to TFFR for the prior fiscal year for fifty randomly selected member accounts. Eligibility is also verified via an ESPB search. In February 2016 information reported for fifty member accounts representing thirty nine employers was verified. Eight member accounts required corrections.

Administrative and Investment Audit Activities

- **Executive Limitation Audit**

The Executive Limitations Final Audit Report for the calendar year beginning January 1, 2015 and ending December 31, 2015 was issued in February 2016. The final audit report was presented to the SIB Audit Committee and the SIB that same month and was ultimately approved by both governing boards. Audit Services was sufficiently satisfied that the Executive Director/CIO was in compliance with the SIB Governance Manual Executive Limitation polices A-1 through A-11.

In conjunction with the Executive Limitation Audit, Audit Services administers an employee opinion survey in January of each fiscal year. The intent of the survey is to provide employees the opportunity to share their opinions regarding the physical office environment and resources, job satisfaction, employee morale, compensation, and immediate supervisors. The results of the survey were made available in February 2016.

In February 2016 the SIB appointed a three member Executive Review Committee for the purpose of evaluating the Executive Director/CIO. The Executive Review Committee requested the assistance of Audit Services during this process. Audit Services administered a survey created by the SIB Executive Review Committee to current members of the SIB. Members of the SIB were asked to evaluate the Executive Director/CIO's level of compliance with the *Ends* and Executive Limitation policies set forth in the SIB Governance Manual. Results of the survey are anticipated in April 2016.

Professional Development Activities

Audit Services continues to pursue networking and professional development opportunities via the IIA's local chapter, Central Nodak.

Summary

Audit effort is directed to activities that are of greatest concern to the SIB Audit Committee, RIO Management, and our external audit partners. Audit Services will continue to work closely with the SIB Audit Committee, RIO Management, and our external audit partners to continue to improve overall efficiency, effectiveness, and economy of total audit activity.

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: July 14, 2016

SUBJ: Pension Benefit Comparisons

Maintaining a sound and predictable pension plan for educators enables them to have modest retirement security after a career in public service, and can give stakeholders the peace of mind knowing that public schools can continue to attract and retain well-trained, dedicated, and professional employees.

To support this objective, the National Education Association (NEA) publishes a report every five years entitled *"Characteristics of Large Public Education Pension Plans."* Its purpose is to serve as a reliable source of accurate information for those involved with pension and retirement security policy.

As you can see from the 2016 report, most states have increased employee contribution rates, reduced benefits, or both. A few states have modified their plan design, moving from a defined-benefit plan to a cash balance or defined contribution plan.

At the July meeting, I plan to compare the NDTFFR plan to the 2016 NEA report which includes the following survey topics: plan administration, investment, retirement eligibility, COLA, contribution rates, benefit formulas, actuarial methods and funding, and retirement board membership.

BOARD INFORMATION ONLY.

Attachment

PENSION PLAN COMPARISONS

NDTFFR Plan and NEA Pension Survey

TFFR BOARD MEETING

JULY 21, 2016

NEA Report Overview

- NEA Characteristics of Large Public Education Pension Plans – January 2016
- Study conducted every 5 years by NEA
- Comprises 114 primary plans covering nearly 19 million active and retired members holding $2.8 trillion in assets.
- Most plan data is for fiscal year ending June 30, 2014.

Type of Plans

- **DB – Defined Benefit plans** (73%) provide a guaranteed, definite future obligation related to employee service. Calculation usually reflects a formula under which an employee receives a benefit equal to a % of final average salary for each year of participation in the plan. (**NDTFFR** plan)

- **DC – Defined Contribution plans** (4%) provide a benefit based on a sum of money that has accumulated in an account at retirement – from employee and employer contributions, and investment earnings or losses.

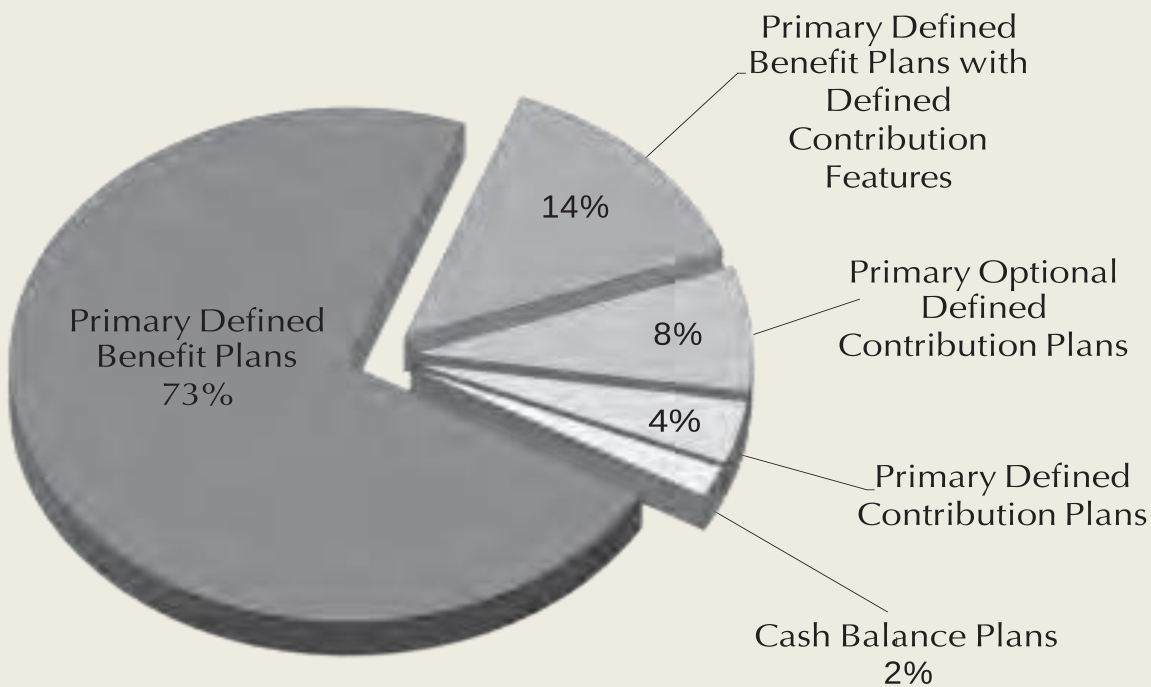
- **DB plans with some DC-like features** (14%). Benefits are predominantly DB in nature.

- **DC plans offered as an option** to existing DB plans (8%). Employees make a choice whether to participate in DB (default) or DC plan.

- **CB – Cash balance plans** (2%) provide employees with an annuity that is generally based on their career average salaries, although their accumulated benefits are reported as notional account balances. Employees have a choice of receiving their benefits as an annuity (default) or a lump sum.

Type of Plans

Types of Public Education Retirement Plans

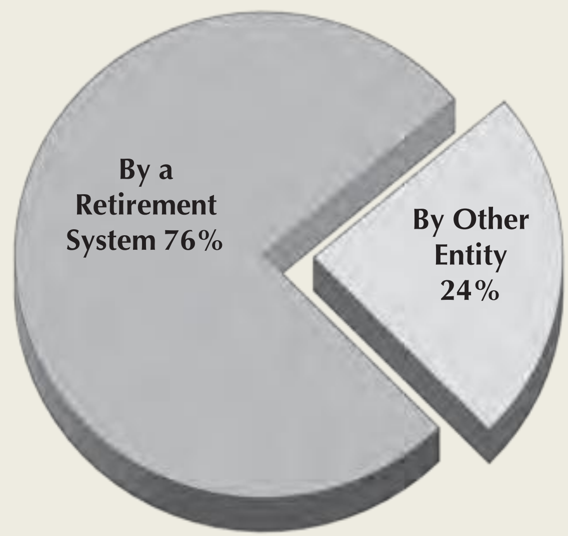


Note: All of the plans reported in this figure serve as the primary retirement vehicle for their participants.

Administration of Plans

- Administration is defined as the daily management of a retirement plan and includes such activities as maintaining member records, calculating benefits, paying benefits, and determining amount of funding needed to pay for them.
- 76% of plans are administered by a retirement system.
- 24% of plans, a retirement board sets policy for the plan while a separate entity, like the State Treasurer's Office, administers the plan on a day-to-day basis.
- **NDTFFR** benefit plan is administered by NDRIO agency, with retirement program authority granted to TFFR Board.

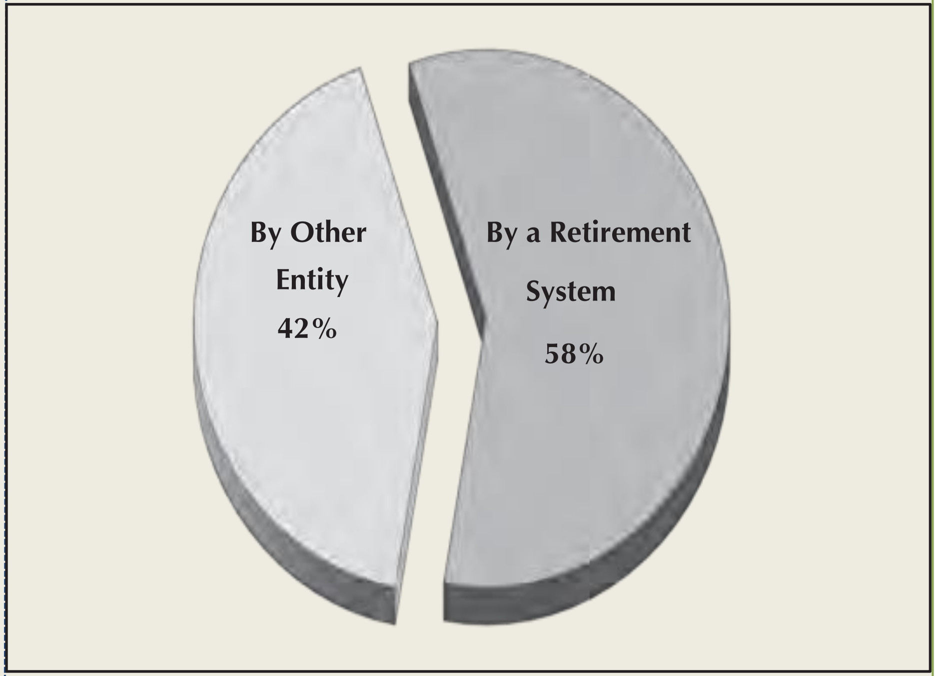
Administration of Retirement Plans



Investment of Plans

- Fewer retirement systems invest assets than administer plans.
- Retirement fund assets are invested by a retirement system for 58% of plans.
- Retirement assets are invested by another entity, usually state board of investments or state treasurer's office, for 42% of plans.
- **NDTFFR** assets are invested by NDRIO agency, with investment program authority granted to SIB.

Investment of Retirement Plans



Plan Size

- Most fulltime employees of SLG participate in DB plans. This survey includes K-12 teachers & education support professionals, and higher education faculty & support professionals.
- Median active membership is 50,904; average is 101,037.
- Median retired membership is 35,131; average is 65,336.

- **NDTFFR** plan:

Active membership is 10,305.
Retired membership is 7,747.

Overview of Plan Size

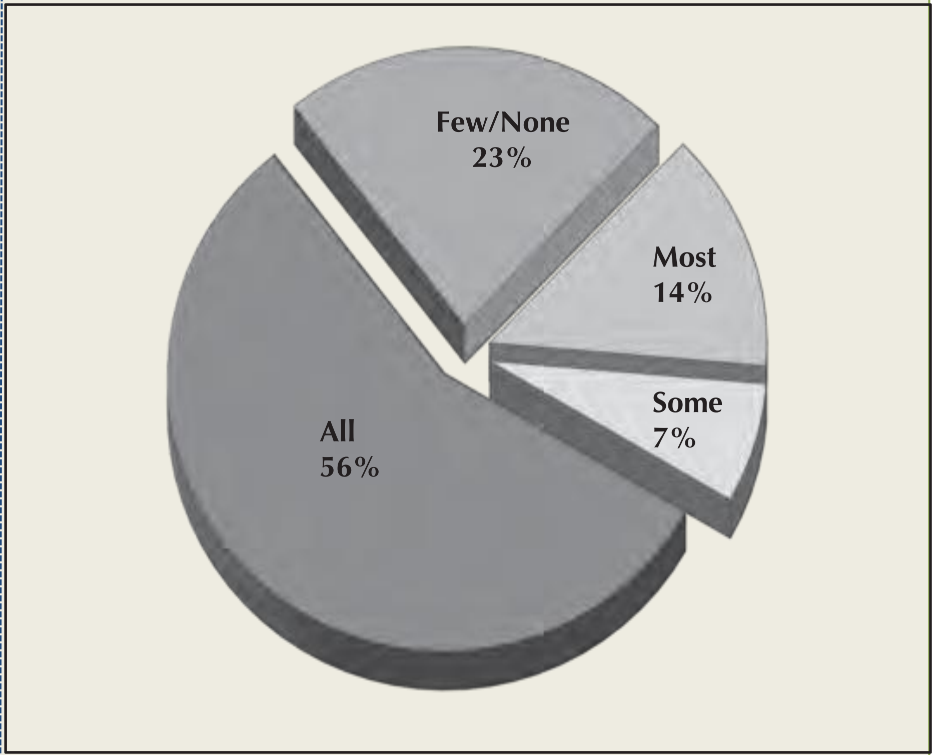
		Number of Plans
Active Members		
	Fewer than 100,000	77
	100,000 or more	37
Annuitants		
	Fewer than 30,000	52
	30,000 or more	62

Social Security Coverage

- SLG employees are not universally covered by Social Security.
- Individual governmental employers have the option of electing Social Security coverage if employees are already covered by a SLG retirement plan.
- 70% of plans report all or most active participants are also covered by Social Security.
- For the 30% of plans whose active members may not be covered by Social Security, contributions and benefits are typically higher.

- **NDTFFR** plan - nearly all participants are covered by Social Security.

Social Security Coverage of Education Employees



Normal Retirement

- Most plans provide for some combination of years of service and age in order to qualify for a full unreduced normal retirement benefit.
- Age 60 or 62 is normal retirement age (NRA) in majority of plans with sufficient service credit.
- Age 65 is fairly common, although a few plans have raised NRA to age 66 or 67.
- For plans with alternative age/service provisions, about 30% permit normal retirement at any age for employees who have 30 or more years of service.
- **NDTFFR** Tier 1 grandfathered vested members can retire at age 65 or Rule of 85 (no minimum age).
- **NDTFFR** Tier 1 non-grandfathered and Tier 2 vested members can retire at age 65 or Rule of 90 (min age 60).

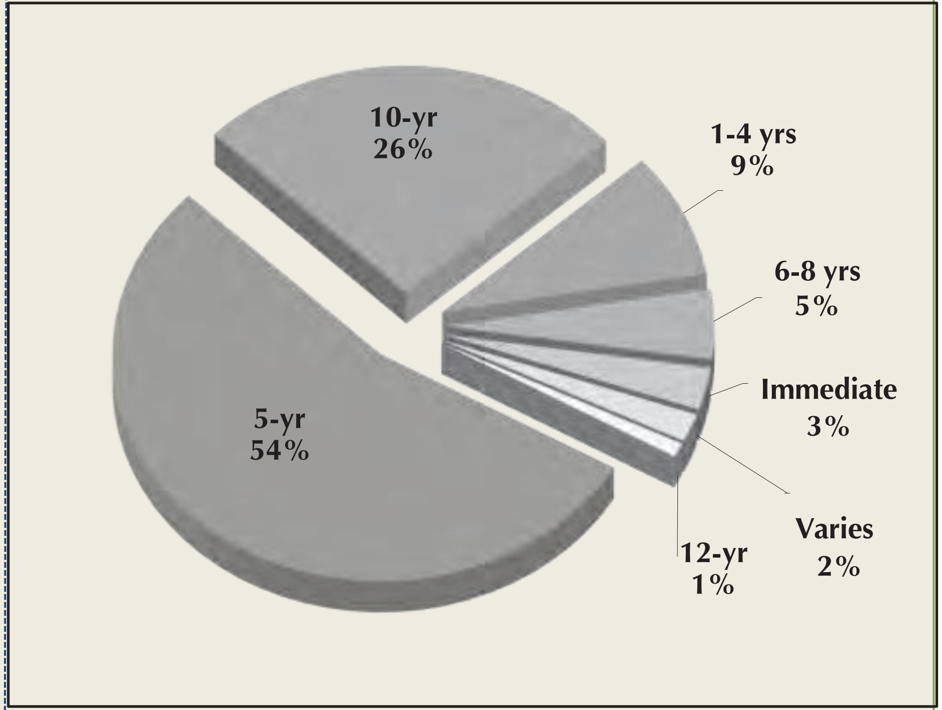
Early Retirement

- Almost all plans have some provision for early retirement.
- A member may be eligible for reduced early retirement benefits upon meeting age and/or service requirements that are somewhat lower than those imposed for normal full retirement.
- Age 55 is most common early retirement age.
- Benefits are reduced because the early retiree is expected to collect benefits over a longer period of time than an employee retiring at NRA.
- Most common early retirement reduction factors used are 3% per year and 6% per year.
- **NDTFFR** plan allows early retirement with reduced benefits at age 55 for Tier 1 and Tier 2 members.
- **NDTFFR** plan reduction factor is 6% per year for Tier 1 grandfathered members and 8% per year for non-grandfathered Tier 1 and Tier 2 members.

Vesting

- Vesting provisions determine when employees acquire an irrevocable right to their full accrued benefits under the plan, even if they leave employment prior to eligibility for an immediate retirement benefit.
- Many public plans have 5 year vesting which is similar to the private-sector ERISA standard.
- **NDTFFR** plan has 3 year vesting schedule for Tier 1 grandfathered and non-grandfathered members; and 5 year vesting for Tier 2 members.

Full Vesting Requirements



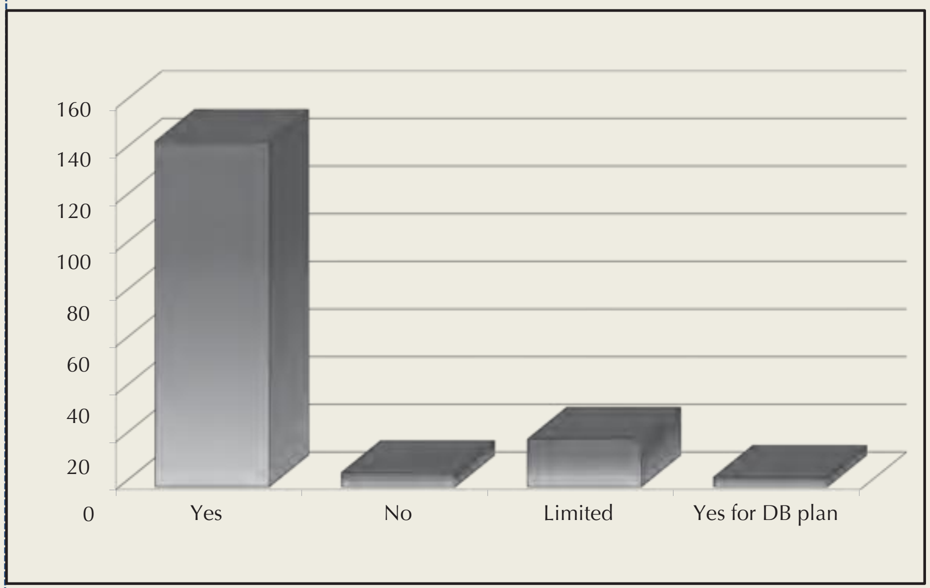
Purchase of Service Credit

- Most plans offer provisions that permit employees to purchase service credit that reflects previous public sector employment.

- Provisions differ as to the types of service that qualify, the amount that must be paid, the maximum amount of service that can be purchased, and the payment options available.

- **NDTFFR** allows purchases of service for refunded TFFR service credit, air time, government agency teaching, leave of absence, legislative service, military service, nonpublic teaching, out-of-state teaching, professional education organization.

Purchase of Service Credit Offered

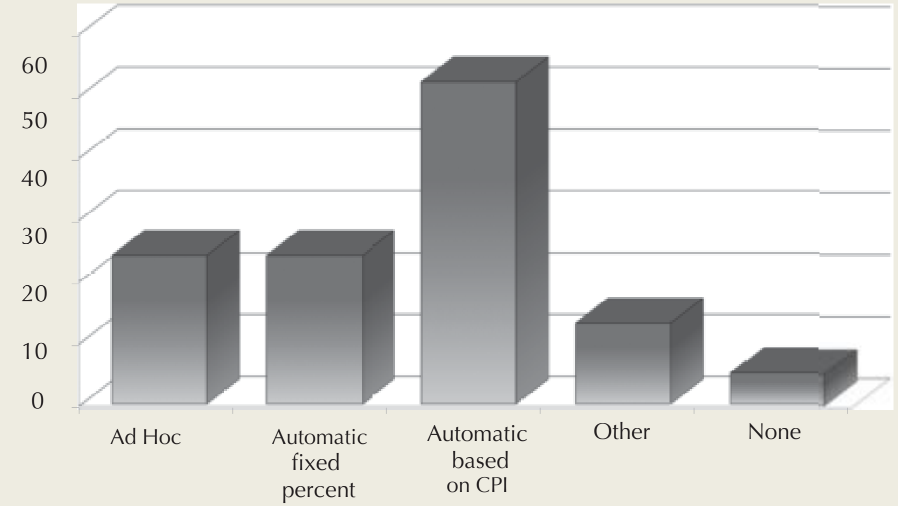


Cost-of-Living Adjustments (COLAs)

- Public retirement plans commonly have some inflation protection built into the plan, although methods vary.
- 64% either automatically provide for a fixed rate of adjustment (typically 3%) or a floating rate tied to changes in the CPI (usually with a 3% ceiling).
- In 36% of plans, COLAs are wholly discretionary (ad hoc) or do not exist.

- **NDTFFR** plan has no automatic COLA provision. The plan has provided ad hoc increases in the past if approved by the state legislature.
- The last NDTFFR retiree benefit adjustment was in 2001-02; there was also a one-time supplemental payment paid to retirees in 2009.

Types of Retirement Plan COLA's

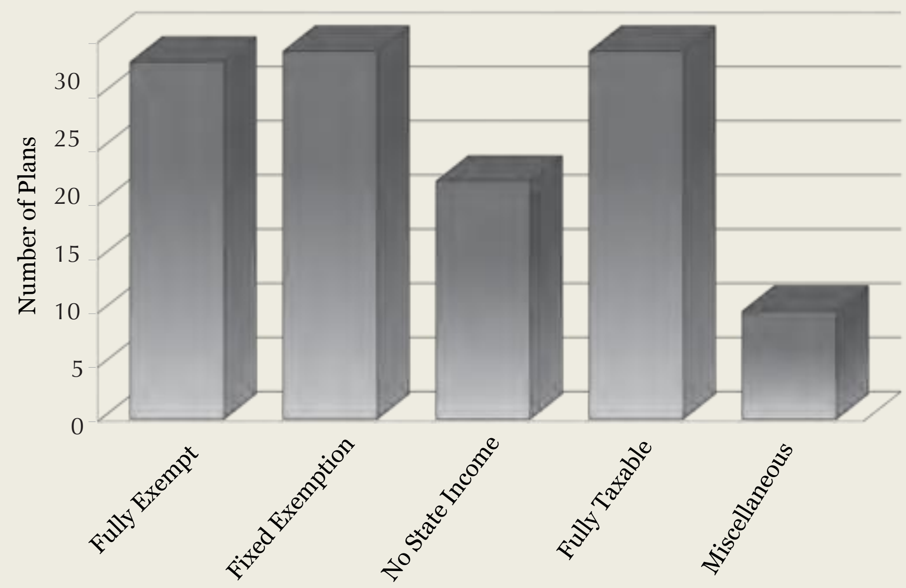


Most automatic COLAs that are based on the CPI have various types of rules-based limits and rarely provide full inflation—or purchasing power— protection. A typical automatic CPI-based COLA would provide protection up to a certain percent CPI increase (the most common is 3 percent). Others only apply after the CPI has risen a certain percent and then limit the COLA to some higher percent.

State Income Tax Liability

- Value of retirement benefits can be affected by how they are treated under varying state income tax laws.
- 51% of the plans are either fully state tax exempt or have a fixed tax exemption.
- **NDTFFR** plan benefits are fully taxable in ND.

State Income Tax Treatment



*Tax treatment by states of otherwise taxable income.

Contribution Rates

- Employer & employee contribution rates often vary because they may be set by state legislatures or are actuarial determined based on each year's plan valuation.
- Median employee contribution rate is 6.8%; averages 5.8%
- Median employer contribution rate is 13.2%; average is 14.2%

- **NDTFFR** rates until plan reaches 100% funded level:

  Member 11.75%

  Employer 12.75%

Average Employee and Employer Contributions by Social Security Coverage

Social Security Coverage	All	Few/None
Average of Employee Contribution Rate	5.79%	9.41%
Average of Employer Contribution Rate	13.21%	17.88%
Combined Employee/ Employer Contribution Rate	19.00%	27.30%

Compares average and combined contributions of employees and employers for plans in which all members participate in Social Security and for those in which few or none participate.

Final Average Salary

- Majority of plans in survey are DB plans which provide for a definite future benefit related to employee service and final average salary (FAS).

- For FAS calculation, some plans use highest 1 - 3- 5 years of salary of career, or a certain number of years; or highest consecutive years, highest years out of last 10 years, or highest consecutive years out of last 10 years, etc. Generally, if fewer years of service are considered in the average, the dollar amount of the average will be higher because earnings tend to be highest in the final years of employment.

- Most common salary averaging period is 3 years. Some plans also provide for limitations on the rate of pay increase that can occur.

- For FAS calculation, **NDTFFR** plan uses
  Highest 3 years of career for Tier 1 members
  Highest 5 years of career for Tier 2 members

Definitions of Final Average Salary*

	Number of Plans
Highest year	1
Highest 2 years	4
Highest 2 consecutive years	4
Highest 3 years	79
Highest 3 years	43
Highest 3 consecutive years	32
Highest 3 out of last 10 years	1
Highest 3 consecutive out of last 10 years	3
Highest 3.5 years	1
Highest 3.5 consecutive years	1
Highest 4 years	10
Highest 4 years	2
Highest 4 out of last 10 years	1
Highest 4 consecutive years	5
Highest 4 consecutive out of last 10 years	2
Highest 5 years	62
Highest 5 years	25
Highest 5 consecutive years	33
Highest 5 out of last 10 years	3
Highest 5 out of last 15 years	1
Highest 8 years	6
Other	24

*Includes plans with multiple definitions; not applicable to defined contribution plans

Benefit Formula

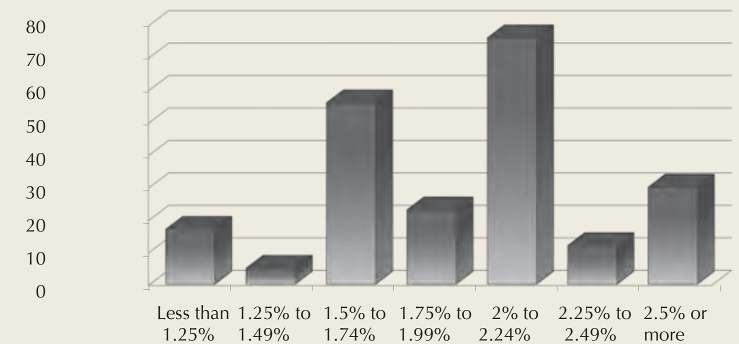
- The formula percentage factor in a DB plan is typically stated as a single % or, in more complex approaches, as 2 or more percentage factors, with each factor applicable to a different portion of FAS.
- 54% of the plans provide a benefit based on a factor of 2% or more.

- **NDTFFR** plan formula is:

Tier 1: **2%** X 3 yr FAS X YOS

Tier 2: **2%** X 5 yr FAS X YOS

Benefit Formulas



Accrual rates for current service (i.e., ignores different rates for prior service at some point in the past), for initial accrual rates (where plans have composite formulas), or for primary effective accrual rates; includes plans with multiple formulas applying to different groups of employees; excludes some plans with more complicated or special features; excludes defined contribution plans that have no formulas.

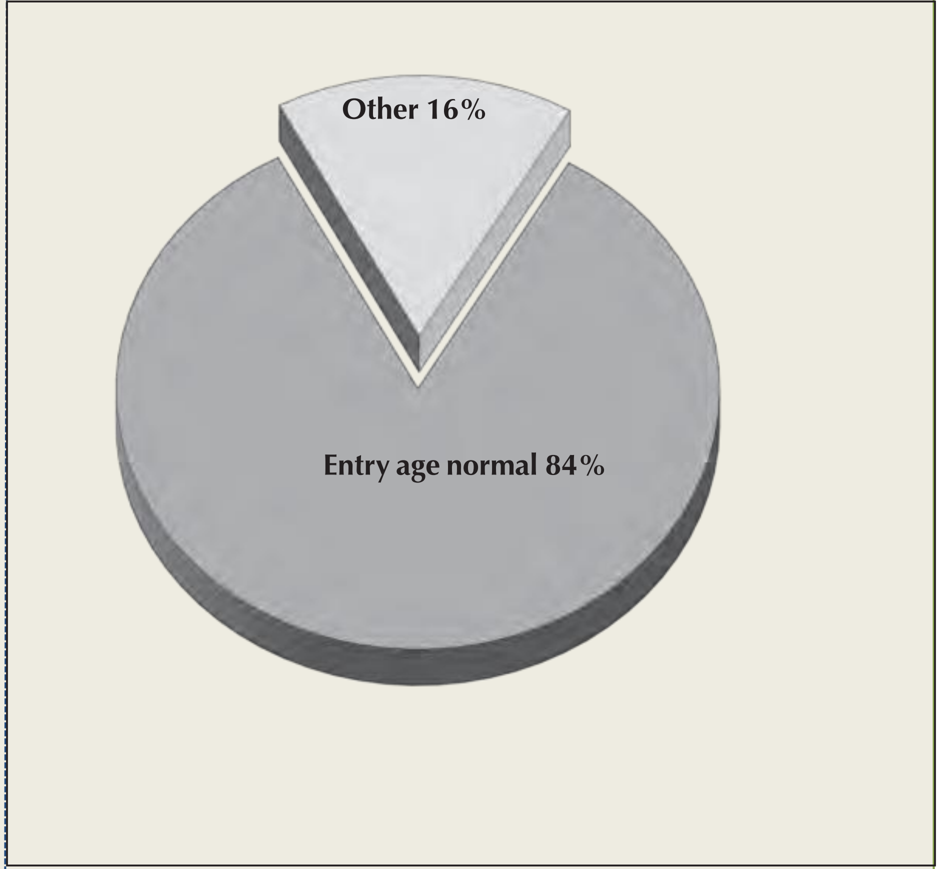
Benefit Limitations

- Some plans limit the pay or pay increase that can occur and the resulting pension earnings for any one year that can be counted as part of the average.
- 66% of plans place some limit on the total retirement benefit that can be paid to an employee.
- These limits are usually expressed as a maximum % of FAS, as a maximum number of creditable years of service, as a limitation on pensionable salary, or as a limitation on salary increases.
- 34% of the plans place no limit on total retirement benefits that can be paid to an employee.
- **NDTFFR** places no limit or cap on total retirement benefits that can be paid.

Actuarial Cost Method

- How well any retirement plan is funded may vary with the actuarial cost method, the actuarial assumptions, and the asset valuation method used by the plan.
- 84% of DB plans use entry age normal actuarial method.
- **NDTFFR** uses entry age normal actuarial method.

Actuarial Methods Used by Plans



Investment Return Assumption

- Actuary must make assumptions about anticipated experience of the plan.
- Interest rate/investment return assumptions ranged from 6.5% to 8.5%, with the average being 7.7%, and median 7.8%
- Rate of general inflation assumed in the plans ranged from 2.5% to 4% with the average and median both 3%.
- The difference between the average interest rate and general inflation rate assumption was about 4.7%.

- **NDTFFR** plan used 8% investment return assumption and 3% inflation assumption at the time of this survey.
- **NDTFFR** plan now uses 7.75% investment return assumption and 2.75% inflation assumption (effective 7/1/15).
- **NDTFFR** difference between interest and inflation rate assumptions (real rate of return) is 5%.

Asset Valuation Method

- A retirement plan's full investment return or loss may not be recognized for actuarial purposes in the year it occurs.
- Although two plans may use the same actuarial cost method and the same assumptions, they may not be comparable from a funded status point of view because of differences in the asset valuation method applied.
- Most plans used some form of market value approach, typically a 5 year smoothed approach practiced by almost two-thirds of the plans.
- **NDTFFR**'s asset valuation method uses market value with 5 year smoothing and a 20% corridor approach.

Asset Valuation Method

Asset Valuation Method	Number of Plans
Market	4
Modified market	2
Market, 3-year smoothing	3
Market, 4-year smoothing	8
Market, 4-year smoothing with corridor	7
Market, 5-year smoothing	48
Market, 5-year smoothing with corridor	12
Market, 6-year smoothing	1
Market, 7-year smoothing	1
Market, 10-year smoothing	3
Market, 15-year smoothing	1
Not available/applicable	7

Funded Ratios

- A plan's funding ratio is the actuarial value of assets as a % of the actuarial accrued liability.
- Difficult to compare due to differences in actuarial cost methods, actuarial assumptions, amortization periods, and asset valuation methods.
- Median funding ratio was 72.5% and average funding ratio was 73.0%.
- Average funding ratio is 6 percentage points lower than in 2010 study due to: the discount rates being used by plans are now lower on average (producing higher liability figures), the failure to fund plans ARC, and the tail-end of the financial impacts from the losses during the Great Recession of 2008-09.

NDTFFR plan funding ratio was 61.8% in 2014 (61.6% in 2015).

Range of Funding Ratios	Number of Plans
Funded ratio of 100 percent or more	3
Funded ratio of 90 to 99.99 percent	12
Funded ratio of 80 to 89.99 percent	20
Funded ratio of 70 to 79.99 percent	15
Funded ratio of 50 to 69.99 percent	38
Funded ratio of 49.99 or less	7

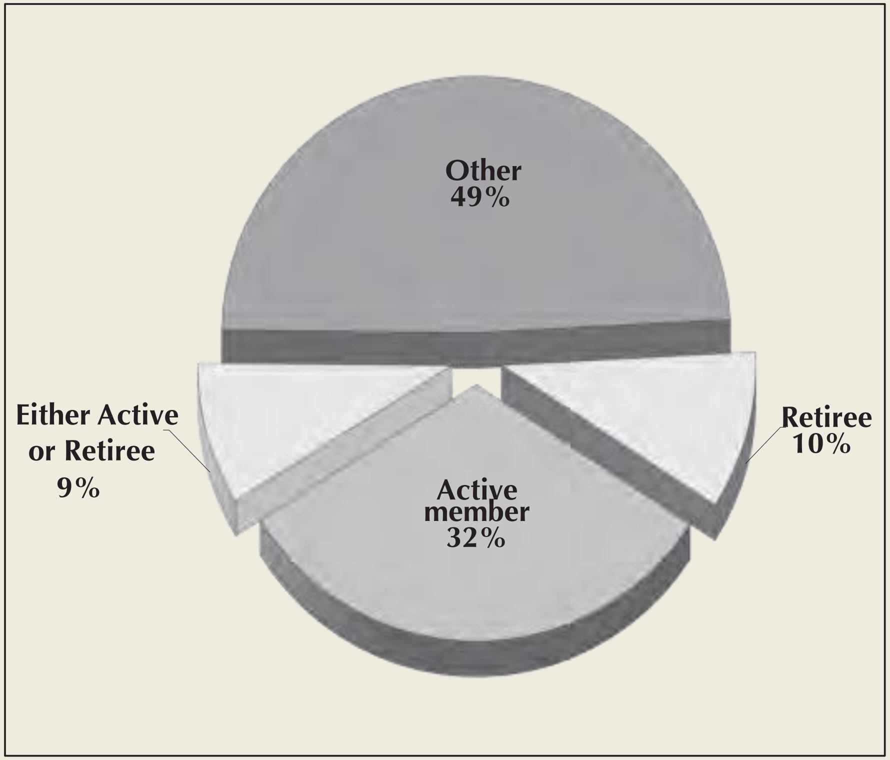
Board Membership

- There is a wide variation in the number of plan trustees (1-26)
  - Median size of boards is 10 members (average is 10.4).
- There is also wide variation in the proportion of trustees who are active or retired members.
  - 48% had half or more of their governing bodies composed of active and/or retired participants.

- **ND TFFR** Board consists of 7 members
  - 3 active (44%)
  - 2 retired (28%)
  - 2 ex-officio (28%)

- **NDSIB** consists of 11 members
  - 6 active and retired members of TFFR & PERS
  - 5 elected and appointed state officials

Composition of Public Pension Boards



Board Membership

- A considerable amount of time and effort is devoted by trustees to their board responsibilities and education.
- Member trustees have a special interest in assuring that there are sufficient assets to pay current and future benefits. This perspective heightens their concern that they manage the retirement system in the most effective manner possible, even though they may not be financial experts. Member trustees have a direct stake in the Fund's long term health and are somewhat shielded from outside or political pressure.
- **ND TFFR plan**
  - 5 member trustees appointed by Governor from list of names submitted by member group.
  - 2 Ex officio (State Treasurer and State Superintendent)

Selection Methods for Boards of Trustees*

	Number of plans
Total number of governing boards reviewed	79
Type of Trustee Selection**	
Elected by constituent groups	50
Appointed by governor	57
Appointed by other	37
Ex officio	61
Other	5

*Reflects ultimate governing bodies for each plan
**More than one type of trustee may be used in any governing body.

Summary

- NDTFFR plan has similar characteristics to other statewide public pension plans for educators.
- At this point in time, retirement benefit formula is comparable, although normal retirement eligibility may be earlier than in some plans.
- Investment losses during the 2008-09 Great Recession greatly contributed to funding declines for all plans, including NDTFFR.
- This has resulted in higher member and employer rates for all plans to improve funding levels.

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **July 14, 2016**

SUBJ: **Annual TFFR Program Review**

Because the TFFR Board is responsible for administering the retirement program, periodic review of the Board's mission, goals, policies, and by-laws included in the TFFR Program Manual is important in order to fulfill your fiduciary responsibilities. This will be reviewed at the meeting.

Board responsibilities include:

1. Establish and monitor policies for the administration of the TFFR program.
2. Establish and monitor investment policy, goals, objectives, and asset allocation.
3. Hire and monitor actuarial and medical consultants; establish and monitor actuarial assumptions and methods; and ensure periodic actuarial valuations, experience studies, asset liability modeling studies, and actuarial audits are conducted.
4. Pay benefits and consultant fees.
5. Submit legislation and monitor the statutory responsibilities of the TFFR program.
6. Determine appropriate levels of service to members and employers.
7. Communicate and monitor TFFR program expectations to the SIB expected to be provided through RIO.
8. Promulgate administrative rules as needed.

BOARD ACTION REQUESTED: Board motion to approve annual program review and/or any other board directives to staff relating to the board's mission, goals, policies, and by-laws.

TFFR BOARD ACCOMPLISHMENTS 2015-16

- ✓ Established and managed annual board calendar and education plan.
- ✓ Conducted annual election of officers and annual TFFR program review including mission, goals, ends and program policies, and by-laws.
- ✓ Approved annual TFFR member and employer customer satisfaction reports, TFFR ends and statistics report, TFFR retirement trends report, RIO budget and expense report, RIO technology review, and other program and statistical reports.
- ✓ Received quarterly updates and approved annual investment report of TFFR asset allocation, fund performance, investment expenses, investment guidelines, and goals and objectives.
- ✓ Received quarterly updates and approved annual internal audit services report on status of TFFR employer compliance audits, agency financial audit, and other retirement program audits and reviews.
- ✓ Reviewed RIO IT security and discussed future RIO technology initiatives.
- ✓ Studied employer issues relating to eligible salary for equipment maintenance and repair duties; approved board policy on “Ineligible TFFR Salary.”
- ✓ Reviewed 2014 Public Fund Survey and various public plan surveys comparing NDTFFR to other statewide public pension plans.
- ✓ Received information and discussed legislative issues relating to TFFR program during 2015-16 interim.
- ✓ Received and analyzed results of 2015 actuarial valuation report and funding projections from Segal Company.
- ✓ Received status reports regarding the implementation of demographic and economic actuarial assumptions recommended by Segal as part of the Experience Study, and approved by the TFFR Board.
- ✓ Conducted consultant interviews and selected Callan Associates to perform Asset Liability study. Received Asset Liability Study report and recommendations. Approved modified asset allocation and investment policy statement. Received status reports regarding implementation.

- ✓ Authorized staff to distribute RFP for actuarial audit services, conducted actuarial consultant interviews, and selected Cavanaugh Macdonald to perform actuarial audit of Segal. Received status reports regarding study process.

- ✓ Received 2015 GASB 68 report, and status reports on plan and employer implementation of new pension accounting standards.

- ✓ Received report from TFFR legal counsel on the U.S. Supreme Court ruling regarding same sex marriage and potential impact on TFFR.

- ✓ Received results of IRS compliance review conducted by Segal, and approved submission of application to IRS for determination letter on TFFR pension plan.

- ✓ Promulgated administrative rules to define certain terms for administrative clarification, update language to maintain compliance with IRC requirements, and update revised actuarial assumptions and factors.

- ✓ Received periodic updates on national pension issues and federal legislation relating to public pension plans.

- ✓ Received 2015 Public Pension Standards Award for Funding and Administration from PPCC.

- ✓ Received 2015 Certificate of Achievement for Excellence in Financial Reporting from GFOA.

- ✓ Approved five disability applications, and six QDRO applications.

- ✓ Approved write off of benefit overpayment to one deceased retiree.

- ✓ Approved board resolution for former trustee, Kim Franz, thanking her for her service.

- ✓ Received board education on:
  - Asset allocation and liability process, capital market expectations, and asset classes (Callan Associates).
  - Investment performance reports and investment benchmarks (CIO).
  - Actuarial audit process (Cavanaugh Macdonald).
  - Fiduciary Duties and Ethics (TFFR legal counsel).

- ✓ Attended 2015-16 trustee or administrator educational conferences and meetings (external).

Mike Burton	NCTR Trustee Wksh	07/15	Cambridge, MA
Mike Gessner	--		
Kim Franz	NCTR Annual Conf	10/15	La Jolla, CA
Mel Olson	NCTR Annual Conf	10/15	La Jolla, CA
Rob Lech	Callan Conference	01/16	San Francisco, CA
Treas. Schmidt	Callan Conference	01/16	San Francisco, CA
State Supt Baesler	--		
Fay Kopp	NCTR Annual Conf	10/15	La Jolla, CA
	NCTR Director’s Mtg	06/16	Columbus, OH

TFFR Program Monitoring Summary

2015-16

Ends Policy	Responsibility	Action	Scheduled	Completed
Mission	TFFR Board	Annual Review	July	7-23-15
Goals	TFFR Board	Annual Review	July	7-23-15
Plan Beneficiaries	TFFR Board	Annual Review	July	7-23-15
Membership Data	TFFR Board	Annual Review	July	7-23-15
	Internal Audit	Annual Report	October	10-22-15
	External Audit/Audit Com.	CliftonLarsonAllen	November	11-19-15
	Retirement Officer	* Staff Presentations	Ongoing	
Investments	TFFR Board/SIB	Annual Review	September	9-24-15
	Investment Director	Annual Report	September	9-24-15
Retirement Services	TFFR Board	Annual Review	July	7-23-15
	Internal Audit	Annual Report	October	10-22-15
	External Audit/Audit Com.	CliftonLarsonAllen	November	11-19-15
	Interest Groups	Annual Report	July	7-23-15
	Retirement Officer	*Staff Presentations	Ongoing	
Account Claims	TFFR Board	Annual Review	July	7-23-15
	Internal Audit	Annual Report	October	10-22-15
	External Audit/Audit Com.	CliftonLarsonAllen	November	11-19-15
	Retirement Officer	*Staff Presentations	Ongoing	
Trust Fund Valuation	TFFR Board	Annual Review	July	7-23-15
	Segal	Annual Valuation	October	10-22-15
	Internal Audit	Annual Report	October	10-22-15
	External Audit/Audit Com.	CliftonLarsonAllen	November	11-19-15
	Retirement Officer	*Staff Presentations	Ongoing	
Program Policies	TFFR Board	Annual Review	July	7-23-15
* Ongoing RIO Staff Presentations include:				
	TFFR Accomplishments	Retirement Officer	July	7-23-15
	Customer Satisfaction	Retirement Officer	July	7-23-15
	RIO Budget Summary	Fiscal Management	September	9-24-15
	Technology Review	Information Tech	September	9-24-15
	TFFR Ends & Statistics	Retirement Services	January	1-21-16
	Retirement Trends	Retirement Services	January	1-21-16
	Pension Plan Comparisons	Retirement Officer	March	4-21-16
	Audit Services Update	Audit Services	Quarterly	J, O, J, M
	Investment Update	CIO	Quarterly	J, O, J, M

TFFR Board Calendar and Education Plan 2016-17

JULY 21, 2016 – 1 pm
Actuarial Audit Report - CavMac
Election of Officers
Annual TFFR Program Review
Annual Customer Satisfaction Reports
TFFR Communications Plan
Qtrly Audit Services Update (3/30)
Qtrly Investment Update (3/30)
Educ: Pension Plan Comparisons (NEA)

SEPTEMBER 22, 2016 – 1 pm
Actuarial Audit Response - Segal
Annual Investment Report (6/30)
Annual Budget and Expense Report
Annual Technology Report
TFFR Member/Employer Online Demo
Educ: State Cyber Security - ITD

OCTOBER 27, 2016 – 1 pm
2016 Actuarial Valuation Report - Segal
2016 GASB Report - Segal
Annual TFFR Program Audit Report (6/30)
Educ: ND Education Demographics – DPI
Educ: ND Teacher Shortage- ESPB

JANUARY 26, 2017 – 1 pm
2017 Legislative Update
GASB Update
Actuarial Contract
Annual Retirement Trends Report
Annual Retirement Statistics Report
Qtrly Audit Services Update (9/30)
Qtrly Investment Update (9/30)
Educ: TFFR Employer Services – Shelly

MARCH 23, 2017 – 1 pm
2017 Legislative Update
Qtrly Audit Services Update (12/30)
Qtrly Investment Update (12/30)
Educ: RIO Audit Services Overview-Terra
Educ: Open Records/Open Meetings - Jan

APRIL 27, 2017 – 1 pm
2017 Legislative Update
2017-18 Board Calendar and Educ Plan
Federal Issues
Educ: Pension Plan Comparisons (PPS)
Educ: TFFR Member Services – Shelly

Note: Agenda items or education topics may be rearranged if needed.

06.29.16

MEMORANDUM

TO: TFFR Board
FROM: Fay Kopp
DATE: July 14, 2016
SUBJ: Annual Customer Satisfaction Reports

1) To assist the **TFFR Board** in monitoring how well the TFFR program is serving member and employer needs, each year we survey the interest groups, and collect evaluations from members and employers. Here are the 2015-16 survey responses.

   - Responses to the TFFR Customer Satisfaction Surveys from NDRTA, NDSBA, and NDASBO are enclosed. Responses from NDCEL and ND United have not been received to date, but will be shared with the Board when they become available.

   - Evaluation responses and comments received directly from the members and employers from benefits counseling sessions, preretirement seminars, business manager workshops, and other member and employer contacts are enclosed. (Note: the names of individual staff members have been replaced with *"RIO Staff"* on the summarized evaluation responses.)

As you can see, feedback is overwhelmingly positive, thanks to the efforts of our experienced and dedicated staff who interact with TFFR members and employers every day. Our staff does a terrific job serving the needs of our customers, and I am very proud of them.

BOARD ACTION REQUESTED: Board motion to accept TFFR Customer Satisfaction Reports.

2) The **State Investment Board** also wants to know from its customers (TFFR, PERS, WSI, etc.) if the SIB (through the RIO staff) is providing quality service. RIO Audit Services will be sending a customer satisfaction survey to the Board the week of July 18. Last year, the TFFR Board decided to have each TFFR trustee complete the form individually and forward to the Board president to compile results. The Board then reviewed the compiled responses at the September meeting and approved submission. The Board should decide if it wants to handle the survey the same way this year, or utilize a different method.

BOARD ACTION REQUESTED: Board should determine the method for responding to SIB Customer Satisfaction Survey.

Enclosures

Is the TFFR Board, through the RIO staff, providing TFFR members and employers with quality service? Please help the TFFR Board measure their performance and identify areas for improvement by completing this annual survey.

	Excellent	Above Average	Average	Poor	N/A
Staff courtesy and professionalism	X				
Staff responsiveness	X				
Staff accessibility	X				
Staff knowledge of TFFR program	X				
Clarity and effectiveness of information	X				
Ease of obtaining information or services - phone, website, newsletters, publications	X				
Member outreach services -presentations, conferences, benefits counseling and retirement education	X				
Employer outreach services -presentations, conferences, meetings	X				
Legislative proposals, presentations	X				
Overall quality of service	X				

How can the TFFR Board and/or RIO staff improve their service to TFFR members and employers?

Comments

Signature [signature] Date 7-13-16

Organization ND Association of School Business Managers

THANK YOU for helping us improve service to TFFR members and employers.

ND Retirement and Investment Office, P.O. Box 7100, Bismarck, ND 58507-7100
Phone: 701-328-9895 or 800-952-2970 - FAX: 701-328-9897 - Email: fkopp@nd.gov

Is the TFFR Board, through the RIO staff, providing TFFR members and employers with quality service? Please help the TFFR Board measure their performance and identify areas for improvement by completing this annual survey.

	Excellent	Above Average	Average	Poor	N/A
	x				
Staff courtesy and professionalism	x				
Staff responsiveness	x				
Staff accessibility	x				
Staff knowledge of TFFR program	x				
Clarity and effectiveness of information	x				
Ease of obtaining information or services - phone, website, newsletters, publications	x				
Member outreach services -presentations, conferences, benefits counseling and retirement education	x				
Employer outreach services -presentations, conferences, meetings					x
Legislative proposals, presentations	x				
Overall quality of service					

How can the TFFR Board and/or RIO staff improve their service to TFFR members and employers?

Comments: Faye and staff continur to provide excellent services to their members and representative associations. It is a pleasure working with the TFFR Office, who are all extremely competent, and courteous. ND is well serviced by the TFFR and RIO staff.

Signature Erica Cermak

Date 7-6-16

Organization NDRTA

THANK YOU for helping us improve service to TFFR members and employers.

ND Retirement and Investment Office, P.O. Box 7100, Bismarck, ND 58507-7100
Phone: 701-328-9895 or 800-952-2970 - FAX: 701-328-9897 - Email: fkopp@nd.gov

Is the TFFR Board, through the RIO staff, providing TFFR members and employers with quality service? Please help the TFFR Board measure their performance and identify areas for improvement by completing this annual survey.

	Excellent	Above Average	Average	Poor	N/A
Staff courtesy and professionalism	X				
Staff responsiveness	X				
Staff accessibility	X				
Staff knowledge of TFFR program	X				
Clarity and effectiveness of information					
Ease of obtaining information or services - phone, website, newsletters, publications	X				
Member outreach services -presentations, conferences, benefits counseling and retirement education	X				
Employer outreach services -presentations, conferences, meetings	X				
Legislative proposals, presentations	X				
Overall quality of service	X				

How can the TFFR Board and/or RIO staff improve their service to TFFR members and employers?

Comments: It is a delight to work with Fay Kopp. She is knowledgeable, talented, and always willing to present at our annual convention. Beyond that, she frequently calls me to ask if I have questions or if there is anything she can do for our membership.

Signature:

Date: July 6, 2016

Organization: ND School Boards Association

THANK YOU for helping us improve service to TFFR members and employers.

ND Retirement and Investment Office, P.O. Box 7100, Bismarck, ND 58507-7100
Phone: 701-328-9895 or 800-952-2970 - FAX: 701-328-9897 - Email: fkopp@nd.gov

TFFR Customer Satisfaction Survey

Is the TFFR Board, through the RIO staff, providing TFFR members and employers with quality service? Please help the TFFR Board measure their performance and identify areas for improvement by completing this annual survey.

	Excellent	**Above Average**	**Average**	**Poor**	**N/A**
Staff courtesy and professionalism	x				
Staff responsiveness	x				
Staff accessibility	x				
Staff knowledge of TFFR program	x				
Clarity and effectiveness of information		x			
Ease of obtaining information or services - phone, website, newsletters, publications		x			
Member outreach services -presentations, conferences, benefits counseling and retirement education		x			
Employer outreach services -presentations, conferences, meetings					x
Legislative proposals, presentations					x
Overall quality of service					

How can the TFFR Board and/or RIO staff improve their service to TFFR members and employers?

____

Comments

We should continue to work together to find avenues to educated NDU members covered by TFFR about the TFFR benefits and options they have.

Signature _Gary Rath with Chad Oban_ Date _____7/18/2016________________

Organization _North Dakota United_____

THANK YOU for helping us improve service to TFFR members and employers.

ND Retirement and Investment Office, P.O. Box 7100, Bismarck, ND 58507-7100
Phone: 701-328-9895 or 800-952-2970 - FAX: 701-328-9897 - Email: fkopp@nd.gov

Business Managers
Statewide Workshop Evaluation
2015-16

Attendees: 110
Evaluations Returned: 93

MANDAN — Location

May 5, 2016 — Date

	Excellent	Above Average	Average	Poor	No Reply
Was the subject material relevant to your needs and/or interests?	62	25	6		

- GASB 68 was run thru too fast with examples.
- I always learn something!

	Excellent	Above Average	Average	Poor	No Reply
How knowledgeable, organized, and effective were the speakers?	80	11	2		

- Always fun & informative.
- Appreciate the handouts.

	Excellent	Above Average	Average	Poor	No Reply
How would you rate the NDRIO/TFFR website?	35	40	11	1	6

- I don't use it a whole lot. If I did, I'd say excellent!!!
- Very easy to navigate.
- Do not use frequently.
- Still becoming familiar with it.
- Very easy to navigate!

	Excellent	Above Average	Average	Poor	No Reply
How would you rate the service you receive from TFFR staff?	75	15	1		2

- Everyone is always so helpful and willing to assist.
- Love the TFFR staff!
- I appreciate the quick responses to email questions.

	Yes	No
Have you ever referenced the TFFR Employer Guide?	86	7

- Lots!!!
- I am very new to this position.
- Not yet but I'm sure I will in the future.

	Yes	No
Do you read the Briefly newsletter?	89	4

- Sometimes
- Not every month.
- Occasionally
- As time allows.
- Sometimes.

How could we serve you better? Other comments?

- Thanks for your prompt & friendly service when needed!
- You do a **great** job.
- Love the spring workshops & your participation in it!
- Every time you get a question on if it's reportable--have a FAQ section that explains to report or not. Post many scenarios so there is a reference.
- Everyone that I have spoken with has been very friendly & helpful. I am a new business manager this year & I appreciate the help from your office.
- You do a GREAT JOB!!
- Keep up the great work! Always enjoy the presentations!
- The business manager training sessions are a good idea.
- I would like to be added to the business manager training workshop.
- Very engaging and informative.
- Hard to hear questions and some presenters. Also handouts on what was projected-very hard to see. *BUT - The TFFR presentation was louder and better to see!!

Annual Tabulation 140
Comment Cards

NORTH DAKOTA RETIREMENT AND INVESTMENT OFFICE
COMMENT CARD SUMMARY
2015-16

Are we providing you with quality service and information on your TFFR benefits?

	Excellent	Above Average	Average	Poor
Staff Courtesy	136	3		1
Promptness	131	7	1	1
Content/Information	131	8	1	

- I was so impressed by the efficiency and professionalism of the staff! Thank you!
- Very professionally completed! Always available and friendly when needing to meet or get questions answered. Thank you very much!
- All of the above was truly excellent!
- RIO staff was great! RIO staff was rude twice on the phone.
- I have been very impressed with the quality of help I received in making this plan. Thanks.
- Great people to help!
- Very happy with RIO staff and all info & questions answered!! Thanks so much!!
- I appreciate the courtesy, professionalism, and prompt responses to my questions these past months. My sincere thanks to a great staff!
- Great job! Thanks for all the help.
- RIO staff was so helpful while assisting us in preparation for our retirement. Her efforts were appreciated! RIO staff was also SO helpful last summer when she met with us.
- Great staff to work with. Always friendly and answered all questions.
- My questions were answered in detail and responses to my request were very prompt. Thank you for making the process very problem free!
- I have always been treated in a positive way; very timely; and every question or inquiry I had, I received a response.
- Excellent!
- RIO staff did a wonderful job. I appreciate this since I am just beginning retirement, living the last 22 years in Wisconsin.
- Great to work with!!
- RIO staff, thank you so much for being **SO PLEASANT, PATIENT, AND HELPFUL**!! ☺
- I wish I had gotten feedback as I had things into your office. I worried that you hadn't got my materials. I think a quick email saying "we have it" would have eased my mind.
- This office does a great job.
- Thank you so very much for your help and support!
- Thank you -- it all went smoothly.
- Very helpful. We especially appreciate RIO staff.
- Thank you for all your help & guidance through the process!
- Really helpful & timely! Very much appreciated a signed letter from RIO staff.

- Keep up the good work. Have a great day.
- Nice job! Thank you for your assistance.
- RIO staff was very helpful in answering my many questions about purchasing service credit.
- I am very happy with the service. ☺
- RIO staff - Thanks for the ease of transition during this stressful time!
- Thank you for your help! Thank you for answering my questions!
- We wish you could train the California teacher retirement staff to be so efficient and courteous as you have been. You definitely won!
- Could not be more pleased with RIO staff's professionalism and pleasantry!
- Nice job and thorough!
- Less redundancy, more communication within and between agencies and departments.
- Thank you for all your help.
- I found the information sent from N Dak Public Employees Retirement and Teacher's Retirement to be easier to understand and the cooperation between the two very good.
- RIO staff was very informative and knowledgeable. My husband and I were very impressed with her. It made retirement even easier.
- Excellent!
- Extremely informative - helpful and prompt! Thank you!
- Retirement is not an easy decision. RIO staff helped me through all my qualms with a professional and courteous demeanor.
- Really appreciate the service and help - all staff I worked with were outstanding!
- Great service! Thank you for all of your help!
- RIO staff gave excellent advice on the ND Retirement Funds for me & retirement plans.
- Thanks for the help.
- Thanks!
- My counselor was excellent! She explained everything thoroughly and answered all my questions. She did everything she said she'd do! When I sent in various documents, she always emailed to say she'd received them and to remind me of what was left to complete. She made the process uncomplicated and trouble-free. Thank you for your terrific service!
- RIO staff did an awesome/excellent job in answering my concerns.
- RIO staff did a very thorough job of explaining all the retirement benefits to me and she was extremely professional in her presentation.
- Everything went smoothly. Very nice gal.
- RIO staff was AWESOME!!! She was a great help.
- Excellent session with RIO staff!!
- One-on-one meeting with representative to plan for retirement and answer questions very helpful.
- Thank you for all your help! ☺
- You thought of everything! Thank you for helping me get everything done.
- Great job - thank you RIO staff!
- I met with RIO staff and she answered every question I had & the ones I didn't even know enough to ask! The packet had all I needed & the session thoroughly covered it all. Great job!!
- We appreciate your good service!
- Thank you!
- RIO staff has been so helpful with all my questions!
- RIO staff was very thorough and had a lot of knowledge in our meeting. Very pleased!
- RIO staff gave an excellent presentation. She was very knowledgeable and prepared. She was able to answer all of our questions.
- RIO staff was very informative and helpful!!
- Thank you!! RIO staff was amazing to help!!! ☺

- The staff was very helpful and courteous! ☺
- Right from the start, we were impressed with RIO staff. She is very knowledgeable on the retirement process. It made retirement decisions very easy. She was well organized and returned all my calls promptly. We appreciated all her help and support.
- Thank you to RIO staff for all her help.
- It was a very smooth transition for me. RIO staff took care of any questions I had. Thanks for all you do.
- Excellent help throughout all aspects of paperwork & retirement benefits process.
- Thank you RIO staff! It could not have been easier going into retirement. Thank you again!
- Excellent service from your staff. Absolutely zero complaints - just praise! ☺
- Thanks for all your help and guidance in getting my retirement affairs in order.
- RIO staff has been great to answer questions as I went through the retirement process. I have checked with TFFR over the years with questions, asking for projections, etc. & have always had wonderful service from everyone. Thanks for all of the help!
- Was very impressed with your efficiency and detailed information. Made the process so easy.
- Enjoyable! A change in life style can be very stressful, but RIO staff made it fun!!
- RIO staff was super about answering my questions. Great service!
- Excellent service! Thanks!
- I worked with RIO staff. Excellent service, informative, knowledgeable and courteous. Great job ladies!
- RIO staff was fantastic!!!
- Very helpful!!
- Everything went smoothly. No problems.
- Excellent experience with all staff. Very polite, friendly & efficient. Great workshop in Fargo 2015.
- The staff at the ND Retirement Office made this an easy process!
- Thanks so much - You made it an easy transition.
- I appreciate your help with the process of applying for Teacher Retirement benefits.
- I had a great experience with the TFFR staff member who helped me with my retirement process. 5 stars! Excellent job!
- RIO staff was exceptionally knowledgeable & accommodating. She had friendly, reliable advice. I've already recommended her to others.
- Thank you.
- RIO staff, along with others that I spoke to on the phone, were very kind, helpful & willing to spend time with me. I appreciate that!
- Excellent in all areas!
- RIO staff was awesome!
- I am amazed at how efficient my retirement process has been going! Thanks RIO staff and others!
- Very good service.
- RIO staff has been wonderful helping me through the retirement process. It has gone smoothly. Thank you!
- Made me feel comfortable. Answered all questions….even silly ones. Thank you!
- All my questions have been answered quickly & completely. Very friendly, helpful & efficient staff.

Group Counseling Session
Evaluation Summary

Grand Forks -- October 1, 2015

Members Present 52

Evaluations Returned 35

Presenters: RIO Staff

Please rate the overall program.

Excellent	Above Average	Average	Poor	No Answer
29	6			

What did you like best about the program?

- We were greeted so nicely! Thank you! Very helpful & well prepared!
- Current info.
- Valuable info.
- Folder + slide show + personal touch
- Nice to know what's coming.
- Lots of info presented clearly.
- Health insurance information & options for the benefit.
- Good to have the forms as presenter was going through them.
- Very thorough - explained carefully - easily understandable
- Good information and very well presented.
- You did a good job explaining everything.
- Clear explanations, WELL ORGANIZED!
- Very clear!
- Very thorough!
- Very good - knew their stuff.
- Individual information.
- All
- Clear information. Very well done!
- Forms
- I have some of the paperwork in hand.
- Overall presentation was great.
- Very informational.
- Helpful -- informative.
- Specific information about my situation.
- It was a good review of the day-long seminar. Hearing some of this again was helpful.
- The presentation was logically organized and very beneficial.
- Stated the goal and followed through - answering questions all the way - friendliness - positive attitude.
- Just enough info.
- Appreciate how my paperwork was figured out for me in my folder. Great overview.
- Information was very good.
- Reassurance, clear explanations.

Group Counseling Session

What did you like least about the program?

- Nothing.
- Would like one on one for questions relevant to my plan.
- Hard to ask questions.
- Loved the individual one on one that helped fill out forms previously-did such with spouse.
- So much to go over!
- Not a lot of new information for me.
- All was good.

Was the length of the program appropriate?

Yes	No	No Answer
34		1

If not, how long should the program be?

- 1 hour is perfect.

Would you recommend this program to others?

Yes	No	No Answer
32		3

- Appreciated this service!
- Very much so.

Any additional comments?

- Thank you! (4)
- Would like a copy of the PowerPoint.
- I feel a one on one meeting would also be needed to finalize what I would do.
- Thank you! When I call the office - the people helping are always friendly! ☺
- Very informative. Took time after to discuss questions I had. Very personable & helpful.
- Thank you for offering this.
- Wonderful!! Most helpful.
- Thank you for allowing the opportunity to learn more about my retirement options and allowing me to walk in.
- Very helpful - not as scary as I thought!

Minot -- October 13, 2015

Members Present 32
Evaluations Returned 28

Presenters: RIO Staff

Please rate the overall program.

Excellent	Above Average	Average	Poor	No Answer
22	6			

Group Counseling Session

What did you like best about the program?

- It's an opportunity to get some basic retirement information.
- All the info presented in understandable, kind manner.
- The visuals were helpful. Nice to have my personal numbers calculated. Very informative!
- Explanations of benefits! Very beneficial!
- Very informative, knowledgeable presenters.
- Well organized and loved the packet!
- Clear info.
- Everything was explained well.
- Detailed information.
- Lots of information. Very good!
- Questions and answers
- Accurate info.
- They explained the monthly benefit options.
- Alerting to what needs to be done.
- The packet with take home info.
- Very knowledgeable!
- Very informative & easy to understand & questions were answered.
- The checklist sheets -- very helpful.
- Organized folder.
- All
- Info
- Finding out retirement date

What did you like least about the program?

- Scary!!
- Went a bit fast
- Complicated to understand sometimes.

Was the length of the program appropriate?

Yes	No	No Answer
28		

If not, how long should the program be?

Would you recommend this program to others?

Yes	No	No Answer
25		3

- Yes, I am a few years away from retirement but want to be more informed about retirement options.
- Yes! It's great to get this knowledge.
- Absolutely! (3)
- Yes! Thanks!

Any additional comments?

- Thank you. (3)
- Thanks! (3)
- Great - Much appreciated!!
- Great job - Thanks!

Fargo -- November 17, 2015

Members Present 41
Evaluations Returned 27

Presenter: RIO Staff

Please rate the overall program.

Excellent	Above Average	Average	Poor	No Answer
24	3			

What did you like best about the program?

- Great info - easy to understand.
- Procedure
- It was informational.
- Answer questions.
- Discussed forms we have in front of us.
- Clarification of all the procedures.
- She explained everything very clearly.
- So informative. RIO staff is great.
- Explanation of when to get forms in.
- Explanation of retirement process and how monthly retirement $ are calculated.
- Very clear on answering questions. Also, answering all questions.
- Very well organized.
- Packet is personalized.
- Very easy to understand the speaker.
- Info
- The program answered all my questions quite well!
- The information provided.
- Information & questions answered.
- Much needed information.
- Short, sweet, to the point, precalculated retirement figures.
- Question and answer periods. Material covered.
- Details
- Explanation of survivor options; tax tables; finding out retirement benefit is not subject to FICA.
- Covered the information thoroughly.
- Useful info. Thanks!

What did you like least about the program?

- Would like to hear about social security from a representative.
- Longevity reduction--not your fault.☺

- Too short.

Was the length of the program appropriate?

Yes	No	No Answer
25	1	1

If not, how long should the program be?

- 1 1/2 hours

Would you recommend this program to others?

Yes	No	No Answer
26		1

- Absolutely!
- Yes - good information.
- Definitely

Any additional comments?

- Good job. (2)
- Great insight!
- RIO staff did a wonderful job of answering all questions!
- Great!
- RIO staff was very knowledgeable and answered all questions thoroughly.

PRE-RETIREMENT SEMINARS FOR TFFR MEMBERS
GRAND FORKS 7/22/15 -- BISMARCK 7/23/15
SUMMARY
2015-16

Members **88**
Spouses **17**
Evaluation Forms Returned **68**

1. TFFR PENSION BENEFITS

Excellent	Above Average	Average	Poor	No Answer
51	17			

Grand Forks

- So much to comprehend!
- Great info - thanks!
- Very informative
- Very easy to understand. Handouts were spot on. You helped me immensely. Super.
- Excellent job of presenting & answering questions.
- Well presented and easy to understand.

Bismarck

- Great info
- Thank you for making the whole retirement process more understandable--what is needed. Thanks for being so organized.
- Very informative and she was more than willing to answer questions, in fact, answered many of my questions.
- Very well presented so anyone can understand. Thanks ☺
- Have been to previous ones - very good again to hear this info! Nice to know timelines etc. now that I have one year to go.
- Help was given to me about why I never could get BIA time over to state to buy back time taught.
- Very informative.
- Did well - very knowledgeable.
- Very helpful!
- I like that you repeated questions from the group as sometimes we don't hear the question.
- Love the checklists! Helpful info. Appreciate the various ways to find out about retirement.
- I found RIO staff to be very knowledgeable but the information presented was confusing.
- Informative.
- Very good.

2. GOVERNMENT HEALTH CARE CHANGES & OPTIONS

Excellent	Above Average	Average	Poor	No Answer
35	27	5		1

Grand Forks

- I'm still confused.
- Good info.
- Clarified many insurance laws.
- It's good to have this information & it's good to have some competition for the Blues.
- Very knowledgeable.
- What is cobra? Knowledgeable - helpful information.
- Presenter does a good job of presenting packages to consider without being overbearing from the company she represents.

Bismarck

- Lots of options.
- Great presentation
- Good!
- She was knowledgeable but difficult to listen to her.
- Disappointed time was mixed up. Probably good for people that want to get Sanford Insurance.
- Very good!
- Knowledgeable - went through fast.
- Covered a lot of aspects that don't apply to retiring teachers.
- I feel much of the presented info could have been passed along in a handout.

3. FINANCIAL PLANNING

Excellent	Above Average	Average	Poor	No Answer
26	20	18	2	2

Grand Forks

- Again - good for awareness but lots of info in a short period - so message is GET HELP AND PLAN!
- I may be tired - he had the last presentation - so it was harder to pay attention. Good info presented, though.
- New summary of all products.
- Have to be the last guy of the day - lots of numbers!
- Good information.
- Basic information. Since he's not "my" advisor it was just "ok".
- Presented with limited expertise; not covering material needed for audience on the verge of retirement.
- Teachers need to know this from day one when they start in the profession. TFFR, school districts, teachers should be involved with money taken out of every check that goes into a 403b purse.

Bismarck

- Need lots more planning here.
- Informative
- Very well done!!
- Good advice.
- Very informative - need to get this info to younger staff on how important it is to start early.
- Help me with personal planning needed for 2 special needs sons planning.
- Went through PowerPoint/slides. Did give "food" for thought. Should be given to new teachers and tie to TFFR then.
- She didn't get much time.
- Too much info in a short period of time.
- Would have loved more on this topic. A lot was mentioned about a 403(b), but we didn't know what this is. Maybe clarifying audience understanding would help! ☺
- Most of this at this stage have this worked out with a financial planner. Stick to time schedule.

4. ESTATE PLANNING

Excellent	Above Average	Average	Poor	No Answer
48	17	3		

Grand Forks

- Great examples.
- So much info & different situations, being a single person much of the info was about joint. But I did get the message to get to an attorney!!
- Great information - great presenter.
- Lots of excellent insights.
- We just started working on our wills etc. She made this even more clearer to me. SUPER.
- Wow! She opened my eyes to some very important information.
- Awesome presentation.
- Good info.
- Tremendous-outstanding presentation on what needs to be done. Just lays it out there in an understandable fashion.

Bismarck

- Lots to think about.
- Very interesting
- Enjoyed it - always learn something new.
- Very good!
- Entertaining and knowledgeable.
- Good coverage of many legal aspects.
- Good pace, various helpful examples, enthusiastic delivery.

5. **SOCIAL SECURITY & MEDICARE**

Excellent	Above Average	Average	Poor	No Answer
44	19	3		2

Grand Forks

- Enjoyable & knowledgeable presenter!
- Cleared up question on SS benefits
- He had to go over a lot in a short period of time. Great tips & websites. Good job!
- Great sense of humor.
- Knowledgeable and entertaining. Good resources.
- He does a good job. Would like to see examples of being included when optimum times should be considered to start receiving benefits. Specific ages for scenarios in life.

Bismarck

- Well prepared presentation but need to speak to the needs of your audience--teacher retirement--not so much on disability benefits.
- Super job!! Answered many questions.
- She did a great job!
- Very good!
- Did well - very knowledgeable.
- Hard to do at end of day. Seems long way away.
- Less on disability, etc. More time on retirement benefits. We are here for retirement **NOT** disability.

6. **PLEASE RATE THE OVERALL SEMINAR**

Excellent	Above Average	Average	Poor	No Answer
36	24	5		3

Grand Forks

- Always learn something different from these.
- Exceeded my expectations! So much great information--lots to think about & look into. Well worth the time.
- Lots of info to think & plan for.

Bismarck

- Very informative.
- I feel more comfortable.

7. DO YOU FEEL THAT ATTENDANCE AT THIS SEMINAR WAS TIME WELL SPENT?

Yes	No	No answer
65		3

Bismarck

- A lot of information to take in.
- On most parts, assume we've been thru a lot of info with financial advisors.
- Not sure. Feeling overwhelmed.

8. WOULD YOU RECOMMEND THIS SEMINAR TO OTHERS?

Yes	No	No answer
64		4

Grand Forks

- Definitely!

Bismarck

- Like I said--encourage young people to attend. But maybe call it something else --Saving for Retirement????
- I feel the seminar was good.
- Not sure. I'm thinking scheduling an individual TFFR session will be more beneficial as a first step. Much of this was overwhelming and not addressing me specifically.

9. WILL ATTENDANCE TODAY MOTIVATE YOU TO TAKE ACTION RELATIVE TO YOUR RETIREMENT PLANNING?

Yes	No	No answer
62		6

If yes, what action will you take?

Grand Forks

- Going to retire from education soon - 2016 or 2017
- Work longer than I thought I would have to ☹
- Make sure estate is up to date.
- Double check joint tenancy.
- Social security website; develop will, health directive, POA.
- Review status of beneficiaries, estate - complete retirement package in timely manner - plan for medical insurance
- Helps me to decide how many more years I will work.
- Make sure beneficiaries & land is in a joint ownership.
- Work on getting things in order.

- Check out health insurance, social security website.
- Get my ducks in a row!
- Take "Greater" care looking over all the policies I sign! ☺
- Get a power of attorney, write a will, possibly do a budget.
- Power of atty, health care directive, estate & financial planning
- TBD
- Check on deeds, pursue info regarding 403(b), child get a POA, and the list goes on & on.
- Financial planning, health care, estate planning
- Estate planning
- Check on the deeds of our property and make sure everything is joint
- We are writing out our will. We need to.
- Get some long term goals and plan when retirement will be appropriate.
- See a lawyer to get power of attorney & review our will (made 15 yrs. ago) and look into long term care insurance. Also, see a financial planner.
- Make an appointment with attorney
- Long term care ins., health care directives, names on deeds, accounts, etc., research medical insurance plans
- Check on property deeds, health directive, etc.
- Review our documents (beneficiaries, etc.)
- Get financial plan together asap.

Bismarck

- Helps me understand the process and to understand and consider the other "things" needed; like social security/health insurance.
- I'm going to meet with a TFFR person on a personal level.
- Schedule an individual TFFR appointment, create a will, etc.
- Lots
- I will be retiring sooner than anticipated.
- I will find a financial planner.
- I will start the process of my retirement.
- Preparing wills, power of attorney.
- It will help. I feel I'm pretty much on track.
- Be informed & proactive.
- I'll check on Social Security and my teacher's retirement account.
- I will be scheduling an appointment earlier to get retirement paperwork started.
- Making sure I have my assets and wills, etc. in order.
- Start a plan/go online/call appropriate people.
- Visit with TFFR rep.
- Undecided.
- Made a Social Security online account. Will discuss information with my spouse. May contact a financial planner.
- Move to a Roth, get more life insurance.
- I have decided to retire at the end of 2015-16 contract year! May put more money in 403B account to save on taxes this year.
- Need to see my financial advisor.

10. WAS THE LENGTH OF THE PROGRAM APPROPRIATE? (one day)

Yes	No	No answer
57	7	4

If not, how long should the program be?

Grand Forks

- Long time sitting! For a summer day! Warm in here!
- It would have been nice if we could have an hour for lunch.
- It would be hard to be longer, but I feel things were rushed.
- Can cut out an hour sooner.
- Too much in 1 day - overwhelming. Do evening session & the next day (all day)

Bismarck

- The day was too long.
- Maybe a 1/2 day.
- 1/2 day
- 1/2 day
- Maybe a little shorter-like finish at 3. But not sure what you would shorten!
- Not bad! Shorter would be better! (if possible)

11. WAS THE TIME OF THE PROGRAM CONVENIENT (FULL DAY - SUMMER)?

Yes	No	No answer
63	1	4

If not, what would be a better time?

Bismarck

- 9:00 to 2:00
- 1/2 day
- More opportunities - scattered throughout state.
- I like the summer date.

12. DO YOU HAVE ANY SUGGESTIONS FOR FUTURE PROGRAMS?

Grand Forks

- Keep offering them.
- Excellent presenters - thanks for putting this together!
- It would be nice to see if there was interest in offering the training at additional sights across the state.
- Maybe a program to younger teachers will help them get their ducks in a row earlier!
- This was very enlightening! The presentations were very valuable. Excellent seminar-no suggestions.
- Outstanding seminar! Thanks!

- **Excellent, thank you, thank you, thank you!** ☺
- Well done! Thank you very much! ☺
- Use voice amplification.
- Have individual counseling available during the day for people that would like this.
- Couldn't these seminars be located in Minot or Fargo also. In other words, 4 different locations that are easier to attend without having to get a hotel room, would be better.
- Just a need for more breaks, 45 minute sessions would be better.
- Encourage people to participate in the program further ahead of their retirement plans - good info to be considering in the years prior to retirement.
- My husband and I took this seminar about 5 years ago & were happy with the suggestions that we eventually acted upon. I'm sure our conversations after today will prove to be equally beneficial to us. Thanks!
- Financial planning could be cut from agenda.
- Grand Forks - We need individual benefits counseling - not more group time.
- Should have twice a year. This time of the year, and also November-December of the year or January as well. Having one in the middle of the year could help in facilitating in getting people to retire.

Bismarck

- Would be nice to be able to schedule an individual session with TFFR sometime during this day -- it was nice getting the print-outs and benefits.
- Make sure the speakers all have & use microphones. Have a light snack midmorning, if possible, as some drive from a distance & had breakfast very early. ☺ (Thanks for the sandwiches from Jimmy Johns in the afternoon, however.)
- Longer lunch hour. I went home and live close. I barely had 30 min. It was not long enough for people from out of town. Allow 1 1/2 hrs. then if you go over (like presenter did today) those that need to go out should have time. Also there was a small turnout for another presenter when he started.
- Continue with the workbook. Very organized. I appreciate all the preparation and professionalism.
- More questions and answers.
- Presenters were very knowledgeable. Few were a bit lengthy.
- *Better snacks. *Longer lunch time.
- Very helpful!
- I was hoping we would have time to sit with someone one on one to give us more specific guidance. It would be nice to get info more tailored to us. Could this info be condensed into a booklet to give to teachers, with contact info if they have questions? More examples would be helpful.
- Presentations were too long. I would have liked to speak to someone on my personal retirement from TFFR.

MEMORANDUM

TO: **TFFR Board**

FROM: **Fay Kopp**

DATE: **July 14, 2016**

SUBJ: **TFFR Communication Enhancements**

TFFR staff recognizes the need to continually enhance and improve communications about the retirement program. Therefore, we are in the process of updating and/or developing new methods to provide information about the TFFR program to members, employers, and the public. Attached is a TFFR Communications Enhancements Plan for 2016-2019 for your review.

Our ability to move forward on these initiatives is highly dependent on technology, staff availability, and budget implications, so this is likely to be a multi-year process.

BOARD INFORMATION ONLY.

Attachment

TFFR Member and Employer
Communications Enhancements Plan 2016-19

CURRENT	FUTURE
No TFFR Member Online Services	**Create TFFR Member Online Services (#1 priority – in process)** Allow active and retired members to securely view member account information, annual statements, 1099s, provide email addresses, etc. online. Once initial Member Online services developed, make enhancements such as benefit calculator, benefit claim status, etc.
TFFR Employer Online Services Allows employers to upload monthly employer reports, update contact information, etc.	**Develop enhancements to TFFR Employer Online services** Allow employers to run Employer Summary report, etc. Provide other electronic alternatives for paper reporting.
TFFR website contains member handbook, employer guide, brochures, publications, presentations, reports, forms, CAFR, actuarial reports, audit reports, GASB reports.	**Update RIO/TFFR website (#2 priority)** Modernize website, make compatible with tablets and smart phones, make more user friendly, add new features and information.
TFFR website includes presentations to members and employers including TFFR overview, Retirement 101, Benefits Counseling and Preretirement seminars, Retirement Trends, NDRTA, ND United, NDCEL, NDSBA, NDASBM meetings. **TFFR website** also contains: Legislative updates, testimony, bill drafts GASB 68 training video, presentation, reports Board meeting schedule and materials	**Create and add webcasts to TFFR website (in process)** Employer reporting basics – SS (drafted) Employer payment plan models – SS (drafted) How to apply for retirement benefits – PB (on website) Plan basics for new teachers Retirement benefits Disability benefits Death benefits Refund of account Service purchases Retiree re-employment How to sign up for TFFR Member Online GASB 68 TFFR Funding Update - FK TFFR Investment Update - DH
Member newsletters mailed and on website. Employer newsletters emailed and on website.	Provide members the option to sign up for e-delivery of newsletters.
Annual Statements mailed to active and retired members.	Provide members the option to sign up for e-delivery of annual statements.

Conduct **Member Outreach programs (statewide)** Individual/group member benefits counseling Preretirement seminars Retirement 101	**Update Member Outreach programs (statewide)** Replace individual benefits counseling sessions with group counseling sessions (in process); Rename and update Preretirement Seminars as Retirement Education Workshops (in process)
Conduct **Business Manager training sessions** and presentations in conjunction with NDASBO and NDSBA.	C**reate new Business Manager Training program** (in process – pilot program conducted in June 2016)
Members call, mail, or email to make **outreach program reservations**.	**Create online group meeting registration system**.
Include **comment cards and evaluation forms** with correspondence, outreach programs, etc. Compile results manually for each program.	**Develop online customer satisfaction survey** for members, employers, outreach programs. Include survey link on website, emails, correspondence, and outreach program materials. Compile results using Survey Monkey.
No **social media**.	**Research social media** implications.

MEMORANDUM

TO: TFFR Board

FROM: Fay Kopp

DATE: July 16, 2015

SUBJ: Trustee Education

Here are some dates and information for upcoming pension trustee educational opportunities. If you are interested in attending any conferences or training programs, please contact Fay or Bonnie.

- **National Council on Teacher Retirement (NCTR)**

			Plans to Attend
Trustee Workshop	July 24-27, 2016	Berkeley, CA	Toni Gumeringer
Annual Conference	Oct 8 – 12, 2016	Providence, RI	Mel Olson Toni Gumeringer

- **Callan College**

Intro to Investments	July 19-20, 2016 Oct. 18-19, 2016	San Francisco, CA Chicago, IL	
Annual Conference	Jan. 23-25, 2017	San Francisco, CA	

- **International Foundation of Employee Benefit Plans (IFEBP)**

2016 IFEPB Public Employee Programs Schedule

BOARD INFORMATION ONLY.

Reading 1

http://www.nasra.org//Files/Spotlight/Significant%20Reforms.pdf

Reading 2

http://crr.bc.edu/wp-content/uploads/2016/06/slp_50.pdf

Reading 3

http://crr.bc.edu/wp-content/uploads/2016/06/IB_16-10.pdf

Reading 4

http://www.nirsonline.org/storage/nirs/documents/Portability%20Report/preserving_security_public_sector_web.pdf