NORTH Dakota | Teachers' Fund For Retirement
Be Legendary. RETIREMENT & INVESTMENT

ND TFFR Board Meeting
Thursday, January 26, 2023, 1:00 p.m.
Virtual Only
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AGENDA

I. CALL TO ORDER AND ACCEPTANCE OF AGENDA

A. Welcome of Retirement Accountant
B. Executive Summary

II. ACCEPTANCE OF MINUTES (November 17, 2022)

III. EDUCATION (45 minutes)

A. Pension Plan Archetypes – Mr. Strom, Segal

IV. GOVERNANCE (120 minutes)

A. Segal 2022 GASB Report – Mr. Strom, Segal
B. 2022 Actuarial Audit Presentation – Ms. Woolfrey & Mr. Wood, GRS
C. Actuarial Services RFP Review & Approval – Mr. Roberts

(Break)

D. 2023 Legislative Session Update – Ms. Murtha
E. "Pioneer" Project Update – Mr. Roberts

V. REPORTS (40 minutes) *Board Action*

A. Annual TFFR Ends Report (6/30) – Mr. Roberts
B. Executive Limitations/Staff Relations Report – Ms. Murtha
    1. Engagement Survey Results.

VI. OTHER BUSINESS

A. Board Reading Materials – Material References Included
B. Next Meeting:
    1. TFFR GPR Committee – February 7, 2023, at 3:30pm
    2. TFFR Regular Board Meeting (tentative) – February 16, 2023, at TBD
    3. TFFR Regular Board Meeting – March 23, 2023, at 1:00 p.m.

VII. ADJOURNMENT

EXECUTIVE SUMMARY

TFFR Regular Meeting
January 26, 2023 – 1:00pm CT

I. **Agenda:** The **January Board Meeting will be Virtual Only; a link will be provided so that Board members and the public may join via video conference.** The board member video link is included in the email with the Board materials.

- We will begin the meeting by welcoming our new Retirement Accountant.

II. **Minutes (Board Action):** The November 17, 2022, Board meeting minutes are included for review and approval.

III. **Board Education – Pension Plan Archetypes (Information):** Representatives from our fund actuary Segal will provide the Board with education on pension plan archetypes.

IV. **A. Governance - Segal 2022 GASB Report (Board Action):** Representatives from our fund actuary Segal will present the 2022 GASB report.

B. Governance – Actuarial Audit Report (Board Action): Representatives from GRS, the actuarial firm retained to perform an actuarial audit, will present their findings. Segal will also be available to comment on their response to the GRS findings.

C. Governance – Actuarial Services RFP Review & Approval (Board Action): The actuarial services contract with our current fund actuary will expire at the end of the biennium and all renewal options have been exercised. Mr. Roberts will present an RFP for actuarial services for the Board to review and approve.

D. 2023 Legislative Session Update (Board Action): Ms. Murtha will present to the Board bills under consideration by the legislature that may have an impact to the TFFR program and seek the Board's guidance on position testimony. Ms. Murtha will also highlight the status of bills where testimony has already been provided.

E. Pioneer Project Update (Information): Mr. Roberts will provide an update on staff efforts related to implementation of the Pioneer Project.

V. **Reports (Board Action):** Staff will provide reports on annual TFFR Ends and executive limitations/staff relations.

Adjournment.

NORTH DAKOTA TEACHERS' FUND FOR RETIREMENT
MINUTES OF THE
NOVEMBER 17, 2022, BOARD MEETING

BOARD MEMBERS PRESENT:	Dr. Rob Lech, President Mike Burton, Vice President Thomas Beadle, State Treasurer Cody Mickelson, Trustee Mel Olson, Trustee Jordan Willgohs, Trustee
BOARD MEMBERS ABSENT:	Kirsten Baesler, State Supt. DPI
STAFF PRESENT:	Jayme Heick, Retirement Programs Spec Missy Kopp, Exec Assistant Jan Murtha, Exec Dir Chad Roberts, DED/CRO Sara Sauter, Supvr of Internal Audit Rachelle Smith, Retirement Assistant Stephanie Schilling, Retirement Programs Spec Dottie Thorsen, Internal Auditor Tami Volkert, Employer Svs Coor Denise Weeks, Retirement Program Mgr
OTHERS PRESENT:	Matt Strom, Segal Members of the Public

CALL TO ORDER:

Dr. Lech, President of the Teachers' Fund for Retirement (TFFR) Board of Trustees, called the meeting to order at 1:02 p.m. on Thursday, November 17, 2022. The meeting was held in the WSI Board Room, 1600 E Century Ave., Bismarck, ND.

THE FOLLOWING MEMBERS WERE PRESENT REPRESENTING A QUORUM: TREASURER BEADLE, MR. BURTON, DR. LECH, MR. MICKELSON, MR. OLSON, AND MR. WILLGOHS.

ACCEPTANCE OF AGENDA:

The Board considered the agenda for the November 17, 2022, meeting.

IT WAS MOVED BY TREASURER BEADLE AND SECONDED BY MR. BURTON AND CARRIED BY A VOICE VOTE TO APPROVE THE AGENDA AS DISTRIBUTED.

AYES: TREASURER BEADLE, MR. BURTON, MR. MICKELSON, MR. WILLGOHS, MR. OLSON, AND DR. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER
MOTION CARRIED

Dr. Lech welcomed Jecca Geffre, the new Communications and Outreach Director.

MINUTES:

The Board considered the minutes of the September 22, 2022, TFFR Board meeting.

IT WAS MOVED BY MR. OLSON AND SECONDED BY TREASURER BEADLE AND CARRIED BY A VOICE VOTE TO APPROVE THE SEPTEMBER 22, 2022, MINUTES AS DISTRIBUTED.

AYES: MR. MICKELSON, MR. OLSON, TREASURER BEADLE, MR. BURTON, MR. WILLGOHS, AND DR. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER
MOTION CARRIED

EDUCATION:

Elements of an Actuarial Funding Policy:

Mr. Strom, Segal, provided education on the elements of an actuarial funding policy and the impact of revision to the Actuarial Standards of Practice (ASOP) 4. The actuarial valuation tells you where you are at the current place in time. Mr. Strom reviewed the parts and inputs of an actuarial valuation, A funding policy has three components which include an actuarial cost method, asset smoothing method, and unfunded actuarial accrued liability (UAAL) amortization policy. Mr. Strom presented funding policy components. Board discussion followed.

GOVERNANCE:

Segal Actuarial Valuation Report:

Mr. Strom, Segal, presented the annual Actuarial Valuation Report as of July 1, 2022. Highlights include the following:

- The return on the fair value of assets for the year ending June 30, 2022, was -6.1%
- Funded ratio increased from 68.6% (as of 7/1/2021) to 69.9% (as of 7/1/2022)
- Effective amortization period decreased from 21 years to 19 years
- Net impact on actuarially determined contribution was a decrease from 12.37% of payroll to 12.12% of payroll
    - Based on the employer contribution rate of 12.75%, the contribution margin has increased from 0.38% of payroll to 0.63% of payroll
- GASB Net Pension Liability increased from $1.05 billion as of 6/30/2021 to $1.46 billion as of 6/30/2022

Board discussion followed.

IT WAS MOVED BY MR. MICKELSON AND SECONDED BY TRESURER BEADLE AND CARRIED BY A VOICE VOTE TO ACCEPT THE ACTUARIAL VALUATION AS OF JULY 1, 2022.

AYES: TREASURER BEADLE, MR. WILLGOHS, MR. OLSON, MR. BURTON, MR. MICKELSON, AND DR. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER
MOTION CARRIED

Governance & Policy Review (GPR) Committee Update:

Mr. Mickelson provided an update from the GPR Committee meeting on November 10, 2022. The Committee continued working through the TFFR manual according to the workplan approved by the Committee. The Committee gave feedback on the legislative presentation that staff will provide to the Board today.

Ms. Murtha reviewed the policy amendment and GPR Committee Charter which were brought before the Board for second reading and final adoption. Ms. Murtha also reviewed the SIB Governance Manual changes because TFFR shares governance with the SIB. The proposed changes allow for coordination with the new SIB Investment Committee and have been reviewed by the SIB GPR and Investment Committees, TFFR GPR Committee, and now the TFFR Board for feedback before going to the SIB for a first reading. Board discussion followed.

IT WAS MOVED BY MR. MICKELSON AND SECONDED BY MR. OLSON AND CARRIED BY A VOICE VOTE TO APPROVE THE SECOND READING AND FINAL ADOPTION OF THE POLICY AMENDMENT AND CHARTER FOR THE TFFR GPR COMMITTEE.

AYES: MR. BURTON, MR. WILLGOHS, MR. OLSON, TREASURER BEADLE, MR. MICKELSON, AND PRES. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER
MOTION CARRIED

The Board recessed at 2:35 p.m. and reconvened at 2:47 p.m.

Legislative Session Planning:

Ms. Murtha provided information about anticipated public policy issues that may arise and be impactful to the TFFR program during the 2023 legislative session. Ms. Murtha asked the Board for guidance as staff prepare testimony for each of the anticipated issues. Staff provided the same presentation to the TFFR GPR Committee, and their recommendations have been included in the current presentation for the Board. Ms. Murtha outlined the proposed process for keeping the Board informed throughout the legislative session. Staff will provide an informational legislation tracking matrix to the Board on a weekly basis. There will be a process established to communicate with the Board chair and the Board when changes occur based on the level of changes or impact. The Board was asked to provide feedback on staff testimony on the TFFR Technical bill, the military exemption bill, PERS plan closure, RIO internal investment opportunities, and the SIB composition bill. Board discussion followed.

IT WAS MOVED BY TRESURER BEADLE AND SECONDED BY MR. WILLGOHS AND CARRIED BY A ROLL CALL VOTE TO SUPPORT STAFF TO PROCEED WITH TESTIMONY AS DISCUSSED.

AYES: MR. OLSON, MR. MICKELSON, MR. WILLGOHS, TREASURER BEADLE, MR. BURTON, AND PRES. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER
MOTION CARRIED

Pioneer Project Update:

Mr. Roberts provided an update on the progress of the development of the new pension administration system. About 20% of the project has been completed and is scheduled to be completed in the fourth quarter of 2024. The project is within budget and on time. The communication and education plan for members and employers is in place. Staff plan to start educational sessions with employers one year before the project completion date. Staff have contacted the payroll software companies that work with the schools. Board discussion followed.

Outreach Update:

Ms. Weeks provided an update on outreach activities. Staff have led many in-person group benefit counseling sessions around the state which have been attended by over 150 members. Staff are also offering two state-wide virtual group benefit counseling sessions. Staff continue offering monthly Info Mixers for Business Managers with different topics each month and held a virtual New Business Managers Workshop in November. Staff participated in multiple conferences throughout the fall. Board discussion followed.

REPORTS:

Annual Reemployed Retirees Report:

Mr. Roberts presented the annual Reemployed Retirees Report. The report is for fiscal year (FY) 2022 and provides a breakdown of retirees returning to work by hours contracted, salaries, types of reemployment and subject areas. The report also covers employer information and an analysis of historical trends. In FY 2022 there were 273 reemployed retirees with 35 of those being in critical shortage areas. The average salary was $29,665 and the median age was 63 years old. A statistic that stands out this year is the increase in administrator positions that were filled by reemployed retirees. The increase in retirees filling administrator positions also increased the average salary. Board discussion followed.

Annual Budget & Expense Report:

Mr. Skor provided the Annual Budget and Expense Report as of June 30, 2022. The quarterly budget and expense information for the quarter ended September 30, 2022, was also included. The operating expenditures line include the PAS project. Without that project included, the operating expenditures line is at about 57% for budget available. Much of the budget for the PAS project will carry over to the next biennium. Board discussion followed.

Quarterly TFFR Ends Report:

Mr. Roberts reviewed the TFFR Ends Report for the period ended September 30, 2022. The Communications and Outreach Director and Accounting Intern positions were posted. RIO's NDIT Business Analyst resigned, and Mr. Roberts participated with NDIT in the hiring process for that position. The TFFR GPR Committee established a workplan to complete a full review TFFR Policy Manual. Ms. Murtha provided testimony to the Retirement Committee regarding impacts to the TFFR plan relating to the proposal to close the PERS defined benefit plan. Board discussion followed.

Quarterly Investment Report:

Mr. Chin provided an investment update for the period ended September 30, 2022. Markets have been challenging in 2022 with rising inflation and geopolitical issues impacting markets. TFFR's performance is negative year-to-date but is in line with the policy benchmark. TFFR continues to be in the top quartile for performance when compared to peer plans. Mr. Chin reviewed the changes that have been made to the equity portfolio and the initiative to implement internal investment management for a portion of the portfolio. Board discussion followed.

Quarterly Internal Audit (IA) Report:

Ms. Seiler provided the Quarterly IA Report. The SIB Audit Committee met on November 15, 2022, and approved the first quarter IA Activities Report and received an update on current IA activities. CliftonLarsonAllen (CLA) presented the FY 2022 Financial Statement Audit which had an unmodified "clean" opinion. The GASB 68 Schedule Audit included testing of 12 employers and 137 employees. There was one employer finding which was immaterial. IA completed a payroll audit for the agency which resulted in one recommendation. The TFFR File Maintenance Audit was completed, and IA provided two recommendations. A Request for Proposals (RFP) was issued to evaluated internal audit and the agency's future needs in this area. The bid was awarded to Weaver & Tidwell, LLP and a kickoff has been scheduled for November 2022. Board discussion followed.

Mr. Willgohs left at 4:30 p.m.

Executive Limitations/Staff Relations Report:

Ms. Murtha provided the Executive Limitations/Staff Relations Report. The reorganization of the TFFR Compliance Specialist and Retirement Accountant was the final phase of the reorganization of the Retirement Services Division. Two new investment staff started this week, and the new Risk Officer will start later this month. The Communications and Outreach Director started on November 7, 2022. A new Accounting Intern has been hired and will start in December 2022. An all-staff training is scheduled for December 6, 2022. Current projects include the Legacy Fund asset allocation study, Pioneer Project, Northern Trust initiative, and the audit consultant RFP. Board discussion followed.

IT WAS MOVED BY MR. BURTON AND SECONDED BY TREASURER BEADLE AND CARRIED BY A VOICE VOTE TO ACCEPT THE ANNUAL REEMPLOYED RETIREE, ANNUAL BUDGET AND EXPENSE, QUARTERLY TFFR ENDS, QUARTERLY INVESTMENT, QUARTERLY INTERNAL AUDIT, AND EXECUTIVE LIMITATIONS/STAFF RELATIONS REPORTS.

AYES: MR. BURTON, MR. OLSON, TREASURER BEADLE, MR. MICKELSON, AND PRES. LECH
NAYS: NONE
ABSENT: SUPT. BAESLER, MR. WILLGOHS
MOTION CARRIED

ADJOURNMENT:

With no further business to come before the Board, Pres. Lech adjourned the meeting at 4:47 p.m.

Prepared by,

Missy Kopp
Assistant to the Board

North Dakota TFFR

Retirement Plan Risk Perspectives

Board Education Presentation

January 26, 2023

Segal

Agenda

Background

Continuum of Risk Sharing in Retirement Plans

Hybrid Designs and Examples

Other Features and Considerations

Retirement Program Objectives

Major Risks Facing Pension Plans

Risks related to economic variables

- Investment return
- Interest rate
- Inflation (pre and post retirement)

Risks related to demographic events

- Employment levels and active population make-up
- Mortality/longevity
- Retirement (Early and Deferred)
- Intergenerational transfers

Risks related to other factors

- Legislative, regulatory and compliance changes
- Communications
- Accounting requirements
- Litigation

Defined Benefit Plan Scrutiny

Why so much defined benefit plan scrutiny?

- Plans originally designed for long careers
  - Work 45 years; receive pension for 10 years

- Over time the dynamics have changed
  - Work 30 - 35 years; receive pension for 30 - 35 years

- Employers are sometimes unable to handle the level and volatility of cost
- Public sector plans can generate negative news

What are Drivers of Defined Benefit Costs?

Primarily investment risk, employment risk and longevity risk

RISK	WHAT IT IS	WHY IMPORTANT
1. Investment	Assets earn less than expected	Shortfall must come from contributions or benefit reductions
2. Employment	Employment levels less than expected	Shortfall must come from extra contributions, or asset returns or benefit reductions
3. Longevity	Retirees live longer than expected	Pensions are paid longer, draining the fund
4. Retirement	Participants retire earlier than expected	Service pensions and subsidized early retirement add additional cost

What are Drivers of Defined Benefit Costs?

Other elements that potentially matter

RISK	WHAT IT IS	WHY IMPORTANT
5. Inflation	Actual cost of living greater than expected	Erodes purchasing power of pension
6. Regulations	Passage of new laws or regulations that require additional financial or administrative burdens	Increases the cost and administrative complexity of the plan
7. Administrative	Accurately calculating benefits and notifying parties	Errors will increase the cost of the plan

Continuum of Retirement Plan Risk Sharing

Allocation of risk between employer and employee in retirement plan design

Employer — Employee

Risk

Traditional DB

- ▲ Employer-pay-all DB
- ▲ Contributory DB
- ▲ Contributory DB with rate based on share of total contribution

Hybrid

- ▲ Cash Balance, fixed credit
- ▲ Cash Balance, interest credits based on market returns
- ▲ DB base benefit + DC
- ▲ Variable Benefit Accrual Plan
- ▲ Variable Annuity Plan

Defined Contribution

- ▲ 401(k) with employer match
- ▲ Employee-pay-all DC

Defined Benefit Versus Defined Contribution

Defined Benefit	Defined Contribution
Known retirement benefit	Unknown retirement benefit
Guaranteed lifetime income	Potential to outlive account balance
Investments professionally managed	Investment decisions by employees
Less expensive per benefit level	More expensive per benefit level
Risks assumed by the plan	Risks assumed by the members
Less portability	More portability

DB v. DC – What Do You Get?

Illustrative situation:

- Teacher hired at 35
- Current Tier 2 DB plan provisions
  - Eligible to retire at 63 (NRA based on 90 points) or 60 (ERA with reduction)
  - "Value" is equivalent to FY23 gross normal cost rate of 12.19% of salary
- Comparative DC plan provisions
  - Contributions earn 6.00% return over the long-term
  - Account balance may be rolled over upon termination
  - Market price for life annuity based on 4.50% interest and current mortality

DB v. DC – What Do You Get?

Defined Benefit		Defined Contribution
Normal retirement annuity of $4,027	←	Annuity conversion at 63 of $2,832
Early retirement annuity of $1,974	→	Annuity conversion at 60 of $2,068
Potential death benefit at 55: $2,044	←	No death benefit provision
Potential disability at 50: $1,469	←	No disability benefit provision
Withdrawal at 45: $845 payable @65	→	$86,000 account balance to rollover
Market tanks* @60 – still $4,027	←	Annuity conversion at 63 of $2,277

* Defined as −10% return, followed by 0%, followed by 5% between ages 60 and 62

Can This Risk Puzzle Be Solved?

Yes… and no

- There are ways to reduce the risks of the plan sponsor
  - Only impacts the plan going forward
  - Still need to fund the legacy plan unfunded liability
  - Some risk is reduced but most is transferred
- Most risk reduction scenarios involve some form of hybrid plan

Hybrid Plans

Many variations with varying risk levels

- Most common risk to mitigate is investment return
- No one style is right in all cases
- Benefits fluctuate up or down with investment returns resulting in less cost volatility and greater ability to budget than traditional defined benefit plans
- Most involve a lower ultimate pension benefit as the trade-off

"Variable" Plan Designs

Variable Benefit Accrual Plans	Variable Annuity Plans
• Variable benefits are <u>pro</u>spective (applies to next year's accrual) • Benefits are locked-in at retirement • Variable formula is defined by target returns (and/or other funding metrics) • Future accrual rate cannot be less than zero • No employee choice on investment allocation • Investment policy could be the same as traditional approach	• Variable benefits are <u>retro</u>spective (applies to earned benefits) • Benefits can fluctuate even after retirement • Variable formula is defined by target returns • Accrued benefit could decrease – but could provide floor benefit to mitigate this • Accrued benefit could increase – but could provide a cap on upward adjustment to mitigate costs or create reserve • Employee choice on notional investments can be provided • Investment policy may track actual employee choice

Variable Benefit Accrual Plan – Example

Variable benefit accrual based on returns

Prior Year Investment Return	Variable Accrual Benefit % for the Year	TFFR "Traditional" Benefit % for the Year
<0%	1.00%	2.00%
0% to 3%	1.25%	2.00%
3% to 6%	1.50%	2.00%
6% to 10%	2.00%	2.00%
10% to 15%	2.50%	2.00%
>=15%	3.00%	2.00%

- 20.75% of FAE benefit accrual for the 10-year period 2003 through 2012
- 19.75% of FAE benefit accrual for the 10-year period 2013 through 2022

	Return	VBA-1	VBA-2
2003	2.1%	1.25%	
2004	18.9%	3.00%	
2005	13.3%	2.50%	
2006	14.6%	2.50%	
2007	20.4%	3.00%	
2008	−7.0%	1.00%	
2009	−27.0%	1.00%	
2010	13.9%	2.50%	
2011	23.5%	3.00%	
2012	−1.4%	1.00%	
2013	13.4%		2.50%
2014	16.1%		3.00%
2015	3.5%		1.50%
2016	0.4%		1.25%
2017	12.6%		2.50%
2018	9.0%		2.00%
2019	5.4%		1.50%
2020	3.3%		1.50%
2021	26.1%		3.00%
2022	−6.1%		1.00%
Total		20.75%	19.75%

Variable Annuity Plan – Example

Variable accrual and annuity based on actual return relative to a hurdle rate

- Annual accrual percentage of 1.75% per year of service
- “Hurdle rate” of 5% and cap rate of 12.5%
- Floor accrual percentage of 1.00% per year of service
- Benefits may be locked-in at retirement
  - Or benefit annuity may also vary in retirement
    - Example assumes a 7% hurdle rate for benefits in payment status

Variable Annuity Plan – Example

In Year 1:

- Investment return of 13.4%
  - Capped at 12.5%
  - **7.5%** higher than the 5% hurdle rate
- Variable annuity accrual calculation:
  - 1.75% **x 1.075** = 1.88% of FAE after 1 year

	Return
2013	13.4%
2014	16.1%
2015	3.5%
2016	0.4%
2017	12.6%
2018	9.0%
2019	5.4%
2020	3.3%
2021	26.1%
2022	−6.1%

Variable Annuity Plan – Example

In Year 2:

- Investment return of 16.1%
  - Capped at 12.5%
  - **7.5%** higher than the 5% hurdle rate
- Variable annuity accrual calculation:
  - (1.88% + 1.75%) **x 1.075** = 3.90% of FAE after 2 years

	Return
2013	13.4%
2014	16.1%
2015	3.5%
2016	0.4%
2017	12.6%
2018	9.0%
2019	5.4%
2020	3.3%
2021	26.1%
2022	−6.1%

Variable Annuity Plan – Example

In Years 3 through 10:

	Return	Min(Return, Cap Rate)	Relative to Hurdle	Annuity Calculation	% of FAE
2015	3.5%	3.5%	−1.5%	(3.90% + 1.75%) **x 0.985**	5.57%
2016	0.4%	0.4%	−4.6%	(5.57% + 1.75%) **x 0.954**	6.98%
2017	12.6%	**12.5%**	7.5%	(6.98% + 1.75%) **x 1.075**	9.38%
2018	9.0%	9.0%	4.0%	(9.38% + 1.75%) **x 1.040**	11.58%
2019	5.4%	5.4%	0.4%	(11.58% + 1.75%) **x 1.004**	13.38%
2020	3.3%	3.3%	−1.7%	(13.38% + 1.75%) **x 0.983**	14.87%
2021	26.1%	**12.5%**	7.5%	(14.87% + 1.75%) **x 1.075**	17.87%
2022	−6.1%	−6.1%	−11.1%	(17.87% + 1.75%) **x 0.889**	**18.87%**

- Note that in year 10, the annuity calculation results in 17.44% of FAE, so the “floor” accrual of 1.00% applies

Variable Annuity Plan – Example

Impact on a member retiring with a $4,000 annuity:

	Return	Min(Return, Cap Rate)	Relative to "In-pay" Hurdle	Annuity Calculation	Annuity In Following Year
2013	13.4%	12.5%	5.5%	$4,000 x **1.055**	$4,220
2014	16.1%	12.5%	5.5%	$4,220 x **1.055**	$4,452
2015	3.5%	3.5%	−3.5%	$4,452 x **0.965**	$4,296
2016	0.4%	0.4%	−6.6%	$4,296 x **0.934**	$4,013
2017	12.6%	12.5%	5.5%	$4,013 x **1.055**	$4,233
2018	9.0%	9.0%	2.0%	$4,233 x **1.020**	$4,318
2019	5.4%	5.4%	−1.6%	$4,318 x **0.984**	$4,249
2020	3.3%	3.3%	−3.7%	$4,249 x **0.963**	$4,092
2021	26.1%	12.5%	5.5%	$4,092 x **1.055**	$4,317
2022	−6.1%	−6.1%	−13.1%	$4,317 x **0.869**	**$4,000**

- Note that in year 10, the annuity calculation results in a following year payment of $3,751, so the "floor" (i.e., original) annuity applies

Cash Balance Plan Designs

Cash balance plans provide some of the best features from traditional DB plans and DC plans

- Benefit is expressed as a hypothetical account balance rather than an annuity at retirement
- Account balance grows with annual credits:
  - Principal credits, which are generally a percentage of salary
  - Interest credits, which are calculated based on amount in account balance
- Members receive benefits that are portable and easy to understand

Cash Balance Plan – Example

Cash balance plans with employer-provided pay credits based on service and interest credits based on fixed 5%

- Member contributes 5% of salary
- Employer contributes: 5% of salary for service <10
7.5% of salary for service between 10 and 20
10% of salary for service 20+
- Notional account balance of $115,800 at age 50, for example, can be taken upon separation and rolled over into an IRA
- Notional account balance of $473,000 at age 65 can be converted to a monthly annuity of $3,600

Continuum of Retirement Plan Portability

Relative degree of portability in retirement plan design

Limited | Portability | Full

Traditional DB

- Percent of pay with life annuity
  - Lump sum option
    - Allows for purchase of service

Hybrid

- Variable Annuity Plan
  - Lump Sum Cash Balance Plan
    - DB base benefit plus DC component

Defined Contribution

- Target benefit DC
  - 401(k) with rollover features

Optional Features for a Traditional DB Plan

- Lump sum/partial lump sum
- Deferred Retirement Option Plan
- Post-retirement benefit adjustment (COLA)
- Increasing annuity optional form of payment
- Variable member contributions
- Enhanced withdrawal benefits

Optional Features

Finding the Right Balance

The Big Question:

What's the right design?

Answer:

- There is no one "right" design for everyone; each Plan needs to determine its specific "right" design
- Assessment of risks is subjective
- Objectives vary from situation to situation
- All traditional and "hybrid" plan designs have pros and cons
- Effects on old plan and transition process must be considered
- There are many options to address risk in traditional DB plans without adopting a "hybrid" plan

North Dakota Teachers' Fund for Retirement

GASB 67 & 68

Accounting Standards for Public Pension Plans
Review of Fiscal 2022 GASB Reporting

January 26, 2023 / Matt Strom / Brad Ramirez

Segal

Agenda

GASB Objectives and Goals

Net Pension Liability

Pension Expense

Cost-Sharing Plans

GASB Objectives and Goals

- **Financial Reporting Focus**
  - Focus is on pension obligation, changes in that obligation, and attribution of expense – *not funding policies*
  - Provides a short-term snapshot of funded status based on market assets and a blended discount rate
- **Long-Term Nature of Governments**
  - Cost of services to long-term operation
  - “Inter-period equity” matches current period resources and costs
- **Employer-Employee Exchange**
  - Employer incurs an obligation to its employees for pension benefits
  - Transaction is in context of a career-long relationship

Net Pension Liability

- **Must disclose a Net Pension Liability (NPL), which is the Total Pension Liability (TPL) less the Market Value of Assets (MVA)**
  - Similar to Unfunded Actuarial Accrued Liability (UAAL) on a market value basis
    - Will be volatile from year to year
    - Asset smoothing only allowed in the pension expense component
  - Must be reported on employer's balance sheet
- **Total Pension Liability component determined by:**
  - "Entry Age" actuarial cost method*
  - The consideration of a "blended" discount rate
- **Must also disclose NPL sensitivity to changes in the discount rate**

* The value of projected benefits allocated over past, present, and future periods as a level percentage of payroll

Net Pension Liability – "Blended" Discount Rate

- **Based on a projection of benefit payments and assets**
  - Benefit payment projection is for current members
  - Asset projection is based on investment return assumption (7.25%) and contributions on behalf of current members
    - **Exclude** contributions intended to fund the service cost for future employees
- **If projected assets are always sufficient to pay projected benefit payments the GASB discount rate is equal to the investment return assumption**
- **If not, a blended discount rate must be used**
- **As of June 30, 2022, TFFR does <u>not</u> have a crossover date**
  - TPL is based on the investment return assumption

Net Pension Liability ($ in millions)

Collective TFFR	June 30, 2021	June 30, 2022
Total Pension Liability at 7.25%	$4,336	$4,480
Fiduciary Net Plan Position (i.e., MVA)	3,282	3,024
Net Pension Liability (NPL)	1,054	1,456
Sensitivity to changes in discount rate		
• 1% decrease at 6.25%	$1,582	$2,000
• Current discount rate at 7.25%	1,054	1,456
• 1% increase at 8.25%	615	1,005

Reconciliation of Collective Net Pension Liability

$ in millions

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance as of June 30, 2021	$4,336	$3,282	$1,054
Changes for the year			
Service cost	92		92
Interest	312		312
Difference between expected and actual experience	(9)		(9)
Contributions – employer		100	(100)
Contributions – member		92	(92)
Contributions – purchased service credit and other		2	(2)
Net investment income		(199)	199
Benefit payments and refunds of contributions	(252)	(252)	-
Administrative expense		(3)	3
Changes of assumptions	-		-
Change of benefit terms	-		-
Net changes	144	(258)	402
Balance as of June 30, 2022	$4,480	$3,024	$1,456

Note: numbers may not add due to rounding

Pension Expense

- **GASB Pension Expense is the change in NPL each year, with deferred recognition of certain elements**
- **Components of Pension Expense include:**
  - Service cost (i.e., normal cost)
  - Interest on the Total Pension Liability
  - Projected investment returns
  - Employee contributions
  - Administrative expenses
  - Differences between actual and projected investment returns over the past year
    - Smoothed over 5 years
  - Differences due to changes in actuarial assumptions, changes in plan provisions, and actuarial gains and losses
    - Smoothed over average expected remaining service lives of active **and** inactive members (including retirees)

Reconciliation of Collective Net Pension Liability

Items that flow directly through pension expense

Items that receive deferred recognition

Item that is not a part of pension expense

$ in millions

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance as of June 30, 2021	$4,336	$3,282	$1,054
Changes for the year			
Service cost	92		92
Interest	312		312
Difference between expected and actual experience	(9)		(9)
Contributions – employer		100	(100)
Contributions – member		92	(92)
Contributions – purchased service credit and other		2	(2)
Net investment income		(199)	199
Benefit payments and refunds of contributions	(252)	(252)	-
Administrative expense		(3)	3
Changes of assumptions	-		-
Change of benefit terms	-		-
Net changes	144	(258)	402
Balance as of June 30, 2022	$4,480	$3,024	$1,456

Employer contributions made during the measurement period directly reduce NPL

Actual investment income is split between projected earnings and investment gain/loss

Note: numbers may not add due to rounding

Collective Pension Expense ($ in millions)

	Year ending June 30, 2021	Year ending June 30, 2022
Service cost	$87	$92
Interest on the total pension liability	301	312
Projected earning on plan investments	(190)	(236)
Contributions – member	(91)	(92)
Contributions – purchased service credit and other	(3)	(2)
Administrative expense	3	3
Current year of recognition of:		
• Change of assumptions	32	7
• Difference between expected and actual experience	(12)	(13)
• Difference between projected and actual earning on pension plan investments	(91)	17
• Change of benefit terms	0	0
Total pension expense	$37	$88

Note: numbers may not add due to rounding

Cost-Sharing Allocation

Ten Largest Participating Employers	Covered Payroll	Proportionate Share Allocation
1. Bismarck Public Schools	$84,464,921	10.733713%
2. Fargo Public Schools	84,040,157	10.679734%
3. West Fargo School	74,749,890	9.499137%
4. Grand Forks School	50,955,420	6.475361%
5. Minot School	50,037,599	6.358725%
6. Williston Basin School District #7	29,137,357	3.702744%
7. Dickinson School	25,279,017	3.212431%
8. Mandan Public Schools	23,882,708	3.034989%
9. Jamestown School	14,074,558	1.788580%
10. McKenzie County School	11,569,778	1.470275%
11-217. Remaining 207 employers	338,721,045	43.044311%
Total	**$786,912,450**	**100.000000%**

- **For example, Bismarck Public Schools is allocated NPL of $156,288,542 and pension expense of $9,426,391**
  - 10.733713% of the collective NPL and pension expense
  - In addition, an adjustment related to the change in proportionate share from the prior year must be included in pension expense

Questions

Appendix

Blended Discount Rate Mechanics

Pension Expense – Calculation Methods

Deferred Outflows and Inflows

Considerations for Cost Sharing Plans

Disclosure Information

"Blended" Discount Rate Mechanics

- **Blended discount rate mechanics**
  - For projected benefit payments that are covered by projected assets, the expected return assumption is used
  - For projected benefit payments that are not covered by projected assets, the 20-year AA/Aa tax-exempt municipal bond index is used (3.54% as of June 30, 2022)
  - The date at which projected assets are not sufficient to cover projected benefit payments is called the "crossover date"
- **Solve for a single rate that gives the same total present value**
  - Use that single equivalent rate to calculate the TPL
- **As of June 30, 2022, TFFR does <u>not</u> have a crossover date**
  - TPL is based on the investment return assumption

Pension Expense – Calculation Methods

- **Pension Expense =**

  +/- Change in Net Pension Liability

  + Employer Contributions

  + Amounts recognized in current year for bases formed previously

  - Outstanding balance at end of year for new inflows and outflows.

- **Pension Expense =**

  +/- Change in Net Pension Liability

  + Employer Contributions

  +/- Net deferred inflow and outflow balances from end of current fiscal year to end of prior fiscal year.

- **Pension Expense =**

  + Service Cost

  + Interest on TPL

  - Employee Contributions

  + Administrative Expenses

  - Expected Return on NPL

  +/- Net deferred inflow and outflow balances from end of current fiscal year to end of prior fiscal year.

Pension Expense
Deferred Outflows and Inflows

- **Deferred portion of changes in NPL are shown as "Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions"**
  - Created for the purpose of spreading income or expense over multiple fiscal years
- **"Deferred Outflows" are increases in NPL that have not been recognized through expense; "Deferred Inflows" are decreases in NPL that have not been recognized through expense**
  - For example, if average expected remaining service lives is 7 years, 1/7th of demographic actuarial gains/losses are recognized in pension expense for the year; the remaining 6/7th is recorded as a deferred inflow/outflow
  - Similarly, 1/5th of investment gains/losses in the fiscal year are recognized in pension expense for the year and the remaining 4/5th is recorded as a deferred inflow/outflow

Pension Expense
Deferred Outflows and Inflows *(continued)*

- **Schedule of deferred outflows and inflows as of FYE 2022**

Employer	Year Established	Original Balance	Original Amortization Period	Amortization Amount During 2022	Outstanding Balance at June 30, 2022
Outflows					
Investments	2019	$59,163,355	5 years	$11,832,671	$11,832,671
Investments	2020	114,538,151	5 years	22,907,630	45,815,260
Assumptions	2020	51,813,028	7 years	7,401,861	29,607,444
Demographics	2021	8,366,320	8 years	1,045,790	6,274,740
Investments	2022	434,694,288	5 years	86,938,858	347,755,430
Total Outflows				**$130,126,810**	**$441,285,545**
Inflows					
Demographics	2016	$8,092,800	7 years	$1,156,116	$0
Demographics	2017	10,748,944	7 years	1,535,563	1,535,566
Demographics	2018	27,939,071	7 years	3,991,296	7,982,591
Investments	2018	30,002,998	5 years	6,000,598	0
Demographics	2019	23,494,914	7 years	3,356,416	10,069,250
Demographics	2020	20,732,097	7 years	2,961,728	11,846,912
Investments	2021	493,904,813	5 years	98,780,963	296,342,887
Demographics	2022	8,504,654	8 years	1,063,082	7,441,572
Total Inflows				**$118,845,762**	**$335,218,778**

Cost-Sharing Plans

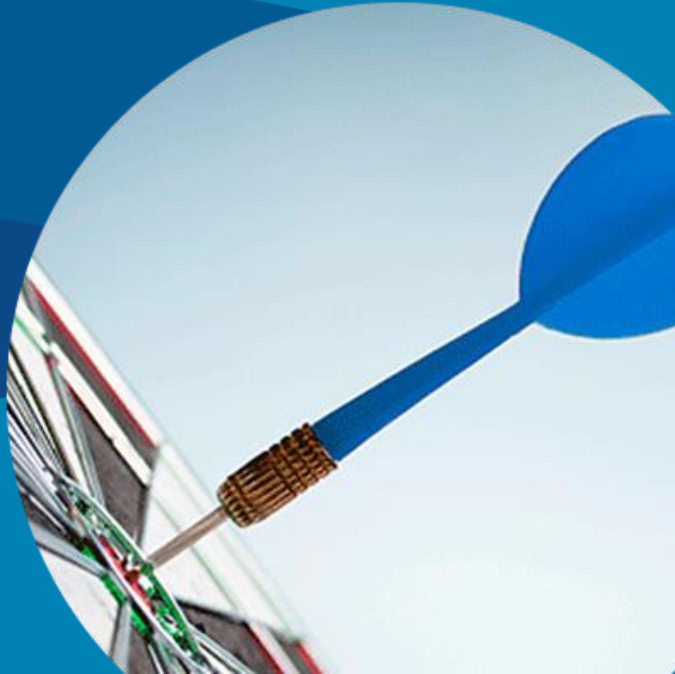
- **Recognize and disclose a "proportionate share" of collective Net Pension Liability, pension expense, and deferred inflows and outflows**
- **Determining an employer's "proportionate share"**
  - Basis should be consistent with the way required contributions are determined
  - If different contribution rates are assessed for different groups, the allocation should reflect these relationships
- **Employer's proportion should be established as of the measurement date:**
  - Unless employer's proportion is actuarially determined (in which case use date of the valuation)
- **For TFFR, covered payroll is used as it is most representative of the employer's projected long-term contribution effort**

Disclosure Information

- **Includes both Notes and Required Supplementary Information**
  - Description of the plan and assumptions
  - Policy for determining contributions
  - NPL sensitivity analysis of a one percentage point increase and decrease in the discount rate
  - Changes in the NPL for the past 10 years
  - Development of long-term earnings assumption (e.g., building block), and if applicable, the "blended" discount rate
  - Annual rates of investment return for past 10 years (plan only)
  - Actuarially determined contribution ("ADC") compared to amount actually contributed for past 10 years.
  - A description of the basis for determining the proportionate share of NPL (and pension expense)

North Dakota Teachers' Fund for Retirement Actuarial Audit of the July 1, 2021 Actuarial Valuation

Dana Woolfrey, FSA, FCA, EA, MAAA
Paul Wood, ASA, FCA, MAAA
January 26, 2023



Purpose of an Actuarial Audit

- Are the funding results, in particular the assessment of the contribution requirements, reasonable?
- Does there appear to be any bias in the current actuarial model?
- Do the reports meet actuarial standards of practice?
- Are there potential, or even predictable, risks on the horizon that need to be discussed and perhaps addressed?

GRS

Review Checklist

- Census Data
- Assumptions
- Actuarial Model
- Report and Deliverables

Primary Conclusion

- "Based on our review of the census data, experience study documents, liability replications, and actuarial valuation report, we believe the 2021 actuarial valuation is reasonable for the purpose of determining the sufficiency of the current contribution rates, based on reasonable assumptions and methods, and the report generally complies with the Actuarial Standards of Practice."

CENSUS DATA REVIEW

Census Data Review

- Checked data against raw and reconciliation of data from year to year
  - Checked that no records “falling off” during processing
    - Most common issue we see
    - Especially on teacher plans with summer valuation date
    - NDTFFR looks good ✓
- **No concerns**

ASSUMPTION REVIEW

Actuarial Funding
Basic Retirement Funding Equation

C + I – E = B

Contributions	Investment Income	Expenses	Benefits
• Funding Policy	• Investment Strategy	• Administrative Policy	• Plan Design

"Money In = Money Out"

NDTFFR Assumption Context

- Fixed rate plan
- Assumptions used to test contribution sufficiency of statutory contribution rates
  1. Assumptions turn out spot on
     - Plan funding evolves as expected
  2. Assumptions turn out conservative (plan costs less then thought)
     - Plan funding improves more quickly than expected
  3. Assumptions turn out aggressive (plan costs more than thought)
     - Plan could prove unsustainable at statutory rates
     - Have to make up for lost time on needed contributions

GRS

The Assumption Set

- The main assumptions used in most actuarial models, include but are not limited to:

Economic	Demographic
Inflation	Retirement Rates
Investment Return/Discount Rate	Disability Rates
Total Payroll Growth	Turnover Rates
Administrative Expenses	Mortality Rates
	Individual Salary Increases

Demographic Assumptions

- Reasonable ✓
  - Mortality using standard current tables
  - Modest adjustments last experience study looked reasonable and appropriate
  - No major demographic gains or losses since study
  - Gains and losses offsetting
    - No concerning bias
- One concern identified in looking at test life detail when setting up valuation replication
  - Early retirement application in cases of extreme benefit reduction

Early Retirement Example

- Eligibility at age 55 and 3/5 years of service
- Tier 1 grandfathered
  - 6% early retirement reduction from Rule of 85 or 65
- Tier 1 non-grandfathered and Tier 2
  - 8% early retirement reduction from Rule of 90 (min age 60) or 65
- Same retirement rates for both groups

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Early Retirement Example

- Example specifically chosen to highlight the issue

Age	Years of Service	Tier 1 GF		Tier 1 NGF and Tier 2	
		Early Retirement Factor	Probability of Retirement	Early Retirement Factor	Probability of Retirement
55	26	76%	2.0%	28%	2.0%
56	27	88%	2.0%	44%	2.0%
57	28	100%	27.5%	60%	3.0%
58	29	100%	15.0%	76%	3.5%
59	30	100%	15.0%	92%	4.0%
60	31	100%	15.0%	100%	17.5%

- Assuming long service member will take a benefit with large reduction rather than simply waiting a few years underestimates costs
- Recommend setting retirement probabilities in red (anything less than 60% for ERF) to 0%
  - Increases our Actuarially Determined Contribution 0.22%

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Economic Assumptions

- Economic assumptions reasonable ✓
- Inflation
  - Appropriate when set, still appropriate now
  - Long term assumption
  - Not feeling the urge to change our own inflation assumptions
  - No COLA in NDTFFR (where we tend to see inflation experience matter more)
    - Although pressure for ad hoc may exist
  - Inflation driven salary experience often doesn't significantly change funding trajectory on fixed rate plans
    - Near term results change, but
    - Contributory pay increasing often offsets initial liability increases over long term

Economic Assumptions

- Investment return = most pivotal assumption
- Current assumption reasonable based on
  - Timing of experience study
  - Plan history
- But likely downward pressure at next experience study
  - Used short-term expectations for prior justification
  - Capital market expectations down since 2019
  - Peer risk
  - Asymmetrical outcomes – consider conservatism

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ACTUARIAL MODEL

Actuarial Model

- Were able to closely replicate Segal's results using stated assumptions
- Recommend alternate approach in calculating normal cost rate
  - Current method over-relies on new hire contributions in sufficiency comparison

Replication Results

- Total Present Value of Future Benefits within 0.2%!

Development of Current Plan Obligations

	Segal	GRS	Difference
1. Present Value of Future Benefits			
Active members			
Retirement	$2,506	$2,497	-0.4%
Withdrawal	184	189	2.9%
Death	35	35	2.6%
Disability	39	45	15.3%
Total	2,764	2,767	0.1%
Total Active	2,764	2,767	0.1%
Retirees and Beneficiaries	2,515	2,524.31	0.4%
Inactive vested members	118	118	0.2%
Inactive non-vested members	14	14	0.0%
Total	$5,411	$5,423	**0.2%**
2. Present Value of Future Normal Costs	$1,075	$1,108	3.1%
3. Actuarial Accrued Liability [1. - 2.]	$4,336	$4,314	-0.5%

Replication Results

Development of the Actuarially Determined Employer Contribution - Replicate			
	Segal	**GRS**	**Difference**
Actuarial Accrued Liability	$4,336	$4,314	-0.5%
Actuarial Value of Assets	$2,974	$2,974	
Unfunded Actuarial Accrued Liability	$1,362	$1,341	-1.6%
Normal Cost	$95.6	$94.5	-1.1%
Administrative Expenses	$2.7	$2.7	0.0%
Amortization of Unfunded Liability	$92.8	$91.4	-1.6%
Total Contribution Requirement	**$191.2**	$188.6	-1.3%
Payroll for Upcoming Year	$793	$793	0.0%
Amounts as a % of Pay:			
Normal Cost*	12.06%	11.92%	
Administrative Expenses	0.35%	0.35%	
Amortization of Unfunded Liability	11.71%	11.52%	
Total Actuarially Determined Contribution	**24.12%**	23.79%	
Employee Contribution Rate	11.75%	11.75%	
Net Employer Actuarially Determined Contribution**	12.37%	12.04%	

**GRS recommendation regarding normal cost would increase rate by 0.5%*

***GRS recommendation incorporating above and early retirement recommendation increases ADC 0.76% and*

increases time to full funding by about 2 years

Normal Cost Rate Determination - Current Approach

Numbers based on July 1, 2021 Segal Valuation (isolating normal cost issue, $ in millions)

	FY 2022 Pay		FY 2022 Contribs
Total	$793	x 24.5% =	$194.2
Closed Group	$761	x 24.5% =	$186.4
New Hires	$32	x 24.5% =	$7.8

	Contribution Needs FY 2022		Contributions Payable FY 2022
Closed Group Normal Cost + Admin as of July 1, 2021	$ 98.3		$ 94.4
Newly Hired Normal Cost During FY 2022	$ -		$ 3.9
Amortization Payment on Closed Group Payroll	$ 89.1		$ 92.0
Amortization Payment on New Hire Payroll	$ 3.7		$ 3.9
Total Dollar Amount	$ 191.2	≤	$ 194.2
As % of Total Pay	24.12%		24.50%
		Sufficient✓	

- Spreads $98.3 million normal cost associated with closed group over both closed group and new hire payroll
- But new hires have their own normal cost
  - Have consistently been showing up with $6 or $7 million liability at first valuation

Normal Cost Rate Determination - Recommended Approach

Numbers based on July 1, 2021 Segal Valuation (isolating normal cost issue, $ in millions)

	FY 2022 Pay		FY 2022 Contribs
Total	$793	x 24.5% =	$194.2
Closed Group	$761	x 24.5% =	$186.4
New Hires	$32	x 24.5% =	$7.8

	Contribution Needs FY 2022		Contributions Payable FY 2022
Closed Group Normal Cost + Admin as of July 1, 2021	$ 98.3		$ 98.3
Newly Hired Normal Cost During FY 2022	$ 4.1		$ 4.1
Amortization Payment on Closed Group Payroll	$ 89.1		$ 88.1
Amortization Payment on New Hire Payroll	$ 3.7		$ 3.7
Total Dollar Amount	$ 195.2	≥	$ 194.2
As % of Total Pay	24.63%		24.50%

Not Sufficient x

- $4.1 million based on GRS typical approach, but could include $6 or $7 million based on recent experience...Should not be $0

REPORT AND PRESENTATION

Valuation Report

- Contains required disclosures
- One minor assumption missing from assumption section
  - Incorporate in 2023

Projections and Associated Communications

- Both MVA Basis and AVA Basis Projections assume market value earns 7.25%
  - Creates volatility in funding period
  - Disconnect with contribution sufficiency result
- If time to full funding is key metric for decision making, then communication should also use smoothed assets
- Okay to use market for stochastic and for short term sensitivity analysis

Funding Period Volatility

- Basing funding period off Market Value (MVA) results in volatile results
- May result in an inconsistent message

	Time to Full Funding	
Valuation Year	**Market Value of Assets**	**Smoothed Value of Assets**
2021	2037	~2042
2022	2044	~2042

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Funding Period Volatility - Disconnect

- Answer to question, "Is contribution sufficient to achieve full funding by 2043?", should be the same based on Actuarially Determined Contribution and Projections

	Information from ADC		Information from Projections	
Valuation Year	**Employer ADC**	**12.75% Contribution Sufficient to Fund by 2043?**	**Full Funding Year**	**12.75% Contribution Sufficient to Fund by 2043?**
2021	12.37%	Yes	2037	Yes
2022	12.12%	Yes	2044	No

GRS

CONCLUSIONS

Primary Conclusion

- “Based on our review of the census data, experience study documents, liability replications, and actuarial valuation report, we believe the 2021 actuarial valuation is reasonable for the purpose of determining the sufficiency of the current contribution rates, based on reasonable assumptions and methods, and the report generally complies with the Actuarial Standards of Practice.”

GRS

Review Checklist

- Data ✓
- Assumptions ✓
  - Pay close attention to retirement experience at eligibilities with severe early retirement reductions
    - Potentially set rates to 0%
  - Likely downward pressure on investment return at upcoming experience study
    - Recommend adopting best estimate or conservative assumption
- Actuarial Model ✓
  - Update normal cost rate calculation to avoid overreliance on new hire payroll
- Report and Deliverables ✓
  - Incorporate minor missing assumption in 2023

Thank You!

- It was a privilege and a pleasure

North Dakota Teachers’ Fund for Retirement

Actuarial Audit of the July 1, 2021 Actuarial Valuation

P: 469.524.0000 | www.grsconsulting.com

January 12, 2023

Board of Trustees
North Dakota Teachers' Fund for Retirement
3442 East Century Avenue
Bismarck, ND 58507-7100

Members of the Board:

Gabriel, Roeder, Smith & Company (GRS) is pleased to present this report of an actuarial audit of the July 1, 2021 Actuarial Valuation of the North Dakota Teachers' Fund for Retirement (NDTFFR). We are grateful to the NDTFFR staff, and Segal, the retained actuary, for their cooperation throughout the actuarial audit process.

This actuarial audit involves an independent verification and analysis of the assumptions, procedures, methods, and conclusions used by the retained actuary for NDTFFR in the valuation as of July 1, 2021, to ensure that the conclusions are technically sound and conform to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board.

GRS is pleased to report to the Board and Staff that, in our professional opinion, the July 1, 2021 Actuarial Valuation prepared by the retained actuary provides a fair and reasonable assessment of the financial position of NDTFFR.

Ms. Woolfrey and Mr. Wood are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Thank you for the opportunity to work on this assignment.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Dana Woolfrey, FSA, FCA, MAAA, EA
Senior Consultant

Paul Wood, ASA, FCA, MAAA
Senior Consultant

Table of Contents

SECTION I

EXECUTIVE SUMMARY

Executive Summary

The North Dakota Retirement and Investment Office engaged Gabriel, Roeder, Smith & Company (GRS) for an actuarial audit of the 2021 actuarial valuation prepared for the North Dakota Teachers' Fund for Retirement.

The purpose of this report is to:

- Provide an evaluation and express an opinion regarding the reasonableness and accuracy of the valuation results (including a determination of actuarial accrued liability, normal cost, and actuarially determined contributions), appropriateness of the actuarial assumptions, and application of the actuarial cost method for the 2021 actuarial valuation; and
- Include any recommendations regarding reasonable alternatives to the actuarial assumptions used in the 2021 actuarial valuation.

The scope of this actuarial audit includes the following:

- Analyze the appropriateness of the actuarial assumptions;
- Review the actuarial assumptions and methodology for compliance with generally recognized and accepted actuarial principles and practices which are consistent with Actuarial Standards of Practice, the Code of Professional Conduct, and the Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries;
- Evaluate the data used for performance of the 2021 actuarial valuation, the degree to which the data is sufficient to support the conclusions of the 2021 actuarial valuation, and the use and appropriateness of any assumptions made regarding the data;
- Conduct a replication of the valuation results using the same data, methods, and assumptions used by the retained actuary in the 2021 actuarial valuation; and
- Assess whether the 2021 actuarial valuation appropriately reflects information pursuant to Actuarial Standards of Practice.

Summary of our Review

Based on our review of the census data, experience study documents, liability replications, and actuarial valuation report, we believe the 2021 actuarial valuation for NDTFFR is reasonable for the purpose, based on reasonable assumptions and methods, and the report generally complies with the Actuarial Standards of Practice.

The technical portion of the audit or the replication was clean with very limited findings. The Total Present Value of Future Benefits is generally considered the primary actuarial result for replication purposes. **GRS was able to match this primary result within 0.2%.**

GRS has identified the following items for the Board, the retained actuary and Staff for the upcoming valuation and experience study which we believe will further improve the reliability of your valuation results in future years. Given that the July 1, 2022 valuation has already been published, we recommend these be incorporated in the July 1, 2023 valuation or as part of the next experience study.

Refinements for the actuarial valuation as of July 1, 2023:

- GRS recommends that early retirement rates be eliminated in circumstances where the benefit is substantially reduced. For additional details, see page 11 under "Departures".
- GRS recommends that the determination of the normal cost rate be better aligned with the associated payroll. For additional details, see page 14.
- GRS recommends that the administrative expense assumption be based on an average of the prior two years, adjusted for payroll, to reflect the biennial cycle of the plan's expenses.

SECTION II

GENERAL ACTUARIAL AUDIT PROCEDURE

General Actuarial Audit Procedure

GRS received and reviewed the following items:

- July 1, 2021 actuarial valuation report;
- Analysis of Actuarial Experience During the Period July 1, 2014 through June 30, 2019
- A preliminary set of census data for plan participants and beneficiaries as of July 1, 2020 and July 1, 2021 originally provided by NDTFFR to the retained actuary for the actuarial valuation; and
- A final set of census data for plan participants and beneficiaries as of July 1, 2020 and July 1, 2021 used by the retained actuary for the actuarial valuation.

In performing our review, we:

- Reviewed descriptions of member benefits and applicable statutes to understand the benefits provided;
- Reviewed the appropriateness of the actuarial assumptions and methods;
- Reviewed the actuarial valuation report; and
- Replicated the actuarial valuation results, including the determination of actuarial accrued liability, normal cost, and actuarially determined contributions.

The actuarial audit observations, which follow, are based on our review of this information and subsequent correspondence with the retained actuary for clarification and further documentation.

Key Actuarial Concepts

An actuarial valuation is a detailed statistical simulation of the future operation of a retirement system using the set of actuarial assumptions adopted by the governing board. It is designed to simulate all of the dynamics of such a retirement system for each current participant of the plan, including:

- Accrual of future service,
- Changes in benefits,
- Leaving the plan through retirement, disability, withdrawal, or death, and
- Determination of and payment of benefits from the plan.

This simulated dynamic is applied to each active member in the plan and results in a set of expected future benefit payments for that member. Discounting those future payments for the likelihood of survival at the assumed rate of investment return produces the Total Present Value of Plan Benefits (TPV) for that participant. The actuarial cost method will allocate this TPV between the participant's past service (actuarial accrued liability) and future service (future normal costs).

We believe that an actuarial audit should not focus on finding differences in actuarial processes and procedures utilized by the consulting actuary and the auditing actuary. Rather, our intent is to identify and suggest improvements to the process and procedures utilized by the retained actuary for NDTFFR. In performing this actuarial audit, we attempted to limit our discussions regarding opinion differences and focus our attention on the accuracy of the calculations of the liability and costs, completeness and reliability of reporting, and compliance with the Actuarial Standards of Practice that apply to the work performed by the retained actuary.

These key actuarial concepts will be discussed in more detail throughout this report.

Actuarial Qualifications

The actuarial valuation report was signed by Matthew Strom, FSA, MAAA, EA, and Kim Nicholl, FSA, MAAA, EA, and Tatsiana Dybal, FSA, MAAA, EA. Ms. Nicholl has since retired, but based on the information provided by the online actuarial directory sponsored by the Society of Actuaries, Mr. Strom and Ms. Dybal have attained the actuarial credentials noted on the signature line of the actuarial valuation report and are compliant with the Society of Actuaries Continuing Professional Development requirement.

SECTION III

ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions

Overview

For any pension plan, actuarial assumptions are selected that are intended to provide reasonable estimates of future expected events, such as retirement, turnover, and mortality. These assumptions, along with an actuarial cost method, the employee census data, and the plan's provisions, are used to determine the actuarial liabilities and the overall actuarially determined funding requirements for the plan. The true cost to the plan over time will be the actual benefit payments and expenses required by the plan's provisions for the participant group under the plan. To the extent the actual experience deviates from the assumptions, experience gains and losses will occur. These gains (losses) then serve to reduce (increase) future actuarially determined contributions and increase (reduce) the funded ratio. The actuarial assumptions should be individually reasonable and consistent in the aggregate, and should be reviewed periodically to ensure that they remain appropriate.

The Actuarial Standards Board ("ASB") provides guidance on establishing actuarial assumptions for a retirement program through the following Actuarial Standards of Practices (ASOP):

(1) ASOP No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*
(2) ASOP No. 23, *Data Quality*
(3) ASOP No. 25, *Credibility Procedures*
(4) ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*
(5) ASOP No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*
(6) ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*
(7) ASOP No. 51, *Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions*
(8) ASOP No. 56, *Modelling*

We generally reviewed the application of the ASOPs applicable on the valuation date of July 1, 2021 for NDTFFR. Subsequent changes to the ASOPs will have to be reflected in future actuarial valuation reports.

The actuarial valuation report for NDTFFR contains descriptions of the actuarial assumptions which were used in the 2021 actuarial valuation. Additionally, the retained actuary published an actuarial experience study report, dated March 19, 2020. We conducted a thorough review of these documents in order to assess the reasonableness of the assumptions used in the actuarial valuations.

Actuarial assumptions for the valuation of retirement programs are of two types: (i) demographic assumptions, and (ii) economic assumptions. We have assessed the reasonableness of both types as part of this actuarial audit.

Demographic Assumptions

General

These assumptions simulate the movement of participants into and out of plan coverage and between status types. Key demographic assumptions are:

- turnover among active members,
- retirement patterns among active members, and
- healthy retiree mortality.

In addition, there are a number of other demographic assumptions with less substantial impact on the results of the process, such as:

- disability incidence and mortality among disabled benefit recipients,
- mortality among active members,
- percent of active members who are married and the relationship of the ages of participants and spouses, and
- benefit elections upon retirement or termination.

Experience Study Process

Demographic assumptions for retirement programs are normally established by statistical studies of recent actual experience, called experience studies. Such studies underlie the assumptions used in the valuations.

In an experience study, the actuary first determines the number of deaths, retirements, etc. that occurred during the experience period. Then the actuary determines the number "expected" to occur, based on the current actuarial assumptions. Finally, the actuary calculates the A/E ratio, where "A" is the actual number (of retirements, for example) and "E" is the expected number. If the current assumptions were "perfect", the A/E ratio would be 100%. When the A/E ratio varies much from 100%, it is a sign that new assumptions may be needed. (However, the actuary may prefer to set assumptions to produce an A/E ratio a little above or below 100%, in order to introduce some conservatism.)

The actuary can further enhance the "count-weighted" process, described above, by using a "liability-weighted" experience analysis. A liability-weighted analysis will generally use amounts such as benefits or liabilities to "weight" and review the experience. From the perspective of the retirement assumption, selecting an assumption based on headcount-weighting is consistent with estimating expected retirements, but selecting an assumption based on amount-weighting is consistent with minimizing gains and losses associated with expected retirements. By weighting the data by benefit amounts, the actuary gives more weight to members who have larger benefits (and thus have larger liabilities). The same concepts apply when the amount-weighted approach is applied to other demographic assumptions such as mortality and termination.

Assumption Setting

Once it is determined whether or not an assumption needs adjustment, setting the new assumption depends upon the extent to which the current experience is an indicator of the long-term future.

- Full credibility may be given to the current experience. Under this approach, the new assumptions are set very close to recent experience.
- Alternatively, the recent experience might be given only partial credibility. Thus, the new assumptions may be set by blending the recent experience with the prior assumption.
- If recent experience is believed to be atypical of the future, such knowledge is taken into account.
- Finally, it may be determined that the size of the plan does not provide a large enough sample to make the data credible. In such cases, the experience of the plan may be disregarded and the assumption is set based upon industry standards for similar groups.

Actuarial Standards of Practice (ASOP) No. 35, *Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations*, applies to actuaries when they are selecting demographic assumptions. In accordance with ASOP No. 35, an actuary should identify the types of demographic assumptions to use for a specific measurement. In doing so, the actuary should determine the following:

a) The purpose and nature of the measurement;
b) The plan provisions or benefits and factors that will affect the timing and value of any potential benefit payments;
c) The characteristics of the obligation to be measured (such as measurement period, pattern of plan payments over time, open or closed group, and volatility);
d) The contingencies that give rise to benefits or result in loss of benefits;
e) The significance of each assumption; and
f) The characteristics of the covered group.

Not every contingency requires a separate assumption. For example, for a plan that is expected to provide benefits of equal value to employees who voluntarily terminate employment, become disabled, or retire, the actuary may use an assumption that reflects some or all of the above contingencies in combination rather than selecting a separate assumption for each.

Observations on Demographic Assumptions

Overall, it appears that the current demographic assumptions are reasonable for valuing the liabilities and assessing the contributions as of 2021.

Mortality

The healthy retiree mortality assumption uses a recent, standard table published by the SOA based on public sector data (Pub-2010), specifically reflecting the underlying teacher population (the Teachers version of the Pub-2010 tables). The adjustments made specific to NDTFFR relied upon benefit-weighted information and explicitly cited the amount of data and the resulting credibility given to the data.

Future mortality adjustments were reflected using the most recent table available at the time, MP-2019. We find that each component of this approach follows best practice.

Active, disabled, and survivor mortality assumptions play a much lesser role in the valuation and are lower frequency events, providing less credible data. We concur with the retained actuary's choice of standard active employee, disabled mortality, and contingent survivor tables that are reflective of the underlying population.

Departures (Retirement, Termination, Disability)

During the five-year experience period, demographic gains and losses related to departures from active status were minimal in relation to the overall liabilities and did not demonstrate any consistent bias in the assumptions. There was minimal change recommended to the assumptions in the most recent experience study which is consistent with the observed gains and losses over the study period. We believe these assumptions to be reasonable in general.

We did note, however, that the early retirement rates, as currently being applied, can result in assuming that a certain percentage of members who are not grandfathered under the pre-2013 provisions will take an extremely reduced early retirement benefit. A non-grandfathered member who retires at age 55 will potentially be subject to an 80% reduction in their benefit (resulting in them receiving 20% of the unreduced benefit). This is not something that has fully had time to play out in the gain loss experience (to observe a possible bias), and the data used to set this assumption was largely reflective of grandfathered members who are subject to a smaller reduction. However, until there is sufficient data to study this group, we feel it would be prudent to assume no early retirement from this group in instances when the member is more than 5 years from unreduced retirement (a greater than 40% reduction in benefit). Assuming retirements with deep early retirement reductions while waiting to have sufficient data to study the group may understate the normal costs for this group. This could result in new unfunded liabilities once there is sufficient data to study the group and the rates are likely lowered or eliminated at younger ages. Implementing a change now will result in relatively minimal impact to plan results and potentially head off bigger impacts later. GRS found that implementing this change as recommended increased the total actuarial contribution requirement by 0.22% of pay.

Other

Mortality, retirement and termination rates are the primary demographic assumptions that impact the valuation results. We examined the other demographic assumptions and found them to be reasonable and similar to those used by other public sector plans.

Economic Assumptions

General

Economic assumptions simulate the impact of economic forces on the amounts and values of future benefits. Key economic assumptions are the assumed rate of investment return and assumed rates of future salary increase. All economic assumptions are built upon an underlying inflation assumption.

ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, applies to actuaries when they are selecting economic assumptions. ASOP No. 27 states that each economic assumption selected by the actuary should be reasonable. For this purpose, an assumption is reasonable if it has the following characteristics:

a) It is appropriate for the purpose of the measurement;
b) It reflects the actuary's professional judgment;
c) It takes into account historical and current economic data that is relevant as of the measurement date;
d) It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
e) It has no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included and disclosed, or when alternative assumptions are used for the assessment of risk.

Additionally, ASOP No. 27 states that communications regarding actuarial reports subject to this standard should contain the following:

a) A description of each significant assumption used in the measurement and whether the assumption represents an estimate of future experience, and
b) A description of the information and analysis used in selecting each economic assumption that has a significant effect on the measurement.

Inflation

We believe the inflation assumption of 2.30% is reasonable. Although it was set during a time with very different economic conditions, these assumptions are intended to reflect long-term expectations and it remains appropriate today. The current high inflation environment does not necessitate a change in this long-term assumption.

Administrative Expenses

The administrative expenses were not specifically addressed in the experience study, but the current assumption uses prior year actual expenses with a one-year inflation adjustment. This is not inappropriate, but we noted that the administrative expenses tend to oscillate biennially (possibly associated with the legislative cycle). It may be slightly more appropriate to use an average of the prior two years (adjusted for inflation).

Investment Return

The investment return assumption is one of the principal assumptions in any actuarial valuation. It is used to discount future expected benefit payments to the valuation date to determine the liabilities of the retirement system. Even a small change to this assumption can produce significant changes to the liabilities and contribution rates.

This assumption is generally set based on forward-looking capital market assumptions provided by investment consultants. These capital market assumptions vary highly from investment consultant to investment consultant and vary highly depending on the period in which the capital market assumptions were developed, and tends to be a more subjective assumption than others. Segal used the 2019 Horizon survey of 20-year returns as their source of capital market assumptions, and ultimately recommended a 7.25% investment return assumption.

We do not find this to be inappropriate; however, we offer the following perspective for the Board regarding reviewing this assumption in the next experience study:

- We see an increased consideration of 10-year capital market assumptions in studying this assumption. Although the plan has a long-term investment horizon, near-term returns are important in the outcome of the plan and should carry some weight. For reference, using the 10-year capital market assumptions from the same Horizon survey used in your most recent experience study would have resulted in a geometric real return almost one percent less than the 5.18% shown on page 15 of the report. Thus, the 0.23% margin for adverse experience is a function of using the longer time horizon to set the return assumption. Therefore, the Board should not take this to mean this assumption was set conservatively.
- At 7.25%, NDTFFR is at the top end of this assumption for their peer group. Most public sector plans now use returns that are 7.00% or less.
- Lastly, and most importantly, NDTFFR is a fixed contribution rate plan with a sunset provision regarding the contribution. In general, we aim to determine a best estimate set of assumptions, but also find that there is an asymmetry of outcomes when it comes to fixed rate plans. If we choose our assumptions to be slightly conservative, and things work out better than expected, then the plan is simply better funded than assumed. If we choose our assumptions to be slightly aggressive, and things don't work out as well as expected, we may find that the plan is unsustainable and that the Board does not have the power for corrective action. Although not an immediate concern, the sunset provision should also weigh into the assumption setting process so as to avoid prematurely lowering the contributions.

<u>Wage-Related Assumptions</u>

For the merit-based salary increase assumption, the study removed actual inflation during the study period which we find to be best practice. The salary increase experience seemed relatively in line with historical rates and modest changes were made according to experience. The 3.25% payroll growth assumption appears reasonable and supported by the information provided.

Actuarial Methods

Actuarial Cost Method

The Entry Age Normal actuarial cost method is the most prevalent funding method in the public sector. It is appropriate for the public sector because it produces costs that remain relatively stable as a percentage of payroll over time, resulting in intergenerational equity for taxpayers. We have reviewed the retained actuary's application of the Entry Age Normal actuarial cost method and we believe that the method is reasonable and appropriately applied.

Asset Smoothing Method

NDTFFR uses five-year asset smoothing with a 20% corridor. This is a reasonable and common approach.

Amortization Method

The Actuarially Determined Contribution (ADC) uses a 22-year closed, level percent of pay amortization. We find this to be a reasonable approach at the current time. Eventually, as the amortization period begins to shorten (for example when the amortization reaches 10 to 15 years), NDTFFR may wish to use a different approach such as a layered amortization approach to avoid extreme volatility in the ADC produced by short amortization periods applied to new gains and losses.

We noted that in their most recent 2022 valuation presentation, Segal already brought up this idea with the Board. The example given included different amortization periods for different sources of unfunded liabilities. Although it is consistent with CCA whitepaper on this topic, which is considered to be a model document, the authors of this report prefer to introduce a single new amortization base each year for simplicity and to avoid anomalies that can occur with the more complex approach.

Determination of Normal Cost Rate and Alignment with Contributory Payroll

The payroll for the upcoming year was reported as $793 million. GRS was able to closely replicate this amount using the fiscal year 2021 pays for the active population along with a year's salary increase based on the individual salary increase assumption. This amount reflects the expected payroll if the entire active population works the full fiscal year 2022. For purposes of determining contributory payroll towards unfunded liabilities, GRS finds this to be an appropriate payroll estimation.

GRS was able to closely replicate the Segal normal cost of $95.6 million based on the active population at July 1, 2021. This amount relates only to current actives, no new hires during fiscal year 2022, and reflects that many members will terminate and retire during the year. New hire payroll should not be relied on to fund these closed group normal costs. New hires come in with a year of service at the valuation date causing a $6 or $7 million liability loss each year. They also come in with contributions sufficient to cover these liabilities. Thus, an approach that excluded new hire normal costs AND new hire contributions in determining funding sufficiency would be acceptable. However, in this instance, new hire normal costs are *excluded* while new hire contributions are *included* thus overstating contribution sufficiency. Essentially, the current approach relies on new hire contributions to pay for new hire liabilities, contribute towards the unfunded liability *AND* pay for normal costs of members terminating during the year which overcounts this new hire contributory payroll.

In converting the closed group dollar normal cost amount to a rate, GRS would spread this normal cost dollar amount over an expected payroll of the active members at July 1, 2021 which reflects that not all members will work the full year, consistent with how the normal cost dollar amount was determined. GRS estimates this expected pay during fiscal year 2022 to be $760 million. Spreading the $96 million normal cost amount over this $760 million expected pay (rather than the $793 million open group pay), increases the normal cost rate by about 0.5%. We find that this higher normal cost rate would be the more appropriate rate to determine the contribution sufficiency of the statutory rates.

SECTION IV

ACTUARIAL VALUATION RESULTS

Actuarial Valuation Results

Replication of Actuarial Valuation Results

We replicated the 2021 actuarial valuation results using the assumptions and methods used by the retained actuary, and we were able to replicate the plan liabilities very closely.

NDTFFR Key Valuation Results as of July 1, 2021

Development of Current Plan Obligations			
	Segal	**GRS**	**Difference**
1. Present Value of Future Benefits			
Active members			
Retirement	$2,506	$2,497	-0.4%
Withdrawal	184	189	2.9%
Death	35	35	2.6%
Disability	39	45	15.3%
Total	2,764	2,767	0.1%
Total Active	2,764	2,767	0.1%
Retirees and Beneficiaries	2,515	2,524.31	0.4%
Inactive vested members	118	118	0.2%
Inactive non-vested members	14	14	0.0%
Total	$5,411	$5,423	**0.2%**
2. Present Value of Future Normal Costs	$1,075	$1,108	3.1%
3. Actuarial Accrued Liability [1. - 2.]	$4,336	$4,314	-0.5%

$ in millions

Development of the Actuarially Determined Employer Contribution - Replicate			
	Segal	**GRS**	**Difference**
Actuarial Accrued Liability	$4,336	$4,314	-0.5%
Actuarial Value of Assets	$2,974	$2,974	
Unfunded Actuarial Accrued Liability	$1,362	$1,341	-1.6%
Normal Cost	$95.6	$94.5	-1.1%
Administrative Expenses	$2.7	$2.7	0.0%
Amortization of Unfunded Liability	$92.8	$91.4	-1.6%
Payroll for Upcoming Year	$793	$793	0.0%
Amounts as a % of Pay:			
Normal Cost*	12.06%	11.92%	
Administrative Expenses	0.35%	0.35%	
Amortization of Unfunded Liability	11.71%	11.52%	
Total Actuarially Determined Contribution	24.12%	23.79%	
Employee Contribution Rate	11.75%	11.75%	
Net Employer Actuarially Determined Contribution**	12.37%	12.04%	

**The normal cost rate shown attempts to fully replicate Segal's methodology. The normal cost rate, and subsequently the Net Employer Actuarially Determined Contribution, would be 0.50% higher using recommended methodology.*

***The GRS Net Employer Actuarially Determined Contribution after incorporating both the change to the normal cost rate determination as well as the recommended elimination of the application of retirement rates in circumstances with large early retirement reductions is 12.76% of pay (or 0.72% higher than the replication results displayed above).*

$ in millions

SECTION V

CONTENT OF THE VALUATION REPORT

Content of the Valuation Report and Presentation

We have reviewed the actuarial valuation report and presentation with particular attention to the requirements of ASOP Nos. 4, 41, 51 and 56, and have no major concerns in this regard.

We have one minor item for the upcoming report:

- Currently there is an assumption regarding inactive vested retirements that is not noted in the valuation report. For inactive vested retirements, the current assumption is that 5% will retire at each early retirement age prior to normal retirement and that 100% of the remaining inactive vested members will retire at normal retirement age. Segal indicated that they would update this in the next valuation report, however it was not updated in the 2022 valuation and will need to be updated in the 2023 valuation.

SECTION VI

SUMMARY

Summary

Based on our review of the census data, experience study documents, liability replications, and actuarial valuation report, we believe the 2021 actuarial valuation is reasonable for the purpose of determining the sufficiency of the current contribution rates, based on reasonable assumptions and methods, and the report generally complies with the Actuarial Standards of Practice.

GRS has identified some items for the Board, the retained actuary and Staff for the upcoming valuation and experience study which we believe will further improve the accuracy of your valuation results in future years, as well as some strategic considerations for the Board going forward. These recommendations are for consideration, but do not hinder our opinion of this being a “clean” audit.

NORTH Dakota | Retirement and Investment

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MEMORANDUM

TO: **TFFR Board of Trustees**
FROM: **Chad R. Roberts, DED/CRO**
DATE: **January 18, 2023**
RE: **TFFR Actuarial and Consulting Services Request for Proposal**

Summary

TFFR Staff has prepared a request for proposal for actuarial and consulting services for the period starting July 1, 2023, ending June 30, 2025. Our present contract with our consultant, Segal, expires on June 30, 2023.

The RFP includes in the scope of work an experience study expected to be performed in FY2024 as well as actuarial valuation, GASB 67 and 68 reporting, proposed legislation analysis and consulting services. The last experience study was completed in 2019 and is mandated to be completed every five years by the Board.

Schedule

RFP issued	2/1/2023
Deadline for submission of Questions and Objections	2/10/2023 by 12:00 PM, CT
Solicitation Amendment with responses to Questions issued approximately (if required)	2/14/2023
Deadline for receipt of proposals (Solicitation Closing)	2/22/2023 by 12:00 PM, CT
Proposal evaluation completed by approximately	3/17/2023
Top Offerors present to NDTFFR Board (In Bismarck or Remote available)	4/27/2023
Notice of intent to award issued approximately	5/1/2023
State issues Contract approximately	5/5/2023
Contract start approximately	7/1/2023

BOARD ACTION REQUESTED: Approval of RFP

STATE OF NORTH DAKOTA

ND Teachers' Fund for Retirement -
ND Retirement and Investment Office
1600 E Century Ave, Ste 3
P.O. Box 7100
Bismarck, ND 58507

REQUEST FOR PROPOSAL (RFP)

RFP Title: Actuarial and Consulting Services

RFP Number: 110.7-023-006

Issued: 2/1/2023

TABLE OF CONTENTS

ATTACHMENTS

SECTION ONE – INSTRUCTIONS

1.1 PURPOSE OF RFP

The State of North Dakota, acting through its ND Teachers' Fund for Retirement - ND Retirement and Investment Office (the STATE) is soliciting proposals for Actuarial and Consulting Services for the ND Teachers' Fund for Retirement pension plan.

1.2 PROCUREMENT OFFICER CONTACT INFORMATION

The Procurement Officer is the point of contact for this RFP. Offerors shall direct all communications regarding this RFP to the Procurement Officer. Please do not add the Procurement Officer to any marketing distribution lists.

PROCUREMENT OFFICER: Gabriel Hoggarth
EMAIL: gjhoggarth@nd.gov
PHONE: 701-328-2740
TTY Users call: 7-1-1

A person or firm interested in submitting a proposal should ensure all communications related to the procurement are only with the designated point of contact. This section does not restrict communication with state officials or any member of the legislative assembly unless the state official or member of the legislative assembly is involved directly with the procurement for which the person is interested or has submitted a bid or proposal (N.D.C.C. § 54-44.4-01.1).

Engaging in unauthorized communication or seeking to obtain information about an open solicitation with any state employee or official other than the responsible Procurement Officer or designee is sufficient grounds for suspension or debarment. [N.D.A.C. § 4-12-05-04(7)]

1.3 DEFINITIONS

For the purposes of this RFP, the acronyms and defined terms are as follows:

Acronym or Term	Name or Definitions
Contractor	Entity that has an approved contract with the State of North Dakota
CT	Central Time Zone
OMB	Office of Management and Budget
RFP	Request for Proposal
Solicitation Closing	Deadline for receipt of proposals listed in the RFP Schedule
SPO	Office of Management and Budget, State Procurement Office
SPO Online	State Procurement Office Online system
TFFR	Teachers' Fund for Retirement
SIB	State Investment Board
RIO	Retirement & Investment Office
NDCC	North Dakota Century Code
NDAC	North Dakota Administrative Code
GASB	Governmental Accounting Standards Board
GFOA	Government Finance Officers Association
ACFR	Annual Comprehensive Financial Report
LEBPC	Legislative Employee Benefits Programs Committee

1.4 RFP SCHEDULE

EVENT	DATE and TIME
RFP issued	2/1/2023
Deadline for submission of Questions and Objections	2/10/2023 by 12:00 PM, CT
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Notice of intent to award issued approximately	5/1/2023
State issues Contract approximately	5/5/2023
Contract start approximately	7/1/2023

1.5 ASSISTANCE TO INDIVIDUALS WITH A DISABILITY

Contact the Procurement Officer, as soon as possible, if an individual with a disability needs assistance with the RFP, including any events in the RFP schedule, so reasonable accommodations can be made.

1.6 BIDDERS LIST AND SECRETARY OF STATE REGISTRATION REQUIREMENTS

Offerors must comply with requirements related for OMB Bidders List application and Secretary of State registration [N.D.C.C. § 54-44.4-09]. Bidders Lists are used to notify vendors when solicitations are issued on SPO Online.

Proposals will be accepted from Offerors that are not on the Bidders List. The successful Offeror must complete the Bidders List application process and comply with Secretary of State registration requirements within 14 calendar days from the date a notice of intent to award is issued. If the successful Offeror does not register within this time, its proposal may be rejected.

Bidders List and Secretary of State Information

1. Secretary of State Registration and Online Bidder Registration instructions are available online at How to Bid | Office of Management and Budget, North Dakota.
2. Offeror should check the Bidders List to determine if Offeror is already registered.
3. An Offeror that needs to complete the registration process shall:
    a. Register with the Secretary of State (fees apply) and obtain a "System ID" number.
    b. Complete the On-line Bidder Registration including selecting commodity codes. Notices related to this RFP will be sent to the Bidders List for the needed commodity or service and other known potential Offerors. The commodity codes used for this solicitation are: 946-12, 946-20, 918-04, 918-40, 946-45, 946-56, 946-75, 918-49, and 918-83 commodity codes.
4. The successful Offeror may be required to register as a new supplier to receive payment from the STATE. New vendors (suppliers and individuals) looking to receive payment from the STATE should use the online Supplier Registration.

1.7 STATE PROCUREMENT WEBSITE (SPO ONLINE)

This RFP and any related amendments and notices will be posted on the North Dakota OMB website using SPO Online. Offerors are responsible for checking this website to obtain all information and documents related to this RFP: https://apps.nd.gov/csd/spo/services/bidder/main.htm

Select "Recent Solicitations". Recent Solicitations are listed by close date.

Notices related to this RFP will be sent to the Bidders List for the needed commodity or service and other known potential Offerors.

Offerors not having completed the Bidders List registration may request to receive notices related to this RFP by contacting the Procurement Officer in writing with the following information: RFP title, business name, contact person, mailing address, telephone number, and email address.

1.8 AMENDMENTS TO THE RFP

If an amendment to this RFP is issued, it will be provided to all Offerors on the Bidders List for the solicitation and to those prospective Offerors who have contacted the Procurement Officer to receive notices related to the RFP. An Offeror shall include in its proposal any required acknowledgements of amendments to the RFP.

1.9 DEADLINE FOR QUESTIONS AND OBJECTIONS

Offerors should carefully review the RFP including all Attachments. Offerors may ask questions to obtain clarification and request additional information, or object to material in the RFP. Questions and objections must be submitted to the Procurement Officer in writing by the deadline identified in the RFP Schedule. If no deadline is specified, questions or objections must be received at least seven days prior to the Solicitation Closing deadline. The Procurement Officer may elect to respond to questions received after the deadline.

Questions and objections should include a reference to the applicable RFP section or subsection. Email is the preferred method of submission with the RFP number and title cited in the email subject line.

Responses to questions will be distributed as a solicitation amendment unless the question can be answered by referring the Offeror to a specific section of the RFP.

1.10 OFFER HELD FIRM

Offerors must hold proposals firm for at least 90 days from the deadline for receipt of proposals (Solicitation Closing). The STATE may send a written request to all Offerors to hold their offer firm for a longer period of time.

1.11 OFFEROR RESPONSIBLE FOR COSTS

Offeror is responsible for all costs associated with the preparation, submittal, and evaluation of any proposal including any travel and per diem associated with demonstrations and presentations.

1.12 TAXES

The STATE is not responsible for and will not pay itemized local, state, or federal taxes. Purchases of tangible personal property made by a state government agency is exempt from sales tax. The state sales tax exemption number is E-2001, and certificates will be furnished upon requested by the purchasing agency. The contractor must provide a valid Vendor Tax Identification Number as a provision of the contract.

The purchasing agency will determine if services provided under this contract are 1099 reportable. The purchasing agency may require the contractor to submit an IRS Form W-9.

The state tax exemption number should not be used by contractors in the performance of a contract.

A contractor or service provider performing any contract, including service contracts, for the United States Government, State of North Dakota, counties, cities, school districts, park board or any other political subdivisions within North Dakota is not exempt from payment of sales or use tax on materials, tangible personal property, and supplies used or consumed in carrying out contracts. In these cases, the contractor is required to file returns and pay sales and use tax just as required for contracts with private parties. Contact the North Dakota Tax Department at 701.328.1246 or visit its website at https://www.nd.gov/tax/tax-resources/ for more information.

A contractor performing any contract, including a service contract, within North Dakota is also subject to the corporation income tax, individual income tax, and withholding tax reporting requirements, whether the contract is performed by a corporation, partnership, or other business entity, or as an employee of the contractor. In the case of employees performing the services in the state, the contractor is required to withhold state income tax from the employees' compensation and remit to the state as required by law. Contact the North Dakota Tax Department at 701.328.1248 or visit its website for more information.

1.13 PROPOSAL RECEIPT DEADLINE – LATE PROPOSALS REJECTED

An Offeror is solely responsible for ensuring its proposal is received by the STATE prior to the Solicitation Closing deadline identified in the RFP schedule regardless of the method of submission. A solicitation amendment will be issued if this deadline is changed. An Offeror may contact the Procurement Officer to inquire whether its proposal has been received. Proposals delivered late will be rejected pursuant to N.D.A.C. § 4-12-08-13.

1.14 PROPOSAL OPENING

A public opening will not be held.

1.15 AMENDMENT AND WITHDRAWAL OF PROPOSALS

Offeror may amend, supplement, or withdraw proposal prior to the Solicitation closing deadline. No changes will be accepted after the Solicitation closing deadline. After the Solicitation closing deadline, Offeror may make a written request to withdraw proposal and provide evidence that a substantial mistake has been made, and the STATE may permit withdrawal.

1.16 NEWS RELEASES

Offerors shall not make any news releases related to this RFP without prior approval of the STATE.

1.17 CONFLICT OF INTEREST

Under state laws and rules, a state employee or official shall not participate directly or indirectly in a procurement when the state employee or officials knows of a conflict of interest. Potential conflicts of interest include state employees or their immediate family members employed by the firm, seeking employment with the firm, or with a financial interest in the firm. Potential conflicts of interest will be addressed in accordance with N.D.A.C. § 4-12-04-04. [N.D.C.C. § 12.1-13-03]

Persons employed by the State of North Dakota, or within one year thereafter, may be prohibited from acquiring a pecuniary interest in a public contract or transaction. Offerors should review N.D.C.C. § 12.1-13-02 to ensure compliance and avoid such conflict(s) of interest.

1.18 ATTEMPT TO INFLUENCE PROHIBITED

Offerors must not give or offer to give anything to a state employee or official anything that might influence or appear to influence procurement decisions. Suspected attempt to influence will be handled in accordance with N.D.A.C. § 4-12-04-05.

1.19 COLLUSION PROHIBITED

Offerors must prepare proposals independently, without collusion. Suspected collusion will be handled in accordance with N.D.A.C § 4-12-04-06.

1.20 PROTEST AND APPEAL

An interested party may protest a solicitation pursuant to N.D.C.C. § 54-44.4-12 and N.D.A.C. § 4-12-14-01. When a solicitation contains a deadline for submission of questions and objections, protests of the solicitation will not be allowed if these faults have not been brought to the attention of the Procurement Officer before the specified deadline. If no deadline for questions is specified, protest based upon defects in the solicitation must be made at least seven calendar days before the deadline for receipt of proposals.

An Offeror that has submitted a response to a solicitation and is aggrieved may protest an award or notice of intent to award pursuant to N.D.C.C. § 54-44.4-12 and N.D.A.C. § 4-12-14-02. The protest must be submitted in writing to the Procurement Officer during the protest period, which is seven calendar days beginning the day after the notice of intent to award is issued.

The protestor may appeal the decision of the Procurement Officer to the Director of OMB or designee in writing within seven calendar days after receiving notice of the decision pursuant to N.D.C.C. § 54-44.4-12 and N.D.A.C. § 4-12-14-03.

SECTION TWO – BACKGROUND

2.1 BACKGROUND INFORMATION

The North Dakota Teachers' Fund for Retirement (TFFR) is a qualified governmental defined benefit pension plan covering North Dakota public school teachers and administrators and certain other teachers who meet statutory membership requirements. TFFR provides retirement, disability, and survivor benefits under North Dakota Century Code (NDCC) Chapter 15-39.1.

The TFFR Board of Trustees is responsible for managing the retirement program. The Board consists of the state treasurer, state superintendent of public instruction, and five members appointed by the Governor for five-year terms. The appointed members include one active school administrator, two active teachers, and two retired members.

Under North Dakota law, the TFFR Board is required to arrange for actuarial valuations of the Fund, establish the Fund's investment policy, and determine appropriate service levels for members. The ND State Investment Board (SIB) is responsible for setting the policies and procedures guiding the investment of TFFR assets. The TFFR and SIB programs are administered by the North Dakota Retirement and Investment Office (RIO).

As of the July 1, 2022 valuation report, TFFR had 11,802 active members, 3,250 inactive members, and 9,483 retirees and beneficiaries. The plan's funded level was 69.9%.

Additional information about the TFFR program can be found here:

https://www.rio.nd.gov/teachers-fund-retirement-members

North Dakota Century Code (NDCC) Chapter 15-39.1 contains TFFR plan provisions:

http://www.legis.nd.gov/cencode/t15c39-1.pdf?20151104100514

TFFR Plan Management Policy:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/TFFR/Reports/planmgmtpolicy2019.pdf

2022 Annual Valuation Report and Funding Projections:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/TFFR/Reports/valuationreportsegal2022.pdf

2022 GASB 68 Report:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/TFFR/GASB/tffrgasbsegalrpt2022.pdf

2021 Plan Management Policy Score Update:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/TFFR/Reports/planmgmtscore2021.pdf

2019 Actuarial Experience Study:

https://www.rio.nd.gov/sites/www/files/documents/PDFs/TFFR/Reports/experiencestudyreport2020.pdf

2022 Annual Comprehensive Financial Report:

NEED LINK – still needs to be posted to website

2021 Actuarial Audit Report:

NEED LINK – still needs to be posted to website

Reports from prior years:

https://www.rio.nd.gov/newsletters-reports

https://www.rio.nd.gov/teachers-fund-retirement-employers

SECTION THREE – SCOPE OF WORK

3.1 SCOPE OF WORK

RIO, on behalf of TFFR, is soliciting proposals for an actuarial consulting firm with experience in public pension plans to provide actuarial and consulting services for the TFFR pension plan.

The work to be performed is for a two-year period from July 1, 2023, through June 30, 2025, with the option to renew for additional two-year periods, subject to satisfactory performance by the consultant and negotiation of fees.

The work to be performed includes annual pension valuations, annual GASB 67 and 68 reports, an actuarial experience study, pricing proposed legislation, and general retirement plan consulting. Work will be conducted under a fixed fee arrangement for annual pension valuations, GASB reports, and actuarial experience study; and an hourly fee for services rate for pricing proposed legislation and general consulting services.

A. Actuarial Valuations

The actuary will be required to prepare an annual pension valuation report for TFFR each fiscal year on a fixed fee basis. TFFR operates on a July 1 through June 30 fiscal year basis. At minimum, the actuarial valuation report must address or include, but is not limited to, the following items:

1) Applicable provisions of North Dakota Century Code (NDCC) and North Dakota Administrative Code (NDAC).
2) Effects of state legislation since the last valuation (if any).
3) Characteristics of covered active members, inactive non-retired participants, pensioners, and beneficiaries.
4) System assets.
5) Economic and demographic actuarial assumptions regarding future investment earnings and employee salary increases, termination, retirement, disability, death, etc. as established by TFFR Board.
6) Actuarial cost methodology and actuarial funding policy approved by the TFFR Board.
7) Summary of investment results, including the effect of unrealized gains and losses.
8) Summary and details of accrued liabilities, projected benefits, funding progress, actual and required contribution levels, major causes underlying any change in funded status, any recommendations for future action, and any other information as is customarily required of actuaries in connection with the operation of public retirement systems.
9) Projections of future funding levels based on variable investment returns, and other variables.
10) Cash flow projection of contributions, benefit payments, investment income, and other receipts or disbursements.
11) Gain/Loss Analysis which reconciles the differences from the previous year to the present year including changes due to plan design, contributions, payroll growth, liability experience, investment experience, assumption changes, amortization method, legislative changes, and other appropriate factors.
12) Compliance with the applicable Actuarial Standards of Practice issued by the Actuarial Standards Board.
13) Compliance with the applicable statements of the Governmental Accounting Standards Board (GASB), specifically GASB 67 including net pension liability, sensitivity of the net pension liability to changes in the discount rate, schedule of changes in net pension liability, etc.

14) All schedules and information required by the Government Finance Officers Association (GFOA) for inclusion in the plan's Annual Comprehensive Financial Report (ACFR).
15) All schedules and information in the current annual valuation report.

The annual valuation services include preparation, onsite presentation to TFFR Board, onsite presentation to Legislative Employee Benefits Programs Committee, follow-up on revisions/issues, and responding to inquiries. The cost proposal template (Attachment A) should incorporate all these services in the fixed fee.

Actuarial Valuations Time Schedule:

RIO will provide membership information for the retired and non-retired members in an electronic format using TFFR's current file specifications to a secure site. Files will be sent by August 18 following the fiscal year ending June 30 of each year. The consultant must review the data and report in writing to RIO within five working days of receipt of any discrepancies or errors discovered.

RIO will send preliminary financial statement information consisting of the "Statement of Net Position" and the "Statement of Changes in Net Position" to the consultant by August 31 following the fiscal year ending June 30 of each year.

The consultant must provide a draft copy of the actuarial report to RIO staff and external auditors by October 5 of each year. The consultant must provide the final actuarial report to RIO by October 12 of each year.

The consultant is required to present the annual pension valuation report to the TFFR Board at the October board meeting each year or as determined by TFFR. Therefore, the consultant should plan to attend one onsite meeting each year for the board presentation.

The consultant is also required to present the annual valuation report to the interim Legislative Employee Benefits Programs Committee (LEBPC) at their October legislative committee meeting each year or as determined by the LEBPC. Therefore, the consultant should plan to attend one more onsite meeting each year for the legislative committee presentation.

B. GASB 67 & 68 Reporting

The actuary will be required to prepare an annual GASB 67 and 68 report for TFFR each fiscal year on a fixed fee basis. At minimum, the GASB 67 and 68 report must contain required calculations and disclosures including, but not limited to, the following items:

1) Annual pension valuation summary, significant issues, and summary of key valuation results.
2) GASB information as required by GASB Statements 67 and 68 including membership data, net pension liability, schedule of changes in net pension liability, schedule of employer contributions, and applicable notes.
3) Additional information for GASB 68 including reconciliation of collective net pension liability, collective deferred outflows of resources and deferred inflows of resources, collective pension expense, schedule of employer allocations, and schedule of pension amounts by employer.

In addition to the plan reporting information required by GASB 67 and the collective information needed for GASB 68, the actuary is expected to maintain all of the GASB 68 schedules for each employer (e.g., proportionate share of NPL, sensitivity of proportionate share of NPL to changes in discount rate, schedule of contributions, proportionate share of pension expense including net amortization of deferred amounts from changes in proportion, proportionate share of deferred inflows and outflows including changes in employer proportionate share, and amortization of deferred inflows and outflows recognized in future pension expense).

1) All schedules and information in the current GASB 67 and 68 report.
2) Other pension information that may be required by applicable GASB statements.

GASB 67 & 68 Time Schedule:

RIO will provide a schedule of employer allocations in an electronic format to a secure site. Files will be sent by August 18 following the fiscal year ending June 30 of each year.

The consultant must provide a draft copy of the GASB 67 and 68 report to RIO staff by October 15 of each year. The consultant must provide the final GASB 67 and 68 report to RIO by October 22 of each year.

C. Plan Management Policy Score Update

The actuary will be required to prepare an annual plan management policy score update for TFFR each fiscal year on a fixed fee basis. The TFFR Plan Management Policy is a risk assessment and management tool that monitors the ongoing health of TFFR using the most recent actuarial valuation results and stochastic projections. The objective of the Plan Management Policy is to provide a basis for balancing the Fund's obligations with current assets and expected future contributions in order to maintain its long-term health and viability. The Policy also provides a framework that the Board can follow in establishing metrics for future funding and benefit changes. The Plan Management Policy is based upon metrics and a scoring system that were established at the July 24, 2019, Board meeting. The Plan Management Policy Score will be updated subsequent to each annual actuarial valuation.

Policy Score Update Time Schedule:

The consultant is required to present the plan management policy score update to the TFFR Board at the April board meeting each year or as determined by TFFR. Therefore, the consultant should plan to attend one onsite meeting each year for the board presentation.

D. Actuarial Experience Study

An actuarial experience study is conducted at least every five years. The last experience study for TFFR was for the period July 1, 2014 through June 30, 2019. The next experience study is expected to be for fiscal year 2024, or as required by the TFFR Board. The experience study must review and analyze all actuarial assumptions and methods including rates of retirement, mortality, termination, disability, investment return, salary increase, inflation, and actuarial cost method and asset valuation method. The experience study report must include: (a) an analysis of the economic and demographic experience of the retirement system over the study period; (b) the development of a set of actuarial assumptions based on the study results, including a financial analysis of the proposed changes; and (c) a review of the existing actuarial funding method and asset valuation method. Services include preparation of the report, presentation to board, staff, legislative committee, follow-up on revisions/issues, and responding to inquiries.

Actuarial Experience Study Time Schedule:

The consultant must provide a draft copy of the actuarial experience study to RIO staff by April 1 of the year following the study. The consultant must provide the final actuarial experience study to RIO by April 15 of the year following the study.

The consultant is required to present the actuarial experience study to the TFFR Board at the April board meeting of the year following the study or as determined by TFFR. Therefore, the consultant should plan to attend one onsite meeting for the board presentation.

E. Proposed Legislation

The consultant will be required to assist the RIO staff, TFFR Board, and ND legislative committees in the following areas relating to proposed legislation based on an hourly fee for services rate. Prior to initiating any efforts under this area, authorization must be given by the Chief Retirement Officer of RIO. Any work efforts the consultant completes or initiates that are not authorized will not be reimbursed.

Consultant must be able to provide actuarial and technical analysis of proposed legislation, including, but not limited to, the following:

1) Prepare and review proposed changes to governing laws and administrative rules.
2) Prepare technical and fiscal impact studies of proposed state or federal legislation. Pricing or technical review work on legislation must specifically address each issue and give the basis for each finding. Consultant must furnish its review in writing and, for pricing efforts, show the assumptions, actuarial implications, cost and alternatives, if appropriate. In most cases, the consultant will be given several weeks to do the necessary pricing and technical analysis. However, during the legislative session (January – April in odd numbered years), it may be necessary to complete legislative analysis within one day.
3) Provide analysis of the applicability of IRS or other federal requirements, as well as identify any general retirement plan design or administrative issues.
4) Testify before legislative committees as requested.
5) Discuss proposed legislation with RIO staff and TFFR Board.
6) Attend selected meetings and hearings as requested.

F. Consulting Services

The consultant will be required to serve on an ongoing basis in an advisory and review capacity to the TFFR Board, the Chief Retirement Officer of RIO, and other RIO staff, as required based on an hourly fee for services rate. In this capacity, the consultant may be required to attend meetings and present findings and recommendations as needed. TFFR may require attendance in person, video conference, or phone conference. Prior to initiating any efforts under this area, authorization must be given by the Chief Retirement Officer of RIO. Any work efforts the consultant completes or initiates that are not authorized will not be reimbursed.

Consultant must be able to provide advice or analysis including, but not limited to, the following:

1) Provide actuarial factors, tables and other calculations as required.
2) Assistance regarding the ongoing administration of TFFR including the review and calculation of benefits, service purchases, QDROS, and other plan calculations.
3) Assistance regarding the development of procedures, forms, publications, tables, and computer systems.
4) Federal and state tax issues affecting TFFR plan, members, and employers.
5) Actuarial and administrative implications of federal and state laws and rules governing TFFR.
6) Developing and implementing statutes, rules, policies, and procedures.
7) Periodic educational presentations or discussions with TFFR Board, staff, legislative committees

or others as requested.

8) Compliance with federal rules and regulations for qualified defined benefit government pension plans including minimum participation rules, Section 415 limits, maximum compensation limits, maximum benefit limits, minimum distribution requirements, tax withholding, and other federal and Internal Revenue Code requirements for qualified plans.
9) Asset/liability modeling support work as requested.
10) Special projects or studies as requested.

3.2 REQUIREMENTS

DELIVERABLES

The contractor will be required to provide the following to achieve the objective of this project:

- Draft 2023 Valuation Report
  Final 2023 Valuation Report
  Presentation to interim Legislative Committee
  Presentation to TFFR Board

- Draft 2023 GASB 67 & 68 Report
  Final 2023 GASB 67 & 68 Report

- 2023 Plan Management Policy Score Update
  Presentation to TFFR Board

- Draft 2024 Valuation Report
  Final 2024 Valuation Report
  Presentation to interim Legislative Committee
  Presentation to TFFR Board

- Draft 2024 GASB 67 & 68 Report
  Final 2024 GASB 67 & 68 Report

- Draft 2024 Actuarial Experience Study
  Final 2024 Actuarial Experience Study
  Presentation to TFFR Board

- 2024 Plan Management Policy Score Update
  Presentation to TFFR Board

- 2025 Legislative Session work product as needed

LOCATION OF WORK/TRAVEL

- No on-site work is required.
- Periodic board, staff, or legislative meetings may require in person attendance as outlined in Section 3.1 Scope of Work or at the request of the State.

STATE-FURNISHED PROPERTY/SERVICES

- The STATE will provide past reports as requested and information as outlined in Section 3.1 Scope of Work.

RISK MANAGEMENT

The contractor will take appropriate measures to ensure the safety of its employees, state employees, the public, and property. The contractor must identify any potential risks, issues and problems associated with the project and identify ways to mitigate those potential risks.

CONTRACT TERM, SCHEDULE, AND DELIVERABLES

1. Contract Term

   This contract will be for a two-year period, with options for two-year renewals. See the attached Contract.

2. Schedule and Deliverables

   The STATE has identified the following deliverables which are significant work products or milestones in the project. The STATE requires these deliverables to be addressed in the Contract Schedule, as a minimum. The contractor shall develop a schedule for accomplishing the Scope of Work, including these specific deliverables. The final schedule shall be agreed upon between the STATE and the successful Offeror and incorporated into the contract. The approximate schedule for this contract is as follows:

• Contract Start Date:	July 1, 2023
• Draft 2023 Valuation Report Due:	October 5, 2023
Final 2023 Valuation Report Due:	October 12, 2023
Presentation to interim Legislative Committee:	October 2023 (TBD)
Presentation to TFFR Board:	November 2023 (TBD)
• Draft 2023 GASB 67 & 68 Report Due:	October 15, 2023
Final 2023 GASB 67 & 68 Report Due:	October 22, 2023
• 2023 Policy Score Update	
Presentation to TFFR Board:	April 2024 (TBD)
• Draft 2024 Valuation Report Due:	October 5, 2024
Final 2024 Valuation Report Due:	October 12, 2024
Presentation to interim Legislative Committee:	October 2024 (TBD)
Presentation to TFFR Board:	November 2024 (TBD)
• Draft 2024 GASB 67 & 68 Report Due:	October 15, 2024
Final 2024 GASB 67 & 68 Report Due:	October 22, 2024
• Draft 2024 Actuarial Experience Study Due:	April 1, 2025
Final 2024 Actuarial Experience Study Due:	April 15, 2025
Presentation to TFFR Board:	April 2025 (TBD)
• 2024 Policy Score Update	
Presentation to TFFR Board:	April 2025 (TBD)
• 2025 Legislative Session work product as needed	TBD

   If any deadlines fall on weekends or holidays, the deadline will be moved to the prior business day.

3.3 EXPERIENCE AND QUALIFICATIONS

For offers to be considered responsive, offerors must meet the minimum qualifications and prior experience requirements. An offeror's failure to meet these minimum requirements will cause its proposal to be considered non-responsive and its proposal will be rejected. The minimum qualifications and prior experience are:

Actuarial Firm:

1) Must have a minimum of five (5) years of experience as a professional actuarial services firm that provides actuarial valuations, experience studies, actuarial audits, and pension consulting services to U.S multiple-employer public employee retirement plans.
2) Must have a minimum of five (5) public pension clients who engaged the firm for such services as conducting actuarial valuations, experience studies, actuarial audits, and other pension consulting services. At least three (3) of these clients must be listed as references.

Primary or Lead Actuary:

1. Must be a Fellow of the Society of Actuaries and an Enrolled Actuary.
2. Must have a minimum of five (5) years of experience as an actuary providing actuarial valuations, experience studies, actuarial audits, and pension consulting services for U.S. multiple-employer public employee retirement plans.

At the time specified by the deadline for submission of proposals, the offeror must have and keep current any professional licenses and permits required by federal, state, and local laws for performance of this contract. Offerors that do not possess required licenses at the time proposals are due will be determined non-responsive.

SECTION FOUR – PROPOSAL INSTRUCTIONS

4.1 PROPOSAL PREPARATION

The STATE discourages overly lengthy and costly proposals. An Offeror must prepare its proposal using the prescribed proposal format and provide all the requested information; this will enable the proposal to be evaluated fairly and completely. If an Offeror submits more than one proposal, each proposal must be prepared in accordance with these instructions.

Each proposal will include a Technical Proposal and a Cost Proposal prepared in accordance with these instructions. The Technical Proposal and a Cost Proposal must be submitted as separate documents, clearly labeled with the name of the Offeror, and marked "Technical Proposal" and "Cost Proposal." Costs must not be revealed in the Technical Proposal. Options may be discussed in the technical proposal, but all cost information must be in the Cost Proposal only. DO NOT submit documents that are embedded into proposal documents or that contain links to documents on an external website.

4.2 PROPOSAL SUBMISSION INSTRUCTIONS

UPLOAD RESPONSE THROUGH THE STATE PROCUREMENT ONLINE SYSTEM (SPO ONLINE):

Offeror **must electronically submit proposals** through the State Procurement Office Online system (SPO Online) by the Solicitation Closing deadline.

DO NOT WAIT UNTIL THE "LAST MINUTE" TO SUBMIT A RESPONSE. Recommend uploading response 24 hours prior to the Solicitation Closing deadline.

Offeror must begin the electronic submission process well in advance of the Solicitation Closing deadline to allow for transmission and resolution of any technical difficulties. Be advised that the STATE is not responsible for an Offeror's failure to timely submit a proposal due to any technical difficulties. If you experience any technical difficulties contact the Procurement Officer or the State Procurement Office at infospo@nd.gov or 701.328.2740.

If documents are in the process of being uploaded when the Solicitation Closing deadline occurs, the upload process will stop. The attempted submission will not be uploaded successfully and is ineligible for consideration. The STATE takes no responsibility for electronic submissions that are captured, blocked, filtered, quarantined, or otherwise prevented from uploading by any anti-virus or other security software.

1. This solicitation is posted on SPO Online at: https://apps.nd.gov/csd/spo/services/bidder/main.htm
2. Select "Recent Solicitations" and find this solicitation. Solicitations are listed by close date.
3. Use "Upload Response" to upload a maximum of five (5), clearly labeled documents before the Solicitation Closing deadline provided in the RFP Schedule.
4. Offeror must upload their Technical Proposal and Cost Proposal in separate files.
5. The maximum file size allowed is 50mb per file.
6. There is a 50 character file name limitation for the document being uploaded.
7. There is 75 character limit in the TITLE field within SPO Online.
8. All SPO Online field entries must be alphanumeric. Dashes and underscores are allowed; however, the system DOES NOT accept other special characters such as apostrophe, & symbol, quotation marks, etc..
9. DO NOT submit documents that are embedded (zip files), movies, wmp, encrypted, or mp3 files.
10. Offeror will receive an email confirmation from infospo@nd.gov that the upload response was received including the "File Description" for the uploaded files. Review this email to ensure all files

were successfully uploaded. If Offeror DOES NOT receive an email confirmation, the upload was NOT successful, and the files will need to be uploaded again. If Offeror does not receive an email confirmation after the reattempt, contact the Procurement Officer or the State Procurement Office at infospo@nd.gov or 701.328.2740.

Visit https://www.omb.nd.gov/sites/www/files/documents/doing-business-with-the-state/procurement/spo-electronic-response-external-job-aid.pdf for the SPO Electronic Response Job Aid which describes how to submit an electronic response.

4.3 PROPOSAL FORMAT

Prepare the Technical Proposal and Cost Proposal in accordance with these instructions.

Technical Proposal – Format the proposal with the following labeled sections:

Section 1 – Cover Letter
Section 2 – RFP Amendments
Section 3 – Scope of Work Strategy
Section 4 – Experience and Qualifications
Section 5 – Contract Provisions
Section 6 – Open Records and Confidentiality

Cost Proposal – The Cost Proposal must be a separate document. Format the Cost Proposal following the RFP instructions.

4.4 TECHNICAL PROPOSAL

SECTION 1 – COVER LETTER

Proposals shall include a cover letter that includes the following:

1. The name of the Offeror, name of the person to contact regarding the proposal, email address, telephone number, and mailing address.
2. Offerors are instructed to review the “Conflict of Interest” provisions in RFP Section 1 “Instructions.” If the firm, its employees or subcontractors working on the contract have an apparent or actual conflict of interest, provide a statement disclosing the circumstances of the apparent or actual conflict of interest. Otherwise, provide a statement that your firm, employees and subcontractors do not have a conflict of interest.
3. The cover letter must be signed by an individual with authority to bind the Offeror. By signing the cover letter, an Offeror certifies that it complies with:
    a. All the requirements, terms and conditions as set forth in this RFP.
    b. The requirement that the Offeror’s proposal accurately describes the goods and services being offered to the STATE, and the proposal will be held firm for the period specified.
    c. All local, state, and federal laws, rules, code laws, rules, code, regulation, and policies, including those relating to nondiscrimination, accessibility, civil rights, and equal employment.
    d. The requirement that this proposal was prepared independently without collusion.

SECTION 2 – RFP AMENDMENTS

Provide signed copies of all Solicitation Amendments issued by the STATE that were required to be acknowledged by Offerors.

SECTION 3 –SCOPE OF WORK STRATEGY

Offeror must review the requirements and deliverables provided in RFP Section 3, Scope of Work.

1. **Strategy for Scope of Work Requirements**. Offerors must provide narrative statements to demonstrate their understanding of the scope of work requirements. Explain the proposed strategy to accomplish the scope of work, meet all requirements, and provide the deliverables described in the scope of work within the STATE's project schedule.

2. **Methodology for Scope of Work Requirements.** Offerors must provide comprehensive narrative statements that set out the methodology it intends to employ and the firm's approach to actuarial consulting. Offerors must illustrate how the methodology will serve to accomplish the work and provide the deliverables described in the scope of work within the STATE's project schedule.

   Offerors should discuss how the firm will assure that all information provided will be kept confidential. Offerors should describe data security policies and procedures, and what steps the firm has taken to secure information.

   Offerors must include a sample actuarial report, sample GASB 67 and 68 report, and sample experience study report, and describe approach to work effort.

   Offerors must describe research capabilities and information made available to public pension fund clients through newsletters, research papers, issue briefs, or other resource materials.

3. **Location of Work.** The proposal must respond to the STATE's Location of Work instructions within the RFP Scope of Work. Describe where the work will be performed and any proposed travel.

4. **State Furnished Property and Services.** Provide a detailed breakdown of the Offeror's expectations for STATE resources that will be needed for the project, including number of staff, qualifications, roles and responsibilities, and time requirements for the various phases of the project.

5. **Risk Management.** Offerors must describe measures to be taken to ensure the safety of its employees, state employees, the public and property. Offerors must also identify any pertinent issues and potential problems related to the project and describe how those potential issues and problems could be mitigated.

6. **Project Management Plan.** The proposal must describe how the contractor intends to manage the project to ensure the work is accomplished on time, within budget, and meet quantity and quality standards. Offerors may provide a narrative or organizational chart to illustrate the lines of authority and accountability. The organizational chart must illustrate the lines of authority and designate the individual responsible and accountable for the completion of each component and deliverable of the RFP.

7. **Proposed Schedule and Deliverables.** The proposal must provide a timeline for accomplishing the work, in consideration of the STATE's Contract Schedule within the RFP Scope of Work.

SECTION 4 –EXPERIENCE AND QUALIFICATIONS

Mandatory Requirements. An Offeror must provide information to demonstrate meeting the Offeror Experience and Qualifications Requirement in RFP Section 3, Scope of Work, Experience and Qualifications.

Experience and Qualifications of the Firm

Provide a brief history and describe the organization of the firm. Describe the number of years the Offeror has provided the type of work requested in this RFP. Describe specific experience of their firm in completing similar projects. Provide a description of the project, approximate time frame of the project, and contact information for the customer. Offerors should discuss their experience working with public pension boards and legislative committees. Offerors must provide letters of reference from customers.

Offerors must provide information specific to the experience and qualifications of the firm that will perform the actuarial consulting work called for in this RFP, including:

1. List of current U.S. public sector clients. Indicate number of years of relationships and dates.
2. List of clients who have terminated a consulting relationship with your firm within the last three years. Indicate the number of years of relationship, dates, and reason for termination.
3. At least three (3) reference names, email addresses, and phone numbers for other U.S. public employee retirement systems for which the firm has conducted actuarial valuations and consulting work. The State reserves the right to contact any current or former clients or references provided by the offeror.
4. At least three (3) reference letters from previous clients.

Experience and Qualifications of the Project Team

Provide a narrative or organizational chart that describes the organization of the proposed project team. Provide information for key project team members, including:

1. Description of anticipated work they will perform and approximate estimated hours;
2. Resume or description of the relevant education, training, experience, skills and qualifications;
3. Previous experience providing actuarial and consulting services to U.S. multiple-employer public employee retirement plans;
4. Professional certifications, licenses, and permits required to publicly perform services identified in this RFP;
5. If the Offeror has vacant positions, identify the job description and minimum qualifications for staff members to be recruited;
6. Subcontractors. If an Offeror intends to use subcontractors, the Offeror must identify in the proposal the names of the subcontractors and the portions of the work the subcontractors will perform. Provide a statement that the Offeror will ensure that the subcontractor has or will obtain any required licenses and registrations, including registration with the North Dakota Secretary of State; and
7. Joint Venture. If submitting a proposal as a joint venture, provide narrative statements that describe the roles and responsibilities of each party to the joint vendor. If available, submit a copy of the joint venture agreement that identifies the parties involved and its rights and responsibilities.

References

Provide three (3) references for similar projects the Offeror has completed. Offerors must include the name of a contact person, address, email, and telephone number. Offerors are responsible for providing accurate reference contact information and are instructed to notify the reference that the STATE may be contacting them. Reference checks may begin within one (1) business day of the Solicitation Closing deadline. Evaluation may be impacted if the STATE is unable to contact the reference or the reference does not timely provide the requested information.

Provide three (3) reference letters from clients for whom similar work was completed. The reference letter must include the name of a contact person, address, email, and telephone number. The STATE may contact references provided for verification and to obtain additional information. Evaluation may be impacted if the STATE is unable to contact the reference or the reference does not timely provide the requested information.

SECTION 5 – CONTRACT PROVISIONS

Offeror shall review the RFP Section 6 and the STATE's Contract – Attachment C.

The proposal must include indicate whether the Offeror accepts the terms and conditions in the STATE's Contract.

An Offeror may state that they accept the STATE's Contract as written.

An Offeror may state any objections or propose changes or additions to the STATE's Contract. Describe the changes to the Contract being proposed or provide a red-line of the STATE's Contract. Offerors are not to submit their own contract or standard terms and conditions with their proposals. Offeror should address the specific language in the attached contract and submit any proposed changes.

North Dakota procurement statutes, rules, and policies allow some negotiation of the terms and conditions. No changes to the terms and conditions will be permitted without prior written approval from the STATE.

SECTION 6 – OPEN RECORDS AND CONFIDENTIALITY

All proposals and other material submitted become the property of the State and may be returned only at the State's option. The State of North Dakota has broad open records laws. Proposals received are exempt from open record requirements until an award is made, in accordance with N.D.C.C. § 54-44.4-10(2). After award, proposals are subject to the North Dakota open records laws. Proposals or portions of proposals may be confidential only if specifically stated in law.

Offerors are instructed not to mark their entire proposal as "confidential."

Offeror must provide one of the following in their proposal:

- Provide a statement indicating that their proposal does not contain any confidential information, OR
- Make a written request to hold confidential any trade secrets and other proprietary data contained in its proposal. Offeror must clearly identify the material considered confidential and explain why the material is confidential. See the North Dakota Office of the Attorney General website for additional information. https://www.legis.nd.gov/cencode/t44c04.pdf and https://attorneygeneral.nd.gov/open-records-meetings

If the STATE receives a request for public information, the Procurement Officer, in consultation with the Office of the Attorney General, shall determine whether the information is an exception to the North Dakota open records laws, and the information shall be processed accordingly.

4.5 COST PROPOSAL

Cost Proposal Format. Cost proposals must be prepared as a separate document from the technical proposal, clearly labeled, "Cost Proposal."
Offeror must complete the Cost Proposal Template – Attachment A or prepare a Cost Proposal following the same format.

The cost proposal must be on a fixed-fee basis for: all work involved in the annual actuarial valuation reports, all work involved in the annual GASB 67 and 68 reports, all work involved in the annual plan management policy score update, and all work involved in the experience study. The cost proposal must also provide an hourly fee for services for pricing legislative proposals and general consulting work. The State estimates 300 hours of general and legislative consulting for the initial two-year contract period, although the number of hours under this contract could be greater or less than the estimate.

Offeror shall not include travel expenses in the fixed fee or hourly fee for services amounts. If travel is required, State may reimburse reasonable travel expenses, consistent with State travel policy. If contract-required presentations are conducted remotely, travel expenses shall not apply.

SECTION FIVE – AWARD AND PROPOSAL EVALUATION

5.1 AWARD

The STATE intends to award a contract to the responsible Offeror whose proposal is determined to be responsive to the requirements of the solicitation and is determined to be most advantageous in consideration the RFP evaluation criteria.

5.2 RESPONSIVENESS

All proposals will be evaluated to determine if they are responsive to the requirements of the solicitation. The STATE reserves the right to waive minor informalities in accordance with N.D.A.C. chapter 4-12-10. Minor informalities are insignificant omissions or nonjudgmental mistakes that are matters of form rather than substance, evident from RFP document, with a negligible effect on price, quantity, quality, delivery, or contractual conditions that can be waived or corrected without prejudice to other Offerors. Responsive proposals will be evaluated by the Procurement Officer or evaluation committee using the evaluation criteria stated in the RFP.

5.3 RESPONSIBILITY – SUPPLEMENTARY INVESTIGATION

The STATE reserves the right to contact references, other customers, including state and local government agencies, regarding past experience with the Offeror. Prior experience of the state agency or institution with any prospective Offeror may also be taken into consideration during evaluation.

The STATE may, at any time, may make a supplementary investigation as to the responsibility of any Offeror in accordance with N.D.A.C. § 4-12-11-04. This investigation may include, but is not limited to, financial responsibility, capacity to produce, sources of supply, performance record, or other matters related to the Offeror's probable ability to deliver if a contract is awarded to the Offeror. If it is determined that an Offeror appears not to be sufficiently responsible, the proposal will be rejected.

5.4 EVALUATION CRITERIA

Proposals will be evaluated using a 100 point scale. The evaluation committee will award points based on the questions in the Technical Proposal Evaluation Worksheet – Attachment B. The Technical Proposal evaluation score and Cost Proposal evaluation score will be added together to determine the total evaluation score. After the initial evaluation, the evaluation committee may determine which proposals are reasonably susceptible for award and continue the evaluation process with only those Offerors. Offerors whose proposals are not selected for further evaluation may request a debrief from the Procurement Officer after an award notice is issued. The final evaluation score will consider information received by the STATE, including but not limited to, discussions with Offerors, demonstrations, presentations, site visits, reference checks, and best and final offers.

The evaluation criteria and relative weight is as follows:

Technical Proposal Evaluation: 70 Points

A. Scope of Work Strategy– 45 Points
B. Experience and Qualifications – 25 Points

Cost Proposal Evaluation: 30 Points

Minimum Technical Score: Technical proposals must receive at least **55 points** of the total points available for the Technical Score to be considered responsive to the RFP requirements.

5.5 COST PROPOSAL EVALUATION – RECIPROCAL PREFERENCE

The STATE will calculate evaluation points awarded to Cost Proposals. Any prompt payment discount terms proposed by the Offeror will not be considered in evaluating cost.

The cost amount used for evaluation may be affected by the application of North Dakota preference laws in accordance with N.D.C.C. § 44-08-01. The preference given to a resident Offeror will be equal to the preference given or required by the state of the nonresident Offeror (i.e., reciprocal preference). For more information, refer to Guidelines to North Dakota Purchasing Preference Laws.

The cost amount used for evaluation may also be affected by the application of other costs required to implement the proposed solution to determine the total cost of the solution (i.e. cost for ITD to host a STATE hosted solution).

After applying any reciprocal preference, the lowest Cost Proposal will receive the maximum number of points allocated to cost. Cost proposals will be evaluated using the following formula.

$$\frac{\textbf{Price of Lowest Cost Proposal}}{\textbf{Price of Proposal Being Rated}} \quad \textbf{X Total Points for Cost Available} = \textbf{Awarded Points}$$

5.6 CLARIFICATIONS OF PROPOSALS – DISCUSSIONS

To determine if a proposal is reasonably susceptible for award, communications by the Procurement Officer or evaluation committee are permitted with an Offeror to clarify uncertainties or eliminate confusion concerning the contents of a proposal and determine responsiveness to the RFP requirements. Discussions will be limited to the specific section of the RFP or proposal indicated by the STATE. Discussions are generally conducted by telephone or internet-based conference.

In conducting discussions, there may be no disclosure of any information derived from proposals submitted by competing Offerors. Clarifications may not result in material or substantive change to the proposals. Evaluation scores may be adjusted based in consideration of information obtained through discussions.

5.7 RIGHT OF REJECTION

The STATE reserves the right to reject any proposals, in whole or in part. Proposals received from suspended or debarred bidders will be rejected. Proposals determined to be nonresponsive to the requirements of the RFP will be rejected. The STATE reserves the right to reject the proposal of an Offeror determined to be not responsible. The STATE reserves the right to refrain from making an award if determined to be in its best interest.

5.8 PRESENTATIONS, DEMONSTRATIONS, AND SITE VISITS

After the initial evaluation, the evaluation committee may determine which proposals are reasonably susceptible for award and continue the evaluation process with only those Offerors. Offerors whose proposals are not selected for further evaluation may request a debrief from the Procurement Officer after an award notice is issued.

Offerors who receive the highest total scores and are determined to be reasonable susceptible for award will be required to make an oral presentation of their proposal to the TFFR Board of Trustees. The presentations will be made to the TFFR Board at their meeting scheduled to be held on April 27, 2023. Offerors may present remotely or in person in Bismarck, ND.

Offerors will be responsible for all costs associated with providing the oral presentation, including travel expenses- should they chose to attend in-person.

5.9 BEST AND FINAL OFFERS

<u>The STATE is not obligated to request best and final offers; therefore, Offerors should submit their best terms (technical and cost) in response to this RFP</u>.

If the STATE determines there is a need for any additional information, substantial clarification or changes to the RFP or proposals, the STATE may request for best and final offers from Offerors that have submitted proposals determined to be reasonably susceptible for award. The best and final offer request will describe the additional information, clarification, or change being requested.

A date and time will be established for receipt of revised proposals. If an Offeror does not submit a best and final offer, the STATE shall consider its original proposal as its best and final offer. Best and final offers will be evaluated using the evaluation criteria stated in the RFP. The STATE may request more than one Best and Final Offer.

5.10 NEGOTIATIONS

Contract negotiations will be conducted in accordance with N.D.A.C. § 4-12-12. The STATE may enter negotiations with one or more Offeror whose proposals received the highest scores and are reasonably susceptible for award. During negotiations, the STATE and Offeror may agree to alter or otherwise change the terms and conditions and price of the proposed contract. Negotiation, if held, will be within the scope of the RFP and limited to those items that would not have an effect on the ranking of proposals.

Each Offeror will be responsible for all costs it incurs as a result of negotiations, including any travel and per diem expenses. Contract negotiations will be conducted primarily by email, conference calls, or internet-based conference. Any on-site negotiation, if needed, will be held in Bismarck, North Dakota.

The STATE may terminate negotiations, reject a proposal as nonresponsive, and continue or commence negotiations with other Offerors reasonably susceptible for award, if the Offeror:

- fails to provide necessary information for negotiation in a timely manner,
- fails to negotiate in good faith,
- is unable to successfully negotiate contract terms that are acceptable to the STATE, or
- indicates that it cannot perform the contract within the budgeted funds.

In accordance with N.D.C.C. § 54-44.4-13.1, The STATE and CONTRACTOR may negotiate payment terms for all commodities and services procured. If a date for payment is not specified in this Contract, payment must be made pursuant to section 13-01.1-01.

5.11 NOTICE OF INTENT TO AWARD

The TFFR Board of Trustees, will make the final decision on selection of the actuarial consultant. The Board reserves the right to make the final selection based upon any factors it deems applicable including, but not limited to, proposal information, cost, references, oral presentations, or other factors.

The notice of intent to award will be issued to all Offerors that submitted proposals. Upon issuance of this notice, the procurement file becomes an open record. The successful Offeror named in the Notice of Intent to Award is advised not to begin work, purchase materials, or enter into subcontracts until the successful Offeror and the STATE sign the contract.

5.12 CONTRACT APPROVAL

This RFP does not, by itself, obligate the STATE. The STATE's obligation shall commence when the STATE signs the contract. Upon written notice to the contractor, the STATE may set a different starting date for the contract. The STATE shall not be responsible for any work done by the contractor, even work done in good faith, if it occurs prior to the contract start date set by the STATE.

5.13 EVALUATION DEBRIEFING

After the notice of intent to award is issued, Offerors may contact the Procurement Officer to schedule an evaluation debrief. The debrief will provide information about the evaluation process and proposal scores.

SECTION SIX – CONTRACT INFORMATION

6.1 NORTH DAKOTA CONTRACTUAL REQUIREMENTS – BACKGROUND

As a public institution and government entity of the State of North Dakota (the STATE), there are a number of statutes, rules, and policies (Requirements) that may restrict or prevent the STATE from entering into certain types of contracts or certain contractual terms and conditions, some of these Requirements are non-negotiable.

While these Requirements occasionally make the process of negotiating a contract with the STATE more challenging than negotiating with a private industry business, these are not unique to any one agency of the State of North Dakota. These Requirements apply to all public institutions and government entities of the State of North Dakota. Although some are unique to North Dakota, the majority of these Requirements are common to public institutions and government entities throughout the United States.

6.2 STATE CONTRACT TERMS AND CONDITIONS – OFFEROR'S PROPOSED CHANGES

The STATE intends to execute a contract substantially similar to the Contract – Attachment C. The Offeror will be required to sign the Contract attached to this RFP and must comply with the terms and conditions. The STATE may deem any failure to object to a contract provision as the Offeror's acceptance of that provision.

North Dakota procurement statutes, rules, and policies allow some negotiation of the terms and conditions. No changes to the terms and conditions will be permitted without prior written approval from the STATE.

Pursuant to N.D.A.C. § 4-12-11-06, proposals subject to conditions imposed by the Offeror may be rejected as nonresponsive, as determined by the STATE. Proposed terms and conditions that conflict with those contained in the attached contract or that diminish the STATE's rights under the contract shall be considered null and void. The terms and conditions in the attached contract shall prevail in the event a conflict arises between a term or condition in the proposal and a term or condition in the attached contract.

Part or all of this RFP and Offeror's proposal may be incorporated into the attached contract. The STATE may deem any failure to object to a contract provision as the Offeror's acceptance of that provision.

6.3 CONTRACT PROVISIONS

Contract Type.

The contract type will be as follows:

Firm Fixed Price with Adjustment. The contractor will be required to hold the price firm during the initial two-year period, except as otherwise provided in the contract. During this period, no price increases will be allowed, and the contractor must notify the STATE immediately of any price decreases. After the completion of the firm fixed period, the contract may make a written request to the STATE for a price increase. The request must include the basis for the cost increase, such as evidence that the price increase applies to all customers. The STATE must approve, deny, or negotiate the requested price increase within 30 days. Any price changes will be set forth in a written amendment to the contract.

This contract is a fixed fee for the annual actuarial valuations, annual GASB reports, annual policy score update, and the experience study; and an hourly fixed fee for services rate for pricing proposed legislation and general consulting services as outlined in Section 3.1 Scope of Work.

Payment Procedures

Compensation and payment terms will be set forth in the contract based upon the successful Offeror's proposal. The STATE will not make any advanced payments before performance by the contractor under this contract.

- The STATE will make payments based on a negotiated payment schedule. Each billing must consist of an invoice and progress report. No payment will be made until the progress report and the project director has approved invoice.

Inspection & Modification

The contractor is responsible for the completion of all work set out in the contract. All work is subject to inspection, evaluation, and approval by the STATE. The STATE may employ all reasonable means to ensure that the work is progressing and being performed in compliance with the contract.

Should the STATE determine that corrections or modifications are necessary to accomplish its intent, the STATE may direct the contractor to make changes. The contractor will not unreasonably withhold changes.

Substantial failure of the contractor to perform the contract may cause the STATE to terminate the contract. In this event, the STATE may require the contractor to reimburse monies paid (based on the identified portion of unacceptable work received) and may seek associated damages.

Contract Changes – Unanticipated Amendments

During the course of the contract entered as a result of this solicitation, the contractor may be required to perform additional work due to a legitimate unforeseen circumstance. That work will be within the general scope of the initial contract. When additional work is required, the STATE shall provide contractor a written description of the additional work and request contractor to submit proposal for accomplishing the scope of work. CONTRACTOR will not commence additional work until all parties agree in writing.

Purchasing Card

STATE may make payments under this contract using a state purchasing card. See the contract related to payments using the STATE purchasing card.

6.4 CONTRACTUAL TERMS AND CONDITIONS – NO MATERIAL CHANGES

A. Indemnification and Insurance

N.D.C.C. § 32-12.2-17 requires that the OMB establish guidelines for indemnification and insurance provisions in state contracts. The indemnification and insurance requirements contained in the attached contract are pursuant to those guidelines. The STATE shall not be deemed to have accepted any alteration of these provisions without prior written approval to Offeror from the STATE acting in consultation with the North Dakota Risk Management Division.

B. Indemnification

Indemnification is a contractual clause by which one party to a contract asks the other party to defend it against any claims of third parties who might be injured as a result of something that occurs while the parties are performing their duties and obligations under the contract. Without specific authority to do so, the STATE agencies cannot enter into agreements indemnifying contractors, or any other entity, against third party claims.

Any clause that has the intent of seeking indemnification from the STATE, whether the clause contains the words “indemnity” or “indemnify,” are not clauses to which the STATE may agree.

The STATE will also not agree to clauses to indemnify a contractor “to the extent permitted by law.” This is because the STATE knows that the extent to which the law permits it to indemnify contractors is no extent whatsoever, and as a result would be disingenuous for the STATE to imply in a contract that there might be some set of circumstances under which the STATE would defend the contractor against a third party claim(s). Simply put, the STATE is not going to agree to something it knows it cannot do. In this circumstance an “extent” clause is merely an invitation to litigate the matter in the event a third party claim(s) arises, and the STATE does not enter into agreements that invite litigation. Do not ask the STATE to indemnify you against third party claims because it is a contractual obligation to which the STATE cannot agree.

While the STATE may limit the liability of a contractor in claims between the STATE and the contractor, the STATE does not have authority to limit a contractor’s liability for claims brought by a third party. In the event a contract contains a limitation of liability clause, the contract’s Indemnification clause and obligation of the contractor cannot be subject to that limitation of liability clause. *See 6.4(D) for Limitation of Liability.*

C. <u>Insurance</u>

Upon receipt of the Notice of Intent to Award, the successful Offeror must obtain the required insurance coverage and provide the Procurement Officer with proof of coverage prior to contract approval. The coverage must be satisfactory to the STATE, in consultation with the North Dakota Risk Management Division. The successful Offeror’s failure to provide evidence of insurance coverage is a material breach and grounds for withdrawal of the award or termination of the contract.

D. <u>Limitation of Liability</u>

The STATE may negotiate Limitation of Liability pursuant to N.D.C.C. § 32-12.2-15 “Contracts limiting liability to the STATE”.

Notwithstanding any provision in N.D.C.C. ch. 32-12.2 to the contrary, an agency may agree to limit the liability of a contractor to the STATE if:

1. the agency determines such services or products cannot be effectively obtained without such limitation; and
2. the limitation does not pose any significant risk of loss to the STATE; and
3. the limitation is in the best interests of the STATE.

The agency, in consultation with the OMB and the attorney general's office, shall prepare a written documentation before agreeing to any liability limitation.

An agency's authority to agree to a limitation of liability is limited to contracts for the purchase or lease of, or services related to, software, communication, electronic equipment, and economic forecasting.

1. An agency may limit its ability to recover indirect consequential damages.
2. If the extent of potential direct loss is unknown, an agency may agree to limit direct damages to a reasonably estimated amount commensurate with the foreseeable risk of loss to the STATE. The amount must be equal to twice the total value of the contract, unless all parties to the contract agree to an alternative amount. Any agreed upon amount that is less than twice the value of the contract must be approved by the director of the OMB. The

liquidated damages and retainage provisions for delay, missed deadlines, and other breaches are not subject to a general limitation on direct or indirect damages authorized under N.D.C.C. § 32-12.2-15.

3. A contract under N.D.C.C. § 32-12.2-15 may not limit any loss to the STATE resulting from fraud or other intentional or willful misconduct, breach of confidentiality obligations, or loss resulting from tangible property damage or personal injury.

E. Waivers of Jurisdiction and Venue; Alternative Dispute Resolution

The North Dakota Attorney General is the STATE's attorney for all purposes, including management of litigation and claims against the state. The STATE may not usurp the Attorney General's authority by agreeing in advance to control the way litigation may be managed in the event of a dispute. The STATE cannot, without specific authority, agree to the jurisdiction or the laws of another state or federal courts, nor can it contractually agree to participate in any form of alternative dispute resolution.

Although the STATE cannot contractually agree to such terms, this does not mean that in the event of a dispute, the STATE would not agree to participate in alternative dispute resolution. It simply means that this is a decision that must be made by the Attorney General and is a decision that is made at the time a dispute arises.

F. Confidentiality

All state agencies of North Dakota are subject to North Dakota public records laws. The STATE cannot agree to contractual terms that attempt to prevent it from having to disclose records that are declared public records under applicable statutes. Although some confidentiality and exemptions are allowed under the public records laws, the STATE may not agree to more restrictive obligations concerning its records. Under North Dakota public records laws, contracts are records that are open to the public and may be reviewed at the request of the public.

G. Unliquidated Expenses (i.e., attorney's fees, add-ons, cost increases)

Because the STATE may only obligate those funds that have been appropriated to it by the Legislative Assembly and may only obligate those funds for the purposes for which the funds were appropriated, the STATE may not agree to clauses which may obligate it to pay for claims that might exceed its current funding appropriation. Certainly, this is one of numerous reasons why the STATE cannot indemnify a contractor against third party claims, but it may also be said for clauses that purport to obligate the STATE to pay a contractor's attorneys' fees, unknown cost increases during the life of the contract, add-ons that were not contemplated or priced in the contract.

6.5 SCOPE OF WORK

The Scope of Work agreed upon by the parties will be incorporated into the attached contract.

6.6 CONTRACT TERM

The contract term will be set forth in the contract, including any options for extension, renewal, and renegotiation.

6.7 RIGHT TO INSPECT PLACE OF BUSINESS

At reasonable times, the STATE may inspect those areas of the contractor's place of business that are related to the performance of a contract. If the STATE makes an inspection, the contractor must provide reasonable assistance.

6.8 LIQUIDATED DAMAGES

The contract may include a clause setting forth an actual dollar amount designated as liquidated damages in order to make the STATE whole if it suffers damages due to a contractor's fault. The specific dollar amount for liquidated damages may be part of the negotiation process. The amount will be reasonable and not disproportionate to the damages to the STATE that are anticipated at the point of the contract and will not serve in any way as a penalty.

ATTACHMENT A

COST PROPOSAL TEMPLATE

2 YEAR CONTRACT COST	**FIXED FEE***
2023 Actuarial Report	$__________
2024 Actuarial Report	$__________
2023 GASB 67/68 Report	$__________
2024 GASB 67/68 Report	$__________
2023 Plan Management Policy Score Update	$__________
2024 Plan Management Policy Score Update	$__________
2024 Experience Study	$__________

TOTAL FIXED FEES*: **$__________**

2 YEAR CONTRACT COST	**FIXED HOURLY FEE FOR SERVICES**
General & Legislative Consulting	$__________ per hour x 300 estimated hours = **$__________**

TOTAL FIXED FEES* AND HOURLY FEES FOR 2 YEAR CONTRACT: $__________

****** *__CONTRACTOR shall not include Travel Expenses in the Fixed Fees amounts.__ If travel is required, STATE may reimburse CONTRACTOR reasonable travel expenses, consistent with STATE travel policy. If contract-required presentations are conducted remotely, Travel Expenses shall not apply.***

ATTACHMENT B

TECHNICAL PROPOSAL EVALUATION WORKSHEET

Proposals that are determined to be responsive to the requirements of the RFP will be evaluated by the Evaluation Committee using the evaluation criteria stated in the RFP. For assistance with RFP evaluations, contact the State Procurement Office at infospo@nd.gov or 701-328-2740.

- If a group evaluation is conducted, the Evaluation Committee will produce one worksheet that summarizes the comments and scores. If individual scores are being compiled, each member of the Evaluation Committee will prepare an evaluation worksheet with their comments and scores.
- Evaluation Committee members must read the Request for Proposal and have a clear understanding of the requirements and evaluation criteria before attempting to evaluate proposals.
- Evaluators should read all proposals twice. First, read all proposals for a general understanding without scoring. Next, read proposals with the intent to complete the evaluation worksheet which includes taking notes and documenting any questions/clarification needed.
- Each evaluation criterion is assigned a specific number of points. The questions under each evaluation criterion help Evaluators measure the quality of the Offeror's response. Do not assign points to individual questions, instead, award a total score for each evaluation criterion.
- Evaluators will assign an initial score for each evaluation criterion and provide comments which explain their scores.
- Evaluation documents become an open record upon award.

RATING SCALE FOR TECHNICAL PROPOSAL SCORING

The rating scale provided is intended to help Evaluators perform evaluations. Evaluators are exercising independent judgement so variation in scoring is normal. However, the Procurement Officer may question scoring that appears to be unsupported. Evaluators may assign any value for a given evaluation area from 0 to the maximum number of points allowed per evaluation criterion. A zero value typically constitutes no response or an inability of the Offeror to meet the criteria. In contrast, the maximum value should constitute a high standard of meeting the criteria. For example: "Experience and Qualifications" is an evaluation area weighted at 25% of the total possible points on a 100 Point Scale, so any value between 0 and 25 points can be awarded. An example of the rating scale is below:

Experience and Qualifications Rating Scale (*25* Point Maximum)	
Point Value	Explanation
0-5	Poor. Not addressed or response of no value
6-10	Fair. Limited applicability
11-15	Good. Some applicability
16-20	Very Good. Substantial applicability
21-25	Excellent. Total applicability

COST PROPOSAL

Cost proposals are normally scored by the Procurement Officer or selected evaluators, and cost proposals are given to the Evaluation Committee after technical proposals have been evaluated. Remember to check if reciprocal preference applies to out of state offerors. Prompt payment discounts are not considered in evaluating cost.

ADJUSTMENT OF INITIAL EVALUATION SCORES

After the initial scoring, the Evaluation Committee should meet to discuss proposals and identify areas where clarification or more information is needed. Evaluation scores may be adjusted as a result of discussions with offerors, clarifications, demonstrations, presentations, reference check results, Best and Final Offers, and further due diligence within the evaluation process.

The TFFR Board of Trustees, will make the final decision on selection of the actuarial consultant, and scores may be adjusted accordingly by the evaluation committee. The Board reserves the right to make the final selection based upon any factors it deems applicable including, but not limited to, proposal information, cost, references, oral presentations, or other factors.

TECHNICAL PROPOSAL EVALUATION WORKSHEET

Offeror Name: ____

RFP Title/Number: Actuarial and Consulting Services RFP #110.7-023-006

Evaluator Name: ____

Evaluator Certification. I have reviewed the Request for Proposal Evaluators Guide, and I certify that neither I nor my immediate family members have a conflict of interest with regard to this offeror, in accordance with N.D.A.C. § 4-12-04-04.

Evaluator Signature:____ **Date:**_____________

THE TOTAL NUMBER OF POINTS USED TO SCORE THIS PROPOSAL IS 100

SCOPE OF WORK STRATEGY RATING SCALE (45 Point Maximum)	
Point Value	Explanation
0 – 9	None. Not addressed or response of no value
10 – 18	Fair. Limited applicability
19 – 27	Good. Some applicability
28 – 36	Very Good. Substantial applicability
37 – 45	Excellent. Total applicability

IMPORTANT. Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion. Evaluators must provide comments to support scoring.

How well has the Offeror followed the proposal preparation instructions? Does the proposal contain all the requested information?
EVALUATOR NOTES

Has the Offeror identified any additional directives that apply to the contract?
EVALUATOR NOTES

How well has the Offeror described their strategy for accomplishing the scope of work requirements? What are the strengths of the proposed strategy?
EVALUATOR NOTES

Are there aspects of the proposed Scope of Work strategy of concern or that requires clarification or further information?
EVALUATOR NOTES

How well does the proposed timeline demonstrate the offeror's ability to meet the contract schedule and deliverables?
EVALUATOR NOTES

How well does the proposal address where the work will be performed and any travel?
EVALUATOR NOTES

How well has offeror described any expectations for State resources?
EVALUATOR NOTES

How well has the offeror addressed risk management? Did they identify any potential risks, issues or problems?
EVALUATOR NOTES

Has the offeror described their project management to accomplish the work on time, within budget, and meet quantity and quality standards?
EVALUATOR NOTES

Does the methodology match and achieve the objectives set out in the proposal?
EVALUATOR NOTES

Does the methodology have provisions for quality assurance?
EVALUATOR NOTES

Is the organization of the project team clear?
EVALUATOR NOTES

How well does the management plan illustrate the lines of authority and communication?
EVALUATOR NOTES

INITIAL EVALUATION SCORE FOR SCOPE OF WORK STRATEGY: ___________
Additional/overall comments related to the offeror's proposed strategy for accomplishing the work.
EVALUATOR NOTES

EXPERIENCE AND QUALIFICATIONS RATING SCALE (25 Point Maximum)	
Point Value	**Explanation**
0-5	None. Not addressed or response of no value
6-10	Fair. Limited applicability
11-15	Good. Some applicability
16-20	Very Good. Substantial applicability
21-25	Excellent. Total applicability

IMPORTANT. Proposals will be evaluated against the questions set out below. Do not assign points to individual questions, instead, award a total score for each evaluation criterion. Comments to support scoring are required, and will be helpful when performing offeror evaluation debriefs after award.

MINIMUM EXPERIENCE OR QUALIFICATIONS

If the RFP required a minimum amount of experience or qualifications, has the offeror provided information to demonstrate meeting this requirements? Does the offeror exceed the minimum experience or qualifications?
EVALUATOR NOTES

EXPERIENCE AND QUALIFICATIONS OF THE FIRM
Has the offeror provided historical information to demonstrate the firm is well established in this field?
EVALUATOR NOTES

How extensive is the firm's experience in this type of work? How well does the information about similar projects demonstrate the firm's experience work related to this RFP?
EVALUATOR NOTES

If the offeror provided letters of reference or the Evaluation Committee contacted the customer contacts, what information did the offeror's customers provide related to the offeror's past performance?
EVALUATOR NOTES

EXPERIENCE AND QUALIFICATIONS OF THE PROJECT TEAM
Has the offeror provided information about the organization of the project team and proposed work project team members will perform, and estimated hours? Does the proposed project team and work breakdown seem appropriate to accomplish the requirements of the RFP?
EVALUATOR NOTES

Are resumes complete and do they demonstrate education and experience that would be desirable for individuals engaged in the work the RFP requires?
EVALUATOR NOTES

How extensive is the experience of the project team members on similar projects?
EVALUATOR NOTES

If a subcontractor will perform work on the project or joint venture is proposed, has the offeror provided the requested information? How extensive is the experience and qualifications of the subcontractor or other party of the joint venture?
EVALUATOR NOTES

REFERENCE CHECK RESULTS
If references were required, did the references provide information to verify the satisfactory performance of the vendor?
EVALUATOR NOTES

Did references identify any areas of concern?
EVALUATOR NOTES

Did references identify any particular strengths of the vendor?
EVALUATOR NOTES

INITIAL EVALUATION SCORE FOR EXPERIENCE AND QUALIFICATIONS: __________
Additional/overall comments related to the offeror's experience and qualifications.
EVALUATOR NOTES

ATTACHMENT C

CONTRACT

OFFEROR INSTRUCTIONS

Offeror shall review the STATE's Contract.

The proposal must indicate whether or not the offeror accepts the terms and conditions in the STATE's Contract.

An offeror may state that they accept the STATE's Contract as written.

An offeror may state any objections or propose changes or additions to the STATE's Contract. Describe the changes to the Contract being proposed or provide a red-line of the STATE's Contract. Offerors are not to submit their own contract or standard terms and conditions with their proposals. Offeror should address the specific language in the attached contract and submit any proposed changes.

North Dakota procurement statutes, rules, and policies allow some negotiation of the terms and conditions. No changes to the terms and conditions will be permitted without prior written approval from the STATE.

RIO ACTUARIAL AND CONSULTING SERVICES CONTRACT

1. PARTIES

The parties to this contract (Contract) are the state of North Dakota, acting through its Retirement & Investment Office (STATE), and ***Name of Business a type of business (e.g. Delaware corporation or privately held company)*** having its principal place of business at ***principal business address*** (CONTRACTOR);

2. SCOPE OF WORK AND DELIVERABLES

CONTRACTOR, in exchange for the compensation paid by STATE under this Contract, shall provide the following:

Annual pension valuations, annual GASB 67 and 68 reports, annual plan management policy score updates, an actuarial experience study, pricing proposed legislation, and general retirement plan consulting. Work will be conducted under a fixed fee arrangement for annual pension valuations, annual GASB reports, annual plan management policy score updates, and an actuarial experience study; and an hourly fee for services rate for pricing proposed legislation and general consulting services.

Services as described under this Contract, the proposal from Contractor dated _______, 2023, and the Request for Proposal No. 110.7-023-006 issued February 1, 2023, (hereinafter "Scope of Service Documents"). During the performance of such services by Contractor, TFFR will retain and exercise all decision-making authority with respect to the management and administration of the TFFR retirement plan and investments relating thereto.

DELIVERABLES:
The contractor will be required to provide the following to achieve the objective of this project:
This schedule of events represents the State's best estimate of the contract schedule that will be followed. The contractor will be required to provide the following deliverables according to the estimated contract schedule below.

• Contract Start Date:	July 1, 2023
• Draft 2023 Valuation Report Due: Final 2023 Valuation Report Due: Presentation to interim Legislative Committee: Presentation to TFFR Board:	October 5, 2023 October 12, 2023 October 2023 (TBD) November 2023 (TBD)
• Draft 2023 GASB 67 & 68 Report Due: Final 2023 GASB 67 & 68 Report Due:	October 15, 2023 October 22, 2023
• 2023 Policy Score Update Presentation to TFFR Board:	 April 2024 (TBD)
• Draft 2024 Valuation Report Due: Final 2024 Valuation Report Due: Presentation to interim Legislative Committee: Presentation to TFFR Board:	October 5, 2024 October 12, 2024 October 2024 (TBD) November 2024 (TBD)
• Draft 2024 GASB 67 & 68 Report Due: Final 2024 GASB 67 & 68 Report Due:	October 15, 2024 October 22, 2024
• 2024 Policy Score Update Presentation to TFFR Board:	 April 2025 (TBD)
• Draft 2024 Actuarial Experience Study Due: Final 2024 Actuarial Experience Study Due: Presentation to TFFR Board:	April 1, 2025 April 15, 2025 April 2025 (TBD)
• 2025 Legislative Session work product as needed	TBD

3. COMPENSATION-PAYMENTS

a. <u>Contractual Amount</u>

STATE shall pay for the accepted services provided by CONTRACTOR under this Contract an amount not to exceed ***[Amount]*** (Contractual Amount) for fixed fee services, and ***[Amount] per hour*** (Hourly Amount) for the hourly services. Any hours in excess of the estimated 300 hours for the initial two-year period (Initial Term) must be approved in advance by the STATE.

The Contractual Amount is firm for the duration of this Contract and constitutes the entire compensation due CONTRACTOR for performance of its obligations under this Contract regardless of the difficulty, materials or equipment required, including fees, licenses, overhead, profit and all other direct and indirect costs incurred by CONTRACTOR, except as provided by an amendment to this Contract.

b. <u>Payment</u>

1) Payment made in accordance with this Compensation section shall constitute payment in full for the services and work performed and the deliverables and work(s) provided under this Contract and CONTRACTOR shall not receive any additional compensation hereunder.

2) STATE shall make payment under this Contract within forty-five (45) calendar days after receipt of a correct invoice.

3) Payment of an invoice by STATE will not prejudice STATE's right to object to or question that or any other invoice or matter in relation thereto. CONTRACTOR's invoice will be subject to reduction for amounts included in any invoice or payment made which are determined by STATE, on the basis of audits conducted in accordance with the terms of this Contract, not to constitute allowable costs. At STATE's sole discretion, all payments shall be subject to reduction for amounts equal to prior overpayments to CONTRACTOR.

4) For any amounts that are or will become due and payable to STATE by CONTRACTOR, STATE reserves the right to deduct the amount owed from payments that are or will become due and payable to CONTRACTOR under this Contract.

c. <u>Travel</u>

STATE shall reimburse CONTRACTOR for expenses related to travel at amounts not to exceed those outlined below:

1) Lodging: Reimbursement shall not exceed the then current, published GSA rate for the travel location. Copies of receipts are required for lodging reimbursement. STATE shall not reimburse for incidental and miscellaneous expenses charged to the room, including: alcohol, telephone charges, or entertainment (e.g., movies).

2) Transportation. Air travel shall be reimbursed by STATE at the actual cost of air fare for coach class travel only. CONTRACTOR shall make air travel arrangements at least fourteen (14) days in advance whenever possible. Reimbursement for rented, chartered, or contracted vehicle transportation shall be limited to reasonable rates as determined by STATE

3) Meals: Meals shall be paid on a per diem basis for each day of travel at then current, published GSA per diem rate for the travel location. Per diem for the first and last day of travel shall be paid at seventy five percent (75%) of the GSA per diem rate. Requests for per diem payments must include the start and end dates of travel, the location where the services are performed, and the allowable per diem amount for each trip on the billing/invoice.

Payment for any travel expenses that exceed the travel budget as agreed upon by the Parties must be approved by STATE.

d. <u>Prepayment</u>

STATE will not make any advance payments before performance or delivery by CONTRACTOR under this Contract.

e. <u>Payment of Taxes by STATE</u>

STATE is not responsible for and will not pay local, state, or federal taxes. STATE sales tax exemption number is E 2001. STATE will furnish certificates of exemption upon request by the CONTRACTOR.

f. <u>Taxpayer ID</u>

CONTRACTOR'S federal employer ID number is: ***[Insert FEIN]***.

g. Purchasing Card

STATE may make payment using a government credit card. CONTRACTOR will accept a government credit card without passing the processing fees for the government credit card back to STATE.

4. TERM OF CONTRACT

This Contract term (Term or Initial Term) begins on July 1, 2023, and ends on June, 30, 2025.

a. No Automatic Renewal

This Contract will not automatically renew.

b. Renewal Option

STATE may renew this Contract upon satisfactory completion of the Initial Term. STATE reserves the right to execute up to 2 options to renew this Contract under the same terms and conditions for a period of 2 years each (Renewal Term).

c. Extension Option

STATE reserves the right to extend this Contract for an additional period, not to exceed 6 months, beyond the current termination date of this Contract.

5. TIME IS OF THE ESSENCE

CONTRACTOR hereby acknowledges that time is of the essence for performance under this Contract unless otherwise agreed to in writing by the Parties.

6. TERMINATION

a. Termination by Mutual Agreement

This Contract may be terminated by mutual consent of both Parties executed in writing.

b. Early Termination in the Public Interest

STATE is entering this Contract for the purpose of carrying out the public policy of the State of North Dakota, as determined by its Governor, Legislative Assembly, Agencies and Courts. If this Contract ceases to further the public policy of the State of North Dakota, STATE, in its sole discretion, by written notice to CONTRACTOR, may terminate this Contract in whole or in part.

c. Termination for Lack of Funding or Authority

STATE by written notice to CONTRACTOR, may terminate the whole or any part of this Contract under any of the following conditions:

1) If funding from federal, state, or other sources is not obtained or continued at levels sufficient to allow for purchase of the services or goods in the indicated quantities or term.

2) If federal or state laws or rules are modified or interpreted in a way that the services or goods are no longer allowable or appropriate for purchase under this Contract or are no longer eligible for the funding proposed for payments authorized by this Contract.

3) If any license, permit, or certificate required by law or rule, or by the terms of this Contract, is for any reason denied, revoked, suspended, or not renewed.

Termination of this Contract under this subsection is without prejudice to any obligations or liabilities of either Party already accrued prior to termination.

d. Termination for Cause

STATE may terminate this Contract effective upon delivery of written notice to CONTRACTOR, or any later date stated in the notice:

1) If CONTRACTOR fails to provide services or goods required by this Contract within the time specified or any extension agreed to in writing by STATE; or

2) If CONTRACTOR fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms.

The rights and remedies of STATE provided in this subsection are not exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

7. FORCE MAJEURE

Neither Party shall be held responsible for delay or default caused by fire, riot, terrorism, pandemic (excluding COVID-19), acts of God, or war if the event was not foreseeable through the exercise of reasonable diligence by the affected Party, the event is beyond the Party's reasonable control, and the affected Party gives notice to the other Party promptly upon occurrence of the event causing the delay or default or that is reasonably expected to cause a delay or default. If CONTRACTOR is the affected Party and does not resume performance within fifteen (15) days or another period agreed between the Parties, then STATE may seek all available remedies, up to and including termination of this Contract pursuant to its Termination Section, and STATE shall be entitled to a pro-rata refund of any amounts paid for which the full value has not been realized, including amounts paid toward software subscriptions, maintenance, or licenses.

8. INDEMNIFICATION

Contractor agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from and against claims based on the vicarious liability of the State or its agents, but not against claims based on the State's contributory negligence, comparative and/or contributory negligence or fault, sole negligence, or intentional misconduct. This obligation to defend, indemnify, and hold harmless does not extend to professional liability claims arising from professional errors and omissions. The legal defense provided by Contractor to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Any attorney appointed to represent the State must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. § 54-12-08. Contractor also agrees to reimburse the State for all costs, expenses and attorneys' fees incurred if the State prevails in an action against Contractor in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

9. INSURANCE

Contractor shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds, authorized to do business in North Dakota, the following insurance coverages:

1) Commercial general liability, including premises or operations, contractual, and products or completed operations coverages (if applicable), with minimum liability limits of $2,000,000 per occurrence.
2) Professional errors and omissions with minimum limits of $1,000,000 per claim and in the aggregate, Contractor shall continuously maintain such coverage during the contact period and for three years thereafter. In the event of a change or cancellation of coverage, Contractor shall purchase an extended reporting period to meet the time periods required in this section.
3) Automobile liability, including Owned (if any), Hired, and Non-Owned automobiles, with minimum liability limits of $500,000 per person and $2,000,000 per occurrence.
4) Workers compensation coverage meeting all statutory requirements.

The insurance coverages listed above must meet the following additional requirements:

1) This insurance may be in policy or policies of insurance, primary and excess, including the so called umbrella or catastrophe form and must be placed with insurers rated "A-" or better by A.M. Best Company, Inc., provided any excess policy follows form for coverage. Less than an "A-" rating must be approved by the State. The policies shall be in form and terms approved by the State.

2) The Contractor shall furnish a certificate of insurance to the undersigned State representative prior to commencement of this agreement.

3) Failure to provide insurance as required in this agreement is a material breach of contract entitling State to terminate this agreement immediately.

4) Contractor shall provide at least 30-day notice of any cancellation or material change to the policies or endorsements. An updated, current certificate of insurance shall be provided in the event of any change to a policy.

10. CYBER LIABILITY AND SECURITY INSURANCE

In the event CONTRACTOR will host data, or provide for the hosting of data through a third-party entity, CONTRACTOR shall secure and maintain Cyber Liability and Security Insurance or equivalent insurance product(s), with minimum liability limits of not less than $5,000,000 and first party limits of not less than $1,000,000, that will provide, without cost to the CONTRACTOR or STATE, an immediate response in the event of a data breach, including meeting all notification obligations of CONTRACTOR and STATE and in the event the data breach involves personal information as defined by N.D.C.C. § 51-30-1(4), the insurance policy shall also make available free credit monitoring for any affected individual for a minimum period of one year. CONTRACTOR shall defend, indemnify, save and hold harmless, the STATE, its officers, agents and employees from liability of any nature or kind, including costs and expenses, on account of a data breach arising from CONTRACTOR hosting, transmission, or control of data, any and all suits, claims, or damages of any character whatsoever, resulting from injuries or damages sustained by any person or persons or property by virtue of performance of this Contract.

11. WORKS FOR HIRE

CONTRACTOR acknowledges that all work(s) under this Contract is "work(s) for hire" within the meaning of the United States Copyright Act (Title 17 United States Code) and hereby assigns to STATE all rights and interests CONTRACTOR may have in the work(s) it prepares under this Contract, including any right to derivative use of the work(s). All software and related materials developed by CONTRACTOR in performance of this Contract for STATE shall be the sole property of STATE, and CONTRACTOR hereby assigns and transfers all its right, title, and interest therein to STATE. CONTRACTOR shall execute all necessary documents to enable STATE to protect STATE's intellectual property rights under this section.

12. WORK PRODUCT

All work product, equipment or materials created for STATE or purchased by STATE under this Contract belong to STATE and must be immediately delivered to STATE at STATE's request upon termination of this Contract.

13. NOTICE

All notices or other communications required under this Contract must be given by email, registered or certified mail and are complete on the date postmarked when addressed to the Parties at the following addresses:

STATE	CONTRACTOR
Chad Roberts	***Name***
Deputy Executive Director / Chief Retirement Officer	***Title***
PO Box 7100	***Address***
Bismarck, ND 58507	***City, State, Zip***
chad.roberts@nd.gov	***Email***

Notice provided under this provision does not meet the notice requirements for monetary claims against the State found at N.D.C.C. § 32-12.2-04.

14. CONFIDENTIALITY

CONTRACTOR shall not use or disclose any information it receives from STATE under this Contract that STATE has previously identified as confidential or exempt from mandatory public disclosure except as necessary to carry out the purposes of this Contract or as authorized in advance by STATE. STATE shall not disclose any information it receives from CONTRACTOR that CONTRACTOR has previously identified as confidential and that STATE determines in its sole discretion is protected from mandatory public disclosure under a specific exception to the North Dakota public records law, **N.D.C.C. CH.**

44-04. The duty of STATE and CONTRACTOR to maintain confidentiality of information under this section continues beyond the Term of this Contract.

The parties agree that all records relating to the benefits and participation of Teachers' Fund For Retirement members and their beneficiaries in programs administered by the Teachers' Fund For Retirement are confidential under North Dakota law. Contractor may request and the Teachers' Fund For Retirement shall provide directly to Contractor upon such request, confidential information necessary for Contractor to provide the services described in the Scope of Service section. Contractor shall keep confidential all Teachers' Fund For Retirement member and beneficiary information obtained in the course of delivering services. Failure of Contractor to maintain the confidentiality of such information may be considered a material breach of the contract and may constitute the basis for additional civil and criminal penalties under North Dakota law. Contractor shall report to the State any use or disclosure of confidential information not provided for by this Agreement of which it becomes aware without unreasonable delay and in any case within thirty (30) days from the date of discovery. Contractor has exclusive control over the direction and guidance of the persons rendering services under this Agreement. Upon termination of this Agreement, for any reason, Contractor shall return or destroy all confidential information received from the Teachers' Fund For Retirement, or created or received by Contractor on behalf of the Teachers' Fund For Retirement. This provision applies to confidential information that may be in the possession of subcontractors or agents of Contractor. Contractor shall retain no copies of the confidential information. In the event that Contractor asserts that returning or destroying the confidential information is not feasible, Contractor shall provide to the Teachers' Fund For Retirement notification of the conditions that make return or destruction infeasible. Upon explicit written agreement of the Teachers' Fund For Retirement that return or destruction of confidential information is not feasible, Contractor shall extend the protections of this Agreement to that confidential information and limit further uses and disclosures of any such confidential information to those purposes that make the return or destruction infeasible, for so long as Contractor maintains the confidential information.

15. COMPLIANCE WITH PUBLIC RECORDS LAWS

Under the North Dakota public records law and subject to the Confidentiality clause of this Contract, certain records may be open to the public upon request.

Public records may include: (a) records STATE receives from CONTRACTOR under this Contract, (b) records obtained by either Party under this Contract, and (c) records generated by either Party under this Contract.

CONTRACTOR agrees to contact STATE immediately upon receiving a request for information under the public records law and to comply with STATE's instructions on how to respond to such request.

16. INDEPENDENT ENTITY

CONTRACTOR is an independent entity under this Contract and is not a STATE employee for any purpose, including the application of the Social Security Act, the Fair Labor Standards Act, the Federal Insurance Contribution Act, the North Dakota Unemployment Compensation Law and the North Dakota Workforce Safety and Insurance Act. CONTRACTOR retains sole and absolute discretion in the manner and means of carrying out CONTRACTOR's activities and responsibilities under this Contract, except to the extent specified in this Contract.

17. ASSIGNMENT AND SUBCONTRACTS

CONTRACTOR may not assign or otherwise transfer or delegate any right or duty without STATE's express written consent, provided, however, that CONTRACTOR may assign its rights and obligations hereunder in the event of a change of control or sale of all or substantially all of its assets related to this Contract, whether by merger, reorganization, operation of law, or otherwise. Should Assignee be a business or entity with whom STATE is prohibited from conducting business, STATE shall have the right to terminate in accordance with the Termination for Cause section of this Contract.

CONTRACTOR may enter subcontracts provided that any subcontract acknowledges the binding nature of this Contract and incorporates this Contract, including any attachments. CONTRACTOR is solely responsible for the performance of any subcontractor with whom CONTRACTOR contracts. CONTRACTOR does not have authority to contract for or incur obligations on behalf of STATE.

18. SPOLIATION – PRESERVATION OF EVIDENCE

CONTRACTOR shall promptly notify STATE of all potential claims that arise or result from this Contract. CONTRACTOR shall also take all reasonable steps to preserve all physical evidence and information that may be relevant to the circumstances surrounding a potential claim, while maintaining public safety, and grants to STATE the opportunity to review and inspect such evidence, including the scene of an accident.

19. MERGER AND MODIFICATION, CONFLICT IN DOCUMENTS

This Contract, including the following documents, constitutes the entire agreement between the Parties. There are no understandings, agreements, or representations, oral or written, not specified within this Contract. This Contract may not be modified, supplemented or amended, in any manner, except by written agreement signed by both Parties.

Notwithstanding anything herein to the contrary, in the event of any inconsistency or conflict among the documents making up this Contract, the documents must control in this order of precedence:

a. The terms of this Contract as may be amended;
b. STATE's Solicitation Amendment #1 to Request for Proposal ("RFP") number 110.7-023-006 dated ________;
c. STATE's Request for Proposal ("RFP") number 110.7-023-006 dated 2/1/2023;
d. CONTRACTOR's proposal dated ____________ in response to RFP number 110.7-023-006.
e. All terms and conditions contained in any automated end-user agreements (e.g., click-throughs, shrink wrap, or browse wrap) are specifically excluded and null and void, and shall not alter the terms of this Contract.

20. SEVERABILITY

If any term of this Contract is declared to be illegal or unenforceable by a court having competent jurisdiction, the validity of the remaining terms is unaffected and, if possible, the rights and obligations of the Parties are to be construed and enforced as if this Contract did not contain that term.

21. APPLICABLE LAW AND VENUE

This Contract is governed by and construed in accordance with the laws of the State of North Dakota. Any action to enforce this Contract must be adjudicated exclusively in the state District Court of

Burleigh County, North Dakota. Each Party consents to the exclusive jurisdiction of such court and waives any claim of lack of jurisdiction or *forum non conveniens*.

22. ALTERNATIVE DISPUTE RESOLUTION – JURY TRIAL

By entering this Contract, STATE does not agree to binding arbitration, mediation, or any other form of mandatory Alternative Dispute Resolution. The Parties may enforce the rights and remedies in judicial proceedings. STATE does not waive any right to a jury trial.

23. ATTORNEY FEES

In the event a lawsuit is instituted by STATE to obtain performance due under this Contract, and STATE is the prevailing Party, CONTRACTOR shall, except when prohibited by N.D.C.C. § 28 26 04, pay STATE's reasonable attorney fees and costs in connection with the lawsuit.

24. NONDISCRIMINATION AND COMPLIANCE WITH LAWS

CONTRACTOR agrees to comply with all applicable federal and state laws, rules, and policies, including those relating to nondiscrimination, accessibility and civil rights. (See N.D.C.C. Title 34 – Labor and Employment, specifically N.D.C.C. ch. 34-06.1 Equal Pay for Men and Women.)

CONTRACTOR agrees to timely file all required reports, make required payroll deductions, and timely pay all taxes and premiums owed, including sales and use taxes, unemployment compensation and workers' compensation premiums.

CONTRACTOR shall have and keep current all licenses and permits required by law during the Term of this Contract all licenses and permits required by law.

CONTRACTOR's failure to comply with this section may be deemed a material breach by CONTRACTOR entitling STATE to terminate in accordance with the Termination for Cause section of this Contract.

25. STATE AUDIT

Pursuant to N.D.C.C. § 54-10-19, all records, regardless of physical form, and the accounting practices and procedures of CONTRACTOR relevant to this Contract are subject to examination by the North Dakota State Auditor, the Auditor's designee, or Federal auditors, if required. CONTRACTOR shall maintain these records for at least three (3) years following completion of this Contract and be able to provide them upon reasonable notice. STATE, State Auditor, or Auditor's designee shall provide reasonable notice to CONTRACTOR prior to conducting examination.

26. COUNTERPARTS

This Contract may be executed in multiple, identical counterparts, each of which is be deemed an original, and all of which taken together shall constitute one and the same contract.

27. EFFECTIVENESS OF CONTRACT

This Contract is not effective until fully executed by both Parties. If no start date is specified in the Term of Contract, the most recent date of the signatures of the Parties shall be deemed the Effective Date.

CONTRACTOR	STATE OF NORTH DAKOTA
<insert business>	Acting through its Retirement & Investment Office
BY: **<Signature>**	BY: **<Signature>**
<Printed Name>	Chad Roberts
<Title>	Deputy Executive Director/Chief Retirement Officer
Date:	Date:

NORTH Dakota | Retirement and Investment
Be Legendary.™

MEMORANDUM

TO: **SIB**
FROM: **Jan Murtha, Executive Director**
DATE: **January 20, 2023**
RE: **2023 Legislative Session Update**

Please find following this memorandum the bill tracker prepared by RIO staff for the week of January 16, 2023. An updated bill tracker will be provided to the Board and replace the enclosed in the Board packet prior to the SIB meeting on January 27, 2023. Staff will review relevant legislation impacting investment operations with the SIB GPR Committee at its meeting on January 26, 2023, for position recommendations to the full SIB. Staff will present SIB GPR recommendations and highlight other bills where RIO has already offered testimony during the SIB meeting on January 27, 2023.

Testimony offered by RIO staff on behalf of both the SIB and TFFR Board thus far this session is included as an appendix to the Board packet. This includes testimony on HB1039, HB 1040, HB 1088, HB 1150, HB 1219, HB 1227, and SB 2022.

ACTION REQUESTED: Provide staff guidance on position for testimony.

2023-2025 Legislative Session RIO Bill Tracker

Bill #	Topic	Description	Sponsor	Hearing Date	Committee	Status
HB 1039	Closing DB Plan	Closing DB Plan (eff. 12/31/23)	Legislative Management: Weisz, Bosch, Boschee, Lefor, Mitskog, Vigesaa, Burckhard, Klein, Piepkorn, Schaible, Wanzek	1/13 - 9:15am	House GVA	
HB 1040	Closing DB Plan	Closing DB Plan (eff. 12/31/24)	Legislative Management: Weisz, Bosch, Boschee, Lefor, Mitskog, Vigesaa, Burckhard, Klein, Piepkorn, Schaible, Wanzek	1/13 - 8:30a.m.	House GVA	
HB 1088	SIB	SIB Membership changes	Government and Veterans Affairs: Schauer, Satrom, Bahl, Cory, Hoverson, Johnson, Karls, Louser, McLeod, Rohr, Schneider, Steiner, Vetter	1/12 - 10:15am	House GVA	Amended by House GVA on 1/19/22. Passed Committee 13-0. Reduced experts to 1 from 2, changed experience language; Legacy Advisory Board would be a voting member; and two legislative members.
HB 1147	Legacy Earnings	Creating a county and township bridge fund from legacy earnings	Rep. Thomas, Rep. Anderson, Rep. Hagert, Rep. Lefor, Rep. Mitskog, Rep. Monson, Sen. Myrdal, Rep. Pyle, Sen. Sorvaag, Rep.	1/18 - 10:30am	House Approps	
HB 1150	Veteran Exemption for TFFR	Allows veterans with at least 20 years of military service to opt out of the TFFR in their first year of teaching	Thomas, Bekkedahl, Heinert, Meyer, O'Brien, Pyle, Richter, Ruby, Schaible, Schreiber-Beck, Vedaa	1/16 - 4:00pm	House Education	Passed House 1/19 54 yeas/ 37 nays
HB 1201	Employee recruiting	Prohibiting a state entity from employing an individual under contract with a school district	Reps. Heinert, Hauck, Koppelman, Meier, Porter, M. Ruby, Toman Sens. Larsen, Meyer, Schaible	1/18 - 2:00pm (3rd)	House Education	
HB 1216	ND Development Fund	Commerce Dept. funds to promote economic development.	Rep, Nathe	1/16- 9:00am	House IBL	
HB 1219	TFFR	TFFR Changes	Reps. Kempenich, Conmy, Kreidt Sen. Schaible	1/20 - 9:15am	House GVA	
HB 1227	Legacy Fund	Requiring a cost-benefit analysis for a measure or policy affecting the Legacy Fund.	Reps. Kempenich, Bosch, Cory, Mock, Swiontek, Thomas, Vigesaa Sens. Klein, Meyer, Patten	1/18 - 9:00am	House Finance & Tax	Passed House 1/20 89 yeas/ 0nays
HB 1251	Salaries for school superintendents	Capping salaries for school superintendents	Rep. Ruby, Sen. Cleary, Rep. Heilman, Rep. Heinert, Sen. Hogue, Sen. Krebsbach, Sen. Kreun, Rep. Lefor, Sen. Meyer, Rep. Schreiber-Beck	1/25 - 10:00am	House Education	

HB 1271	TFFR	Opt-out for retired teachers returning to service from having to contribute to TFFR	Reps. Schatz, Hauck, D. Ruby, Strinden Sen. Myrdal	1/23 - 3:00pm	House Education	
HB 1278	SIB	Requiring contracts with custodians/managers include required written support of fossil fuel and ag industries in state.	Reps. Satrom, Grueneich, Headland, Lefor, S. Olson, Ostlie, Schauer, Steiner Sens. Conley, Wanzek		House GVA	
HB 1283	Financial Industry	Impacting and creating a list of banks that develop stances on ESG	Rep. Novak, Rep. Dyk, Rep. Kempenich, Rep. Lefor, Sen. Myrdal, Sen. Rummel, Rep. Steiner, Rep. Tveit	1/24- 8:00am	House IBL	
HB 1285	Agency	Prohibiting executive branch agency bill submissions without legislator or legislative committee sponsor.	Reps. Toman, Christensen, Heilman, Henderson, Prichard		House GVA	
HB 1321	PERS Board	Changing PERS Board makeup	Reps. Kasper, Dockter, Lefor, Louser, D. Ruby, M. Ruby, Steiner, Vigesaa, Weisz Sen. Hogue	1/18 - 2:30pm	House IBL	
HB 1345	Procurement	All contracts between a state entity and a vendor must include a provision of the vendor supporting the state's agriculture and energy industries	Reps. Satrom, Grueneich, Hagert, Headland, Kiefert, Ostlie, Steiner Sen. Conley, Erbele, Lemm, Wanzek	1/20 - 9:00am	House Agriculture	
HB 1347	Banking	State treasurer and financial institutions engaged in boycotts of energy companies	Reps. Satrom, Grueneich, Ostlie, Schauer, Strinden Sens. Clemens, Conley	1/18 - 2:30pm (4th)	House IBL	
HB 1368	Investments	Prohibiting investments and contracts with companies that boycott Israel.	Reps. K. Anderson, Bellew, M. Ruby, Strinden, Timmons, Tveit Sens. Clemens, Kannianen, Myrdal	1/23 - 9:00a.m.	House IBL	Moved to GVA
HB 1372	Teacher Permitting	Foreign practitioners			House Education	
HB 1379	Legacy Earnings Streams	Modifies Legacy Fund Earnings streams	Reps. Lefor, Bosch, Dockter, Headland, Nathe, Novak, O'Brien Sens. Bekkedahl, Hogue, Rummel, Sorvaag		House Approps	
HB 1400	Investing Land Assets	Allows Land to use SIB for Investment purposes		1/24 - 8:00a.m.	House IBL	
SB 2015	Budget bill	OMB Budget Bill	Senate Appropriations	1/20 - 8:30am	Senate Approps - Gov't Ops	
HB 1420	Economic Development	Small Business Diversity revolving Loan fund		1/23 - 9:00a.m.	House IBL	

HB 1429	SIB	ESG Boycott/ Contract Restrictions/SIB list	Reps. Novak, Koppelman, Louser, J. Olson, S. Olson, M. Ruby, Thomas, Sen. Elkin, Magrum, Rummel	01/23 - 9:00a.m.	House IBL	
HB 1469	SIB	Restrictions on Investment Operations	Reps. Novak, Dyk, J. Olson, S. Olson, Porter, Schauer, Weisz, Sen. Bekkedahl, Rust		House IBL	
HB1486	NDPERS	Specifies a lump sum deposit from the GF, special funds and municipalities for the closing of the DB plan	Kasper	1/26 - 8:30a.m.	House GVA	
SB 2022	Budget bill	RIO's Budget	Senate Appropriations	1/19 - 10:00am	Senate Approps - Human Resources	Committee Work 1/23
SB 2070	Teacher Permitting	Extends the length of time non-certified teachers can be permitted	Senate State and Local Govt - Roers, Barta, Braunberger, Cleary, Estenson, Lee	1/17 - 2:00pm	Senate Education	Amended.
SB 2164	PERS Board	Changing how legislative members of PERS Board are appointed	Sen. Dever Reps. Brandenburg, Hatlestad, D. Johnson, Monson, Schauer	1/19 - 9:30am	Senate State & Local	
SB 2165	Energy Commission	Funds to clean sustainable engery fund/ BND	Sen. Patten, Rep. Bosch, Sen. Kannianen, Sen. Kessel, Rep. Novak, Rep. Porter	1/19-10am	Senate Energy and Natural Resources	
SB 2196	Infrastructure Revolving Loan Fund	Resets terms of the infrastructure revolving loan fund.	Sen. Patten, Sen. Beard, Sen. Bekkedahl, Sen. Kannianen, Rep. Olson, Rep. Richter	1/19-10:30am	Senate Energy and Natural Resources	
SB 2220	Legacy Earnings	Adding a Housing Incentive Fund bucket to Legacy stream	Sens. Kreun, Barta, Hogan, Mathern Reps. Ista, O'Brien	1/23 - 9:30a.m.	Senate Finance & Taxation	
SB 2233	BND	Auditing practices of certain funds under management of BND	Sen. Klein, Sen. Bekkedahl, Sen. Hogue, Rep. Lefor, Rep. Vigesaa	1/23 - 10:15a.m.	Senate IBL	
SB 2239	PERS Plan	Changing PERS contribution rates and appropriating $250M to the fund	Sens. Cleary, Dever Rep. Boschee	1/27 - 9:45a.m.	Senate State & Local	
SB 2258	TFFR	Expands scope of Critical Shortage area qualification for rehired retirees	Sens. Paulson, Beard Reps. Heilman, Hoverson, Louser	1/23 - 10:30a.m.	Senate Education	
SB 2330	Legacy Fund	Legacy earnings definition and change in Legacy Fund IPS percentages.	Sens. Klein, Hogan, Meyer Reps. Bosch, Kreidt		Senate IBL	
SB 2346	Legacy Earnings	Using $160M of Legacy Earnings school funding formula	Sens. Larsen, Vedaa Reps. Fisher, Toman		Senate Finance & Taxation	

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MEMORANDUM

TO: TFFR Board of Trustees
FROM: Chad R. Roberts, DED/CRO
DATE: January 18, 2023
RE: January 2023 Pioneer Project Update

Project Status

Pilot 1 elaboration meetings were completed on December 16, 2022. Pilot 1 contained modules of the system such as employer enrollment and service credit purchase. The modules from Pilot 1 are in the development phase with the vendor engineering team and are being reviewed by TFFR staff as each section of the software is developed. Once developed, the modules enter the testing phase during which the vendor tests all aspects of the build prior to sending to TFFR staff for in-house testing.

Pilot 2 elaboration began on January 9, 2023. This elaboration phase is projected to last through May 18, 2023. In addition to the design of modules such as dual member enrollment and service retirement benefit calculation, the vendor and TFFR staff are also conducting meetings to develop the new file scanning and document management process for the system.

There are four total pilot phases of the elaboration stage of the project with the last pilot scheduled to be complete in the 4th quarter of 2023. The project is still planned to "go live" in the fourth quarter of 2024.

Budget Status

The project remains on budget with no current cost overruns.

Unanticipated Issues

During the elaboration sessions the vendor and TFFR staff identified three necessary interfaces with other state agency software solutions. Those interfaces are with the Office of Management and Budget, the Department of Public Instruction and NDPERS. NDIT is presently working with the vendor to develop the interfaces. The vendor has determined the interfaces are within the scope of their contract and will not be passing any additional costs on to RIO for these interfaces. NDIT is assessing whether there will be any additional costs passed on to RIO for the interface work done by NDIT.

BOARD ACTION REQUESTED: Acceptance

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MEMORANDUM

TO: **TFFR Board of Trustees**
FROM: **Chad R. Roberts, DED/CRO DATE: January 24, 2023**
RE: **FY2022 Annual Ends Report**

Summary

Attached is the Annual Ends Report for TFFR for the 2022 Fiscal Year. The report summarizes and provides metrics for performance of the program in order to demonstrate the program is adhering to policies and expectations of the TFFR Board and the SIB.

The report addresses four key areas: membership data and contributions, member services, account claims, and trust fund evaluation and monitoring.

BOARD ACTION REQUESTED: Acceptance

TFFR Ends
Annual Review
Year Ended June 30, 2022

The information provided in the following report reflects performance indicators and measures that the TFFR ends policies formally adopted by the TFFR Board and accepted by the SIB are being implemented. The report covers the areas of membership data and contributions, member services, account claims, and trust fund evaluation/monitoring. The data in the report reflects the best available data as available on June 30, 2022.

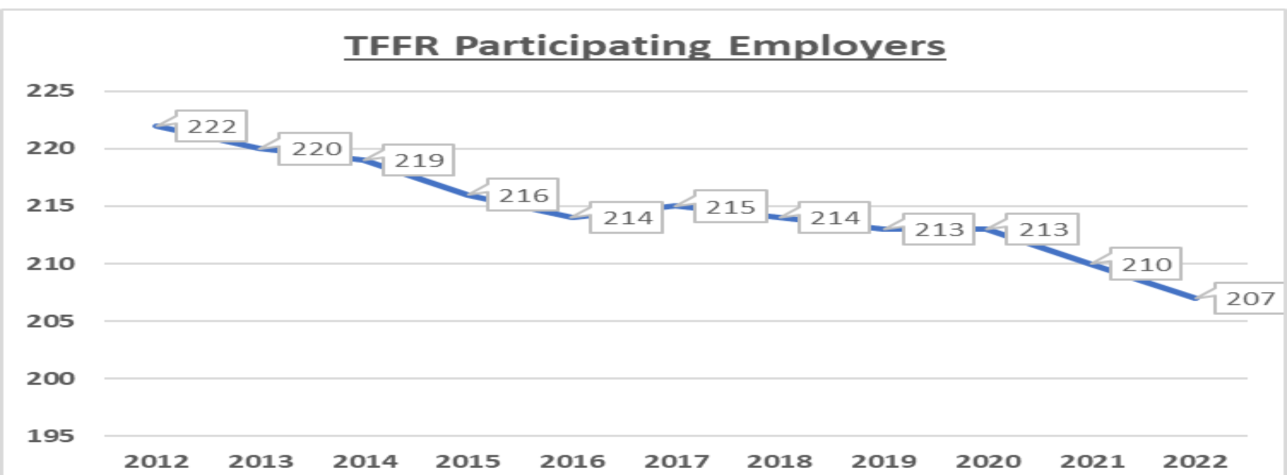
Membership Data and Contributions

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

- **Collections and Payments**

Collected employer contributions totaling $100,331,347 from 207 employers for the fiscal year ending 06/30/2022. The ADEC for employer contributions for the same period was $97,341,070.

The number of participating employers decreased to 207 in FY2022 from 210 in FY2021. This decrease was the result of two pairs of school consolidations and the last eligible member from ND United retiring.



Collected employee contributions totaling $92,462,223 for the fiscal year ending 06/30/2022.

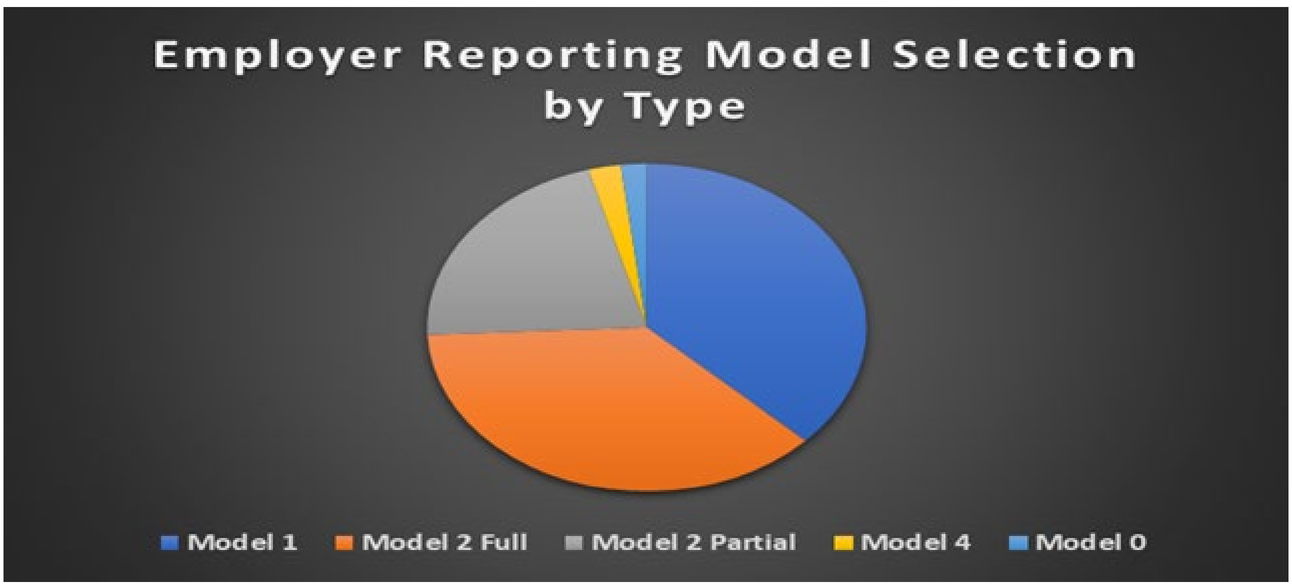
Paid out $244,069,172 in pension benefits and $7,142,359 in refunds and rollovers totaling $251,847,455 for the year. There was a noticeable increase in refunds in FY2022, increasing nearly 19% over FY2021.

About 86% of employers electronically report contributions to TFFR. These reports contained the reporting data for almost 98% of active participants.

As of June 30, 2022, there are 177 employers reporting using the TFFR Employer Online Services.

There were no reporting penalties assessed and TFFR did not withhold foundation payments from any school districts. Employer reporting penalties include late reporting of contributions and failure to provide documentation in a timely manner (e.g. new member forms, return to teach forms, employer compliance audit documentation.)

9 employers modified employer payment plan model election. Of those model changes, three employers changed from a model 1 to a model 2. The remainder of the changes were model 2 schools changing their employer paid portion of the employee share.



- **Employer Summary Report and Member Statements**

  Mailed 9,261 annual statements to retired members in December 2021.

  Mailed FY2022 Employer Summary Report to each employer in August 2022.

  Prepared 15,024 Annual Statements for non-retiree’s online accounts in September 2022.

- **Employer Outreach Programs & Communications**

  TFFR staff participated in the 2021 School Board and School Business Manager Association Annual Conference in October 2021. At this conference the DED/CRO, Retirement Programs Manager and Employer Services Coordinator did a presentation on changes with TFFR including the upcoming pension administration system project.

One new business manager training workshop was conducted virtually in the March of 2022. We had a total of 68 business managers registered for the workshop and 45 of those registered attended.

There were six business manager info mixers held in the 2022 fiscal year. Topics covered at those learning sessions covered areas such as the retirement process, employer payment plan models and year end reporting. A total of 174 business managers attended these events.

GASB 68 2021 data updated and added to website.

Briefly employer newsletter (3 publications sent electronically). The newsletter was produced and sent out in October 2021, February 2022 and June 2022.

Member Services

Ends: Provide direct services and public information to members of TFFR.

- **Outreach Program Statistics**

  339 members attended outreach programs

  Retirement Services staff traveled 0 miles

- **Retirement Education Workshops**

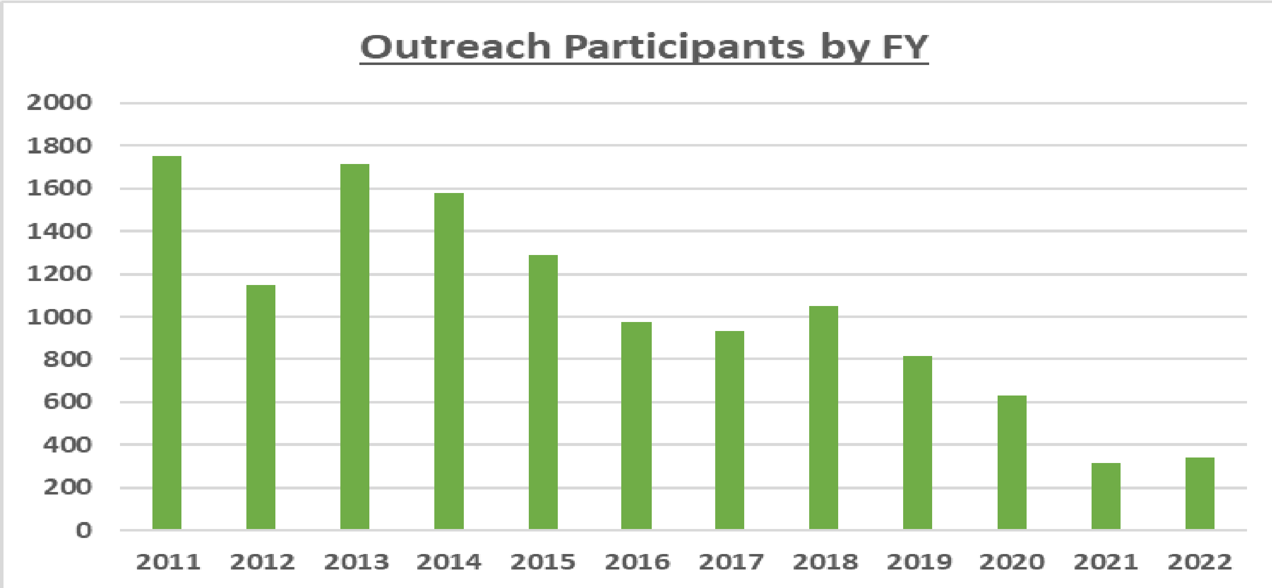
  32 members attended the single Retirement Education Workshop conducted in Bismarck

- **Retirement 101 Workshops**
  None requested in fiscal year 2022

- **Group and Individual Counseling Sessions**
  All sessions were conducted virtually

  18 group sessions were conducted with a total of 229 members attending

  78 individual sessions were conducted



- **Member Communications**

  Updated TFFR Fast Facts handout
  Marketed Member Online with email blasts

- **TFFR Member Online**

  As of June 30, 2022, there are 7,851 members who have signed up for TFFR Member Online Services. That is a 16% increase in registrations over June 30, 2021.

Account Claims

Ends: Ensure the payment of benefit claims to members of TFFR.

- **Annuity Payments**

  Distributed $251,874,262 in pension benefits to 9,438 retired members and beneficiaries.

  The average age of pensioners in TFFR as of July 1, 2022, was 79.267 years.

  The average pension benefit paid as of July 1, 2022, was $2,224.63

- **Member Account Activity**

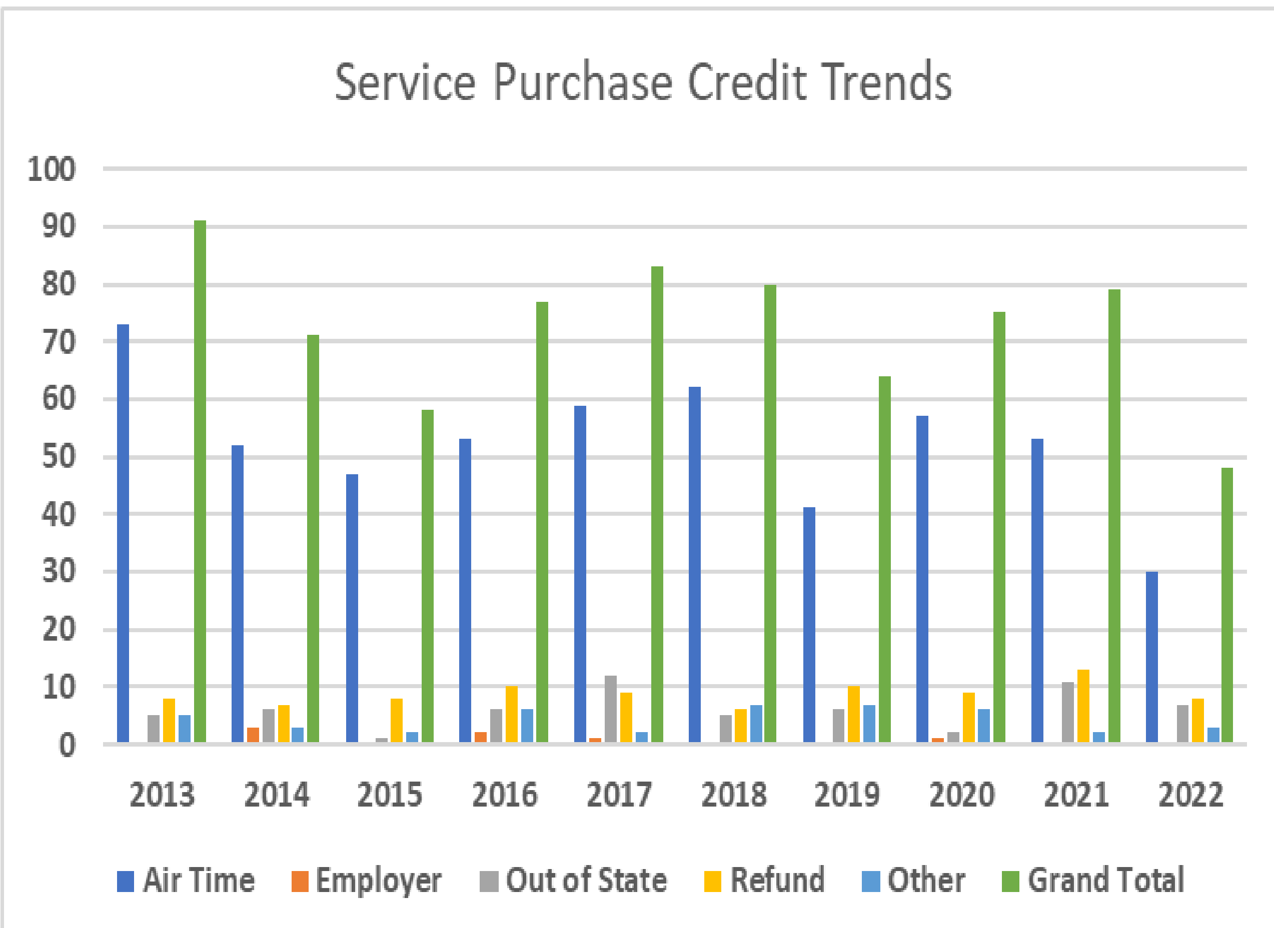
New members	965
Deaths	169
Service Purchases	48

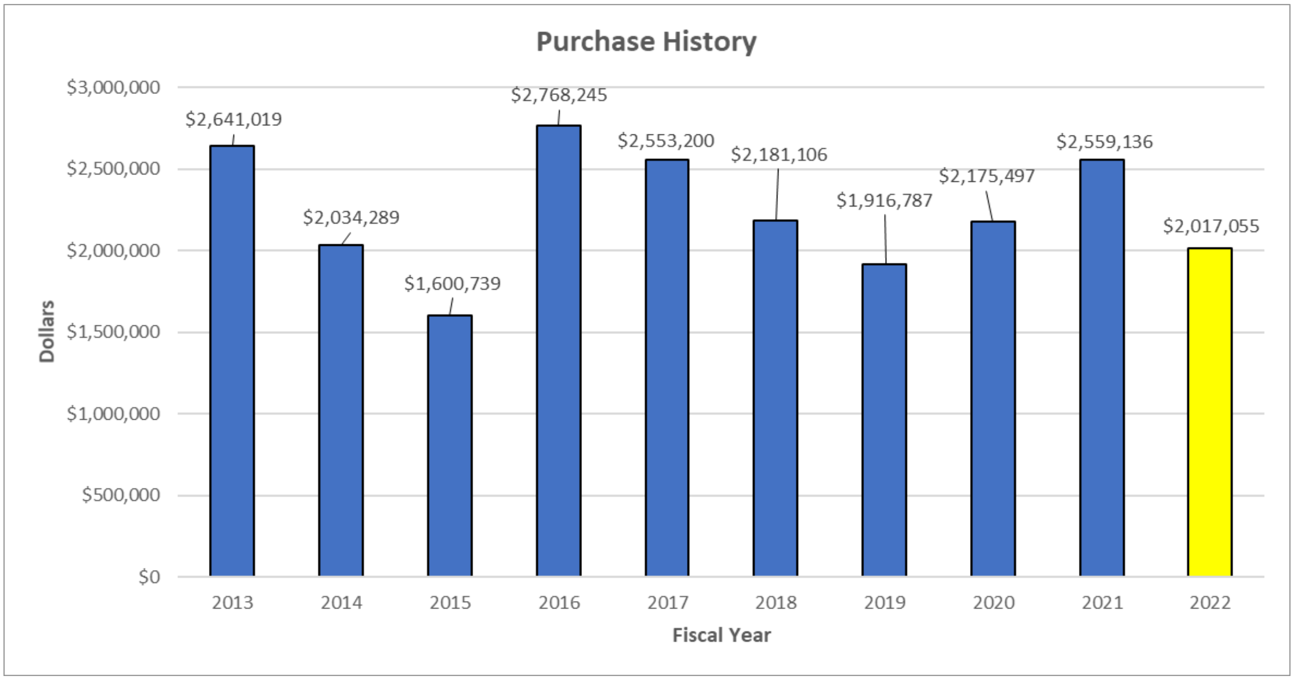
- **Refunds, Rollovers & Transfers**

  Distributed refund and rollover payments of $7,142,359 to 197 participants during the fiscal year.

- **Service Credit Purchases**

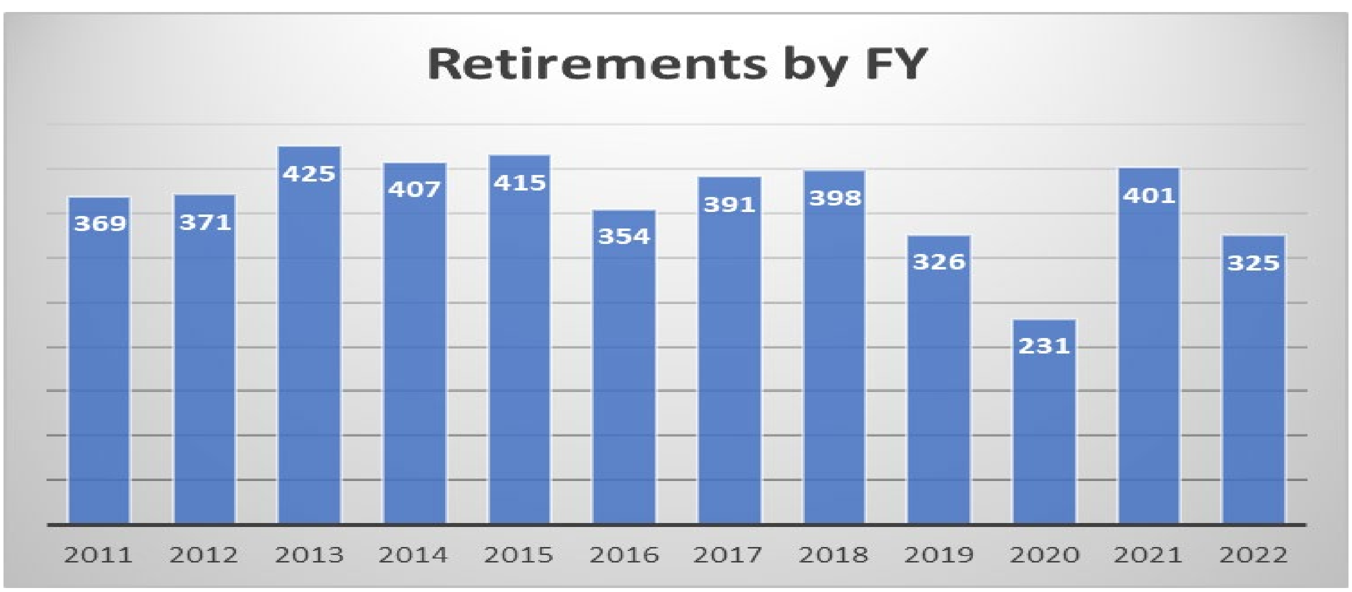
  There were 48 service credit purchases in FY2022. Of those, 30 were for airtime, 7 were out of state, 8 were refunded service and 3 were other. The total dollar value of those purchases was $2,017,055. This was a decrease of both the total value and the total number of service credit purchases from FY2021.





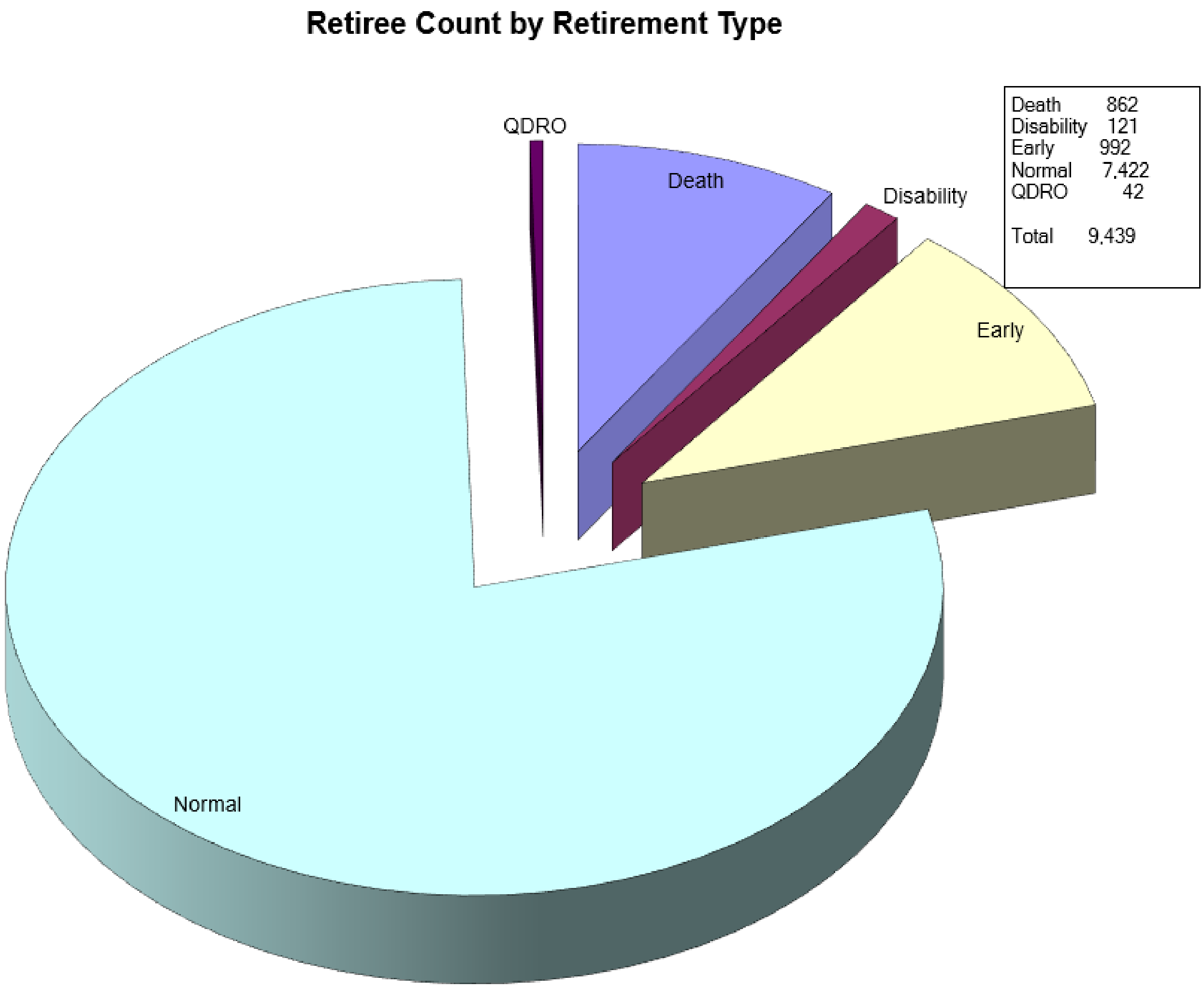
- **Processed Claims for Benefits**

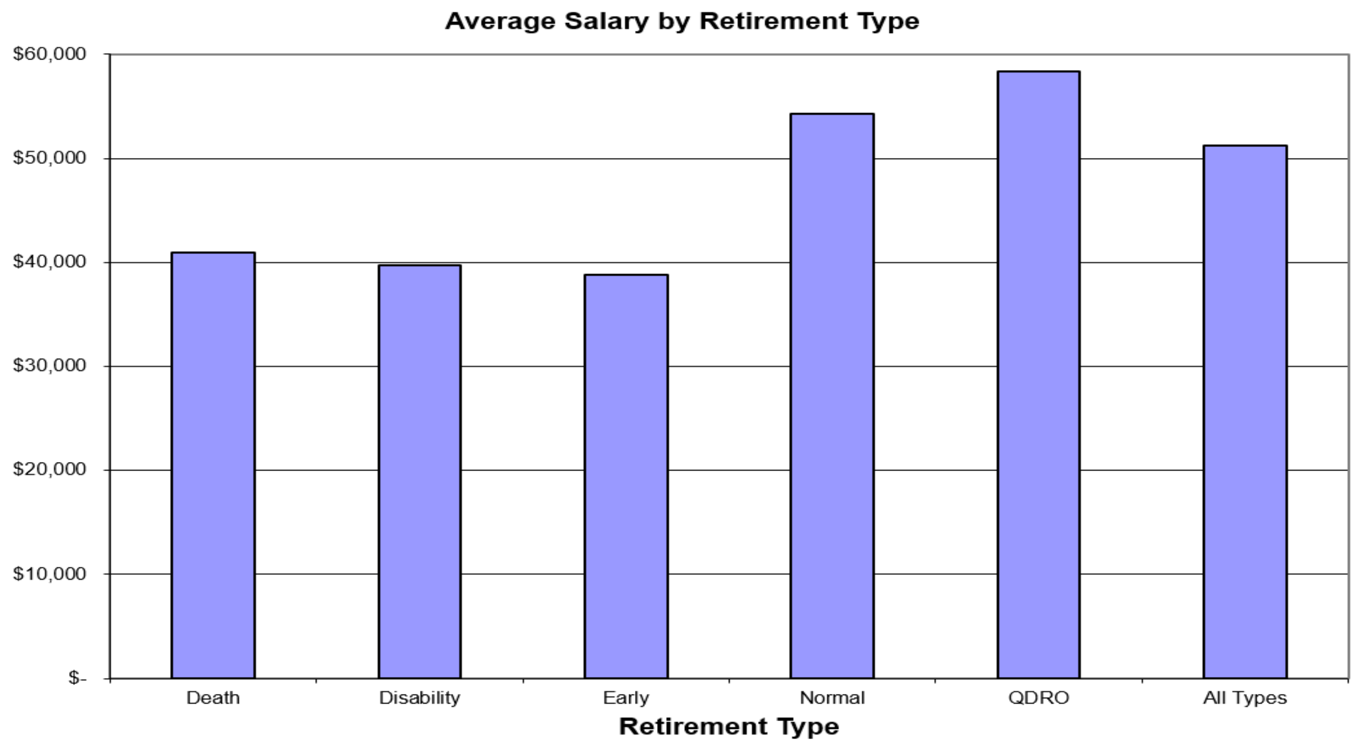
Refunds	171
Rollovers	26
Retirements	325
Disabilities	1
Survivor annuitants	3

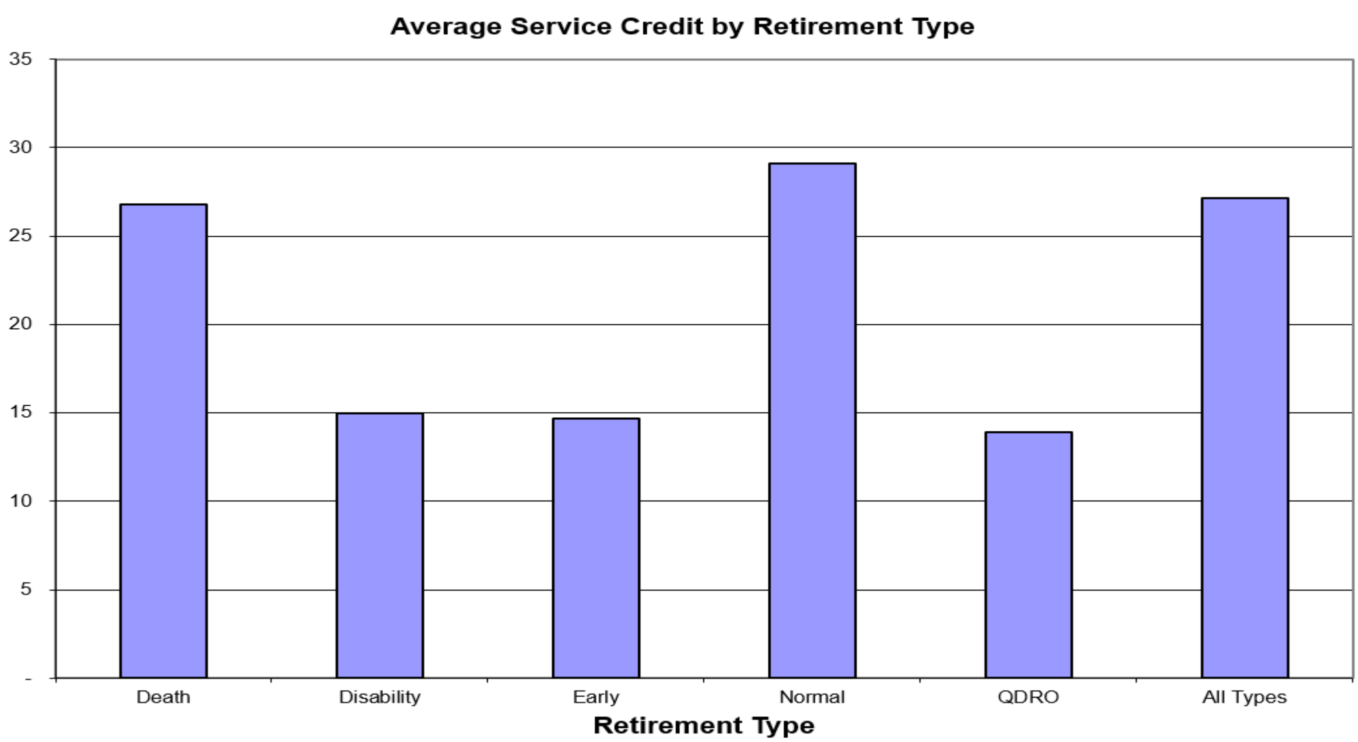


TFFR Ends
Annual Review
Year Ended June 30, 2022

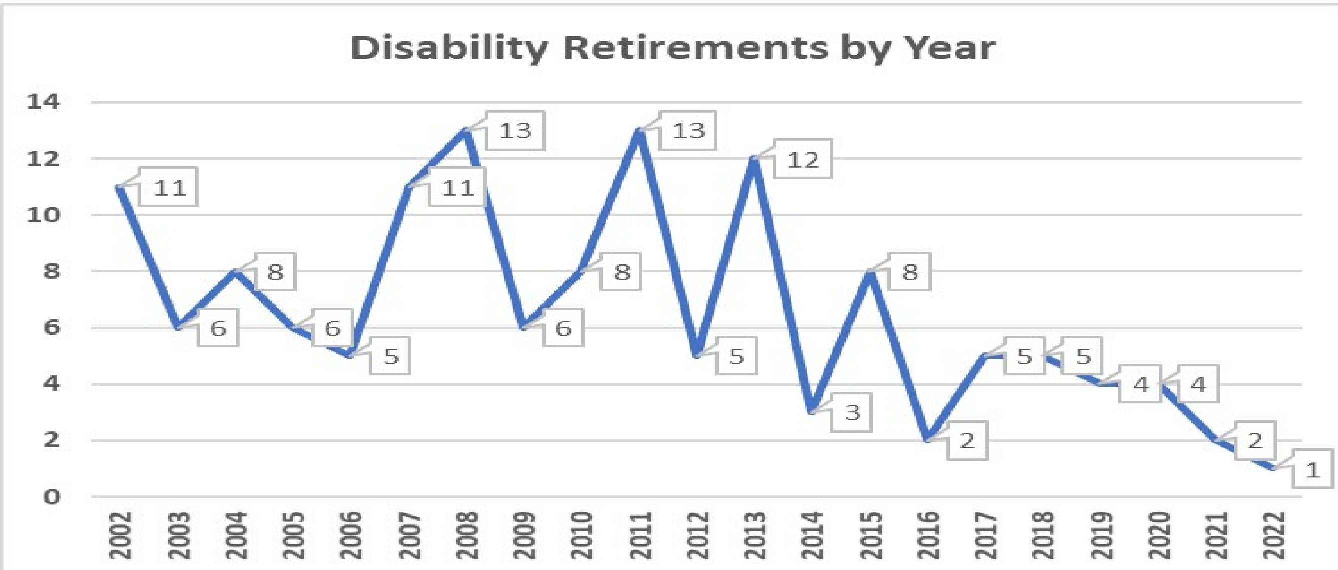
As of July 1, 2022, there are 9,439 retirees in the TFFR program. The following charts break out the retirements by type. Chart one is total retirement counts by type. Chart two is average salary by retirement type. Chart three is average service credit by retirement type. The last and final chart, chart four, is the average pension by formula.




Average Salary by Retirement Type
$60,000
$50,000
$40,000
$30,000
$20,000
$10,000
$-
Death
Disability
Early
Normal
QDRO
All Types
Retirement Type


Average Service Credit by Retirement Type
35
30
25
20
15
10
5
-
Death
Disability
Early
Normal
QDRO
All Types
Retirement Type

Disabilities are trending downward for the previous five years, with only one disability retirement in FY2022.



Trust Fund Evaluation/Monitoring

Ends: Ensure actuarial consulting and accounting services are provided to the retirement program. The TFFR Board of Trustees will select the independent actuary for consulting and actuarial purposes and direct a contract to be executed by the Deputy Directory/Chief Retirement Officer.

- **Actuarial Services**

  The annual actuarial valuation for July 1, 2022, was presented to the TFFR Board by Segal on November 17, 2022.

- **External Audit**

  An unqualified opinion was issued by independent auditors, CliftonLarsonAllen, LLP, regarding RIO's financial statements for the year ending June 30, 2022. CliftonLarsonAllen, LLP presented the report to the SIB Audit Committee on November 15, 2022.

- **Internal Audit**

  The annual audit activities report was presented to the TFFR Board on September 22, 2022. The report included information on the executive limitations audit, SIB self-evaluation and governance, succession planning, strategic planning, TFFR benefit payment audit, TFFR salary verification audit, and pension administration system.

- **Other**

  Received Certificate of Achievement in Financial Reporting from GFOA for June 30, 2022, Annual Financial Report.

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MEMORANDUM

TO: **TFFR Board**
FROM: **Jan Murtha, Executive Director**
DATE: **January 20, 2023**
RE: **Executive Limitations/Staff Relations**

Ms. Murtha will provide a verbal update at the meeting on agency efforts to address current and future organizational risk through strategic planning. Including updates on the following topics:

1. **Retirements/Resignations/FTE's/Temporary Assistance**:

Employee Title	**Status**
Retirement Accountant.	The Retirement Accountant was posted externally and filled by an internal candidate in January 2023.
Chief Risk Officer	Offer accepted. Start date TBD, expected Q1 2023.
Investment Accountant	Vacancy due to team member accepting Retirement Acct. position. Posted and set to close 1/30/23.
Sr. Investment Officer	Offer accepted. Start date TBD, expected Q1 2023.
Accounting Intern	Started December 2022.

2. **Current Project Activities/Initiatives:**

- **Legacy Fund Asset Allocation Study –** RVK continues its work on the Legacy Fund Asset Allocation Study. The changes to the Investment Policy Statement recommended by RVK were approved by both the Advisory Board and the SIB in December 2022. At the last meeting, it was discussed that RVK, and the Advisory Board intend to meet in Q2 2023 to review recommendations for updates to the Legacy Fund asset allocation and discuss a pacing schedule.
- **TFFR PAS Project** (hereinafter TFFR "Pioneer Project")– The TFFR Pioneer Project continues with implementation consistent with the project plan. Currently the project is in an elaboration phase involving review of system components. The amount of time spent on the project by various staff members currently varies from 5 to 25 hours or more per week.
- **Northern Trust Initiative** – In an effort to enhance the infrastructure for the investment program the Investment and Fiscal teams are leading an initiative to coordinate with Northern Trust for additional functionality/capabilities.
- **Audit Consultant RFP:** In September staff issued an RFP for Audit consultant services to assist with the development of additional internal audit business practices to support program evolution consistent with the agencies strategic plan. Procurement concluded, the contract is finalized, and work is currently underway with the expectation that recommendations will be presented to the SIB Audit Committee in May 2023. Weaver Consultants was awarded the contract.

3. Engagement Survey Results

Following this memorandum are the 2022 Gallup Engagement Survey results for the agency. Ms. Murtha will review the results with the Board at the meeting.

BOARD ACTION REQUESTED: Information Only.

GALLUP

EMPLOYEE ENGAGEMENT REPORT

Q12 Engagement Survey - trending - Regular staff - October 2022

Agency - 19000

Oct 17, 2022 - Nov 07, 2022 | Total Respondents : 12

Mean

Change

↑ +0.20

Respondents

12

Percentile Rank

76th

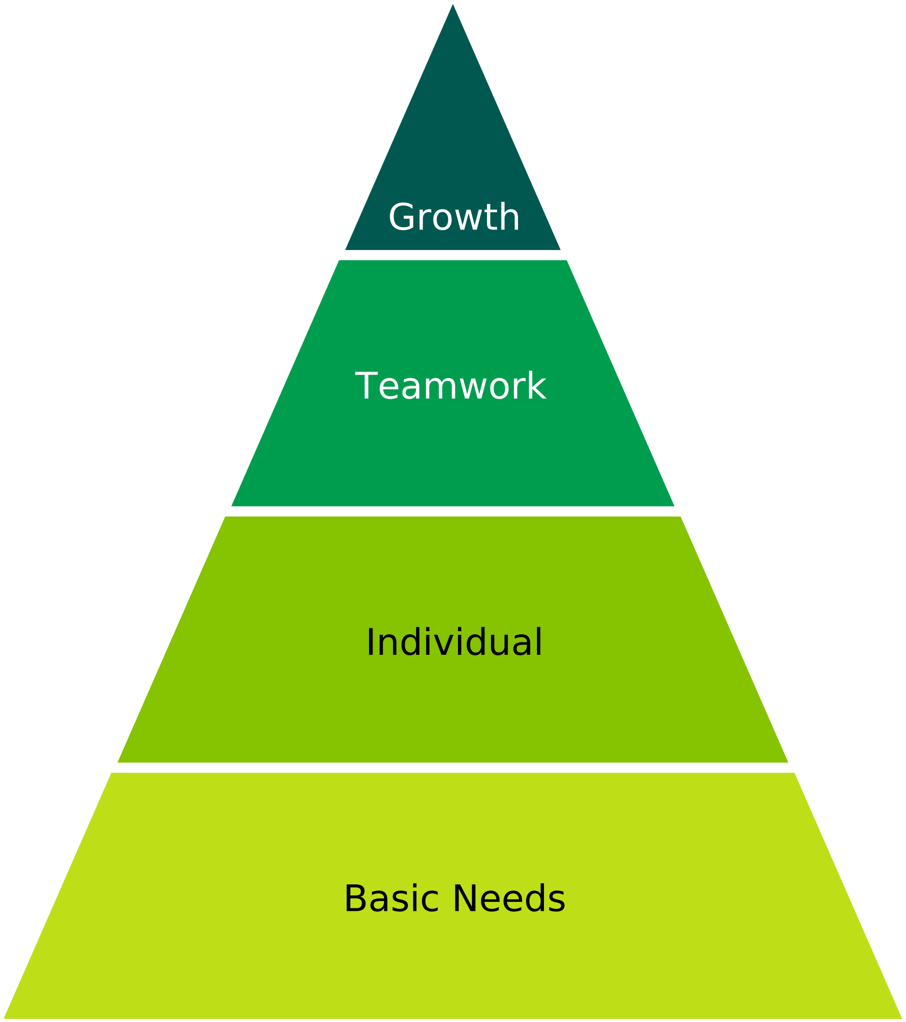
The mean is greater than 76% of those in the Gallup Overall database.

Mean Scores compared to Gallup Overall Database: < 25th Percentile | 25-49th Percentile | 50-74th Percentile | 75-89th Percentile | >= 90th Percentile

Q12 Mean	Respondents	Engagement Mean	Change	Mean Percentile Rank - Gallup Overall	Engagement Index
The Gallup Q12 score represents the average, combined score of the 12 elements that measure employee engagement. Each element has consistently been linked to better business outcomes.	12	4.42	↑ +0.20	76	Engagement Index is unavailable for the currently selected scorecard.

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q00: On a five-point scale, where 5 means extremely satisfied and 1 means extremely dissatisfied, how satisfied are you with your agency as a place to work?	12	4.17	4.00	0.17	53	3.72
Q01: I know what is expected of me at work.	12	4.25	4.08	0.17	30	4.21
Q02: I have the materials and equipment I need to do my work right.	12	4.33	4.33	0.00	58	4.04
Q03: At work, I have the opportunity to do what I do best every day.	12	4.17	3.92	↑ +0.25	48	3.90
Q04: In the last seven days, I have received recognition or praise for doing good work.	12	4.42	4.17	↑ +0.25	80	3.37
Q05: My manager, or someone at work, seems to care about me as a person.	12	4.92	4.58	↑ +0.34	90	4.08
Q06: There is someone at work who encourages my development.	12	4.42	4.17	↑ +0.25	71	3.77
Q07: At work, my opinions seem to count.	12	4.00	4.00	0.00	56	3.54
Q08: The mission or purpose of my agency makes me feel my job is important.	12	4.58	4.92	↓ -0.34	77	3.92
Q09: My coworkers are committed to doing quality work.	12	4.67	4.42	↑ +0.25	82	3.96
Q10: I have a best friend at work.	11	3.91	3.55	↑ +0.36	59	3.22
Q11: In the last six months, someone at work has talked to me about my progress.	12	4.58	4.08	↑ +0.50	77	3.65
Q12: This last year, I have had opportunities at work to learn and grow.	12	4.83	4.42	↑ +0.41	91	3.90

Engagement Hierarchy



Growth - How can I grow?

Employees need to be challenged to learn something new and find better ways to do their jobs. They need to feel a sense of movement and progress as they mature in their roles.

Teamwork - Do I belong here?

Employees need to feel like they belong and are a good fit with their team. They need to know they are part of something bigger than themselves. As a manager, encourage opportunities for teamwork and a sense of belonging.

Individual - What do I give?

Employees want to know about their individual contributions and their worth to the organization. Manager support is especially important during this stage because managers typically define and reinforce value.

Basic Needs - What do I get?

Employees need to have a clear understanding of what excellence in their role looks like so they can be successful. Groups with high scores on the first element are more productive, cost-effective, creative and adaptive.

ENGAGEMENT HIERARCHY

Basic Needs - What do I get?	Respondents	Current Mean	Change	Mean Percentile Rank - Gallup Overall
	12	4.29	0.08	44

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q01: Know What's Expected I know what is expected of me at work.	12	4.25	4.08	0.17	30	4.21
Q02: Materials and Equipment I have the materials and equipment I need to do my work right.	12	4.33	4.33	0.00	58	4.04

ENGAGEMENT HIERARCHY

Individual - What do I give?	Respondents	Current Mean	Change	Mean Percentile Rank - Gallup Overall
	12	4.48	↑ +0.27	74

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q03: Opportunity to do Best At work, I have the opportunity to do what I do best every day.	12	4.17	3.92	↑ +0.25	48	3.90
Q04: Recognition In the last seven days, I have received recognition or praise for doing good work.	12	4.42	4.17	↑ +0.25	80	3.37
Q05: Cares About Me My manager, or someone at work, seems to care about me as a person.	12	4.92	4.58	↑ +0.34	90	4.08
Q06: Development There is someone at work who encourages my development.	12	4.42	4.17	↑ +0.25	71	3.77

ENGAGEMENT HIERARCHY

Teamwork - Do I belong here?	Respondents	Current Mean	Change	Mean Percentile Rank - Gallup Overall
	12	4.29	0.07	67

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q07: Opinions Count At work, my opinions seem to count.	12	4.00	4.00	0.00	56	3.54
Q08: Mission/Purpose The mission or purpose of my agency makes me feel my job is important.	12	4.58	4.92	↓ -0.34	77	3.92
Q09: Committed to Quality My coworkers are committed to doing quality work.	12	4.67	4.42	↑ +0.25	82	3.96
Q10: Best Friend I have a best friend at work.	11	3.91	3.55	↑ +0.36	59	3.22

ENGAGEMENT HIERARCHY

Growth - How can I grow?

Respondents	Current Mean	Change	Mean Percentile Rank - Gallup Overall
12	4.71	↑ +0.46	83

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q11: Progress In the last six months, someone at work has talked to me about my progress.	12	4.58	4.08	↑ +0.50	77	3.65
Q12: Learn and Grow This last year, I have had opportunities at work to learn and grow.	12	4.83	4.42	↑ +0.41	91	3.90

Engagement Index

There is a powerful link between employees who are engaged in their jobs and the achievement of crucial business outcomes.

Engagement Index is unavailable for the currently selected scorecard.

FOOTNOTES

* - Scores are not available due to data suppression.

Questions with zero responses for the selected team and/or reporting group do not appear on the report.

Respondents can select multiple responses for multi-select questions.

Not shown if n < 4 for Mean, Top Box, Verbatim Responses, and Sentiment, n < 10 for Frequency, or data is unavailable.

Meaningful change is represented by a green or red arrow if the score changes by 0.2 or more between survey periods.

Percentile Rank in Gallup Overall Database < 25th Percentile 25-49th Percentile 50-74th Percentile 75-89th Percentile >= 90th Percentile

Percent Engaged available when n ≥ 30. All categories available when n ≥ 100.

All text analytics are machine generated. Because we use machine learning to generate sentiments, results may not be 100% accurate.

GLOSSARY

The glossary provides high-level definitions of terms within the engagement report. Because of the dynamic nature of this site, not all terms will be applicable to or displayed on your report. Please use the terms that are relevant to your team when discussing and interpreting the data.

ENGAGEMENT DEFINED

EMPLOYEE ENGAGEMENT: Employee engagement refers to how committed an employee is to their organization, their role, their manager and their co-workers. Engagement drives performance. Gallup's research shows that more highly engaged employees give more discretionary effort at work and have higher productivity, profitability and customer service, as well as reduced turnover and safety incidents.

THE SURVEY ITEMS/QUESTIONS

OVERALL SATISFACTION: Overall Satisfaction is a measure of how content your team is with the overall company as a place to work. Overall Satisfaction is not included in the Overall Workgroup Engagement (GrandMean) score. Being a satisfied employee does not equate with being engaged, though the two are highly related.

Q01-Q12: These items are Gallup's proprietary workgroup engagement questions (commonly referred to as the $Q^{12®}$). These items were selected for their strong connection to performance outcomes and the ability to take action at the workgroup level.

INDICES: In addition to the $Q^{12®}$ items, Gallup has created a number of empirically-derived sets of indices, which are comprised of 3-4 questions each. Individual scores of each index item are provided, along with a combined index score, which measures the strength of the core index construct. These indices help companies strategically pinpoint and improve specific focus areas relevant to their current situation.

CUSTOM ITEMS: These items are unique to your company and can vary across companies and surveys. While these "additional" questions link to the Gallup Engagement hierarchy, they are not always within the power of the workgroup to influence or change. These questions can provide additional insights into employees' perceptions, the situational workplace environment or company-specific initiatives.

EMPLOYEE ENGAGEMENT RESULTS

GRANDMEAN: The GrandMean measures overall Workgroup Engagement, which is an average of the 12 Workgroup Engagement items (Q01-Q12). The higher your score (with a maximum possible score of 5), the more engaged your fellow employees are.

ENGAGEMENT INDEX: The Engagement Index (EI) is a macro-level indicator of an organisation's health that allows leaders to track the engagement levels of employees. This analysis identifies the percentage of participants who are engaged, not engaged and actively disengaged based on their responses to the $Q^{12®}$ survey items. You must have 100 employees participate to receive the full spectrum of responses for the EI. If you have 30<100 employees, the report will include the percentage of engaged employees only.

ENGAGEMENT HIERARCHY: Every employee has a distinct set of needs that follows a hierarchy, with basic needs at the foundation and growth at the top. Employees feel more or less engaged depending on how well they believe their needs are being met in the workplace.

UNDERSTANDING THE SCORES

THE SURVEY SCALE: The engagement survey utilises a 5-point scale with 1=Strongly Disagree and 5=Strongly Agree. For each question, employees have the option to also select

"Don't know" or "Does not apply".

TOTAL N: The total number of employees who responded to the survey.

MEAN SCORES: The average score using the 5-point survey scale, with 5.00 being the highest score and 1.00 being the lowest.

TOP BOX/%5: The percentage of employees who responded "5 – Strongly Agree" to the survey item.

DISTRIBUTION OF RESPONSES: The percentage of employees who responded "1", "2", "3", "4" or "5" to an item. If 10 or more employees respond to the survey, the report could display a full distribution of responses. Otherwise, only the percentage of employees who responded with a "5" (TopBox) and item means will display.

SUPPRESSED DATA: Confidentiality of responses is extremely important to Gallup. If too few employees respond to a survey item, the data will be suppressed (not published) and an asterisk ("*") will appear in its place.

COMPARISONS

EXTERNAL BENCHMARKING: (Gallup Overall): Used as a benchmark to determine how your team's results compare to other workgroups within the Gallup Overall of clients.

PERCENTILE RANKING: The 25th percentile indicates 75% of workgroups fell above this score; the 50th percentile indicates 50% of workgroups fell above and below this score; the 75th percentile indicates only 25% of workgroups fell above this score. The higher your percentile, the stronger the item is in relation to the database. Used as a benchmark to determine how your team's results compare to internal and external workgroups.

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MEMORANDUM

TO: TFFR Board of Trustees
FROM: Chad R. Roberts, DED/CRO
DATE: January 18, 2023
RE: January 2023 TFFR Board Reading Materials

Summary

Enclosed are three journal articles related to pension system programming and alternatives pension schemes.

Journals

Evaluating Pension Reform Options with the Public Pension Simulator
A Case Study of Pennsylvania Teachers

Risk-sharing Alternatives for Public Plan Design: An Overview and Case Studies

Collective Defined Contribution Schemes as an Alternative to Pension Plans

BOARD ACTION REQUESTED: None

RESEARCH REPORT

Evaluating Pension Reform Options with the Public Pension Simulator

A Case Study of Pennsylvania Teachers

Richard W. Johnson　　*Owen Haaga*

March 2017

URBAN INSTITUTE · ELEVATE · THE · DEBATE

ABOUT THE URBAN INSTITUTE

The nonprofit Urban Institute is dedicated to elevating the debate on social and economic policy. For nearly five decades, Urban scholars have conducted research and offered evidence-based solutions that improve lives and strengthen communities across a rapidly urbanizing world. Their objective research helps expand opportunities for all, reduce hardship among the most vulnerable, and strengthen the effectiveness of the public sector.

Contents

Acknowledgments

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The views expressed are those of the author and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute's funding principles is available at www.urban.org/support.

Evaluating Pension Reform Options with the Public Pension Simulator

Covering 14 million state and local government employees (US Census Bureau 2015), public pension plans typically provide lifetime retirement benefits that are based on years of service and the salary earned near the end of a career. Many of these plans, however, face serious financial problems and may be ill suited to a changing workplace in which long-term employment is rare.

Only a handful of plans have set aside enough funds to cover promised benefits. Conservative estimates based on the plans' own financial assumptions place the shortfall at about $1 trillion nationally (Pew Charitable Trusts 2015). Estimates that use arguably more realistic assumptions are several times higher (Novy-Marx and Rauh 2011). The public contributions necessary to close the funding gap would strain many state and local governments, requiring higher taxes or cutbacks in other services (Cembalest 2016).

The growing financial burden has sparked public debate over state and local pensions and prompted some jurisdictions to cut benefits and raise employee and government contributions to these plans. Yet, the long-term effects of recent and proposed reforms have received little attention.

In addition to affecting government costs, pension reforms help determine how fairly retirement plans treat different employees. For example, most state and local pension plans now provide meaningful retirement security to employees covered by a plan for a full career, but provide few benefits to shorter-term employees. Some proposed reforms would slash pensions for shorter-term employees, an important drawback as long-term employment becomes less common. Many public pension plans also reduce lifetime benefits for employees who work beyond a certain age, encouraging them to leave. These early retirement incentives could create staffing shortages as the nation ages.

The Urban Institute's new Public Pension Simulator (http://pensionsimulator.urban.org) fills this knowledge gap by comparing some of the nation's largest state and local pension plans under existing benefit rules and various reform alternatives. Using detailed benefit formulas and demographic and financial data from each plan, it shows how much participants with a certain amount of completed service would receive from their plan and how benefits would change as they work longer. It also shows how much governments must contribute to each plan and whether plan assets are sufficient to cover promised benefits. Users can change a plan's benefit rules or the assumptions a plan uses to project costs, such as the rate of return on plan assets, and see the impact on benefits and costs.[1] Additional plans are being added continuously to the simulator.

Using Pennsylvania's teacher pension plan as a case study, this report illustrates how the Public Pension Simulator can shed light on the distribution of pension benefits among state and local government employees, costs for taxpayers, and the potential impact of various reform options. Pennsylvania's teacher pension plan is large, covering 260,000 employees and 242,000 retirees and their survivors in 2015 and holding assets worth $51.9 billion (Pennsylvania Public School Employees Retirement System 2015; Xerox 2016). However, the plan's finances have been deteriorating steadily for nearly a decade. In 2008, the plan held enough assets to cover 85 percent of its future pension obligations; that funding ratio fell to 70 percent in 2011 in the wake of the 2008 financial crisis and recession. It continued to fall even as the economy improved, declining to 61 percent in 2015 (Xerox 2016). To cover these shortfalls, employers must now contribute 30 percent of payroll to the pension fund, creating significant financial burdens for local school districts.

In light of these financial pressures, the Pennsylvania state legislature has been debating various ways of cutting pension costs for teachers and other state employees (Thompson 2015). After showing the distribution of benefits under existing plan rules and how much they cost taxpayers, we report the potential impact on benefits and costs of various reforms, including eliminating early retirement benefits, raising the normal retirement age, reducing benefits by changing the benefit formula, and eliminating cost-of-living adjustments (COLAs) provided to retirees. The results show that eliminating the early retirement option would significantly reduce overall costs while safeguarding pensions received by teachers with shorter careers.

Pennsylvania's Teacher Pension Plan

Like public school teachers in nearly every other state, public school teachers in Pennsylvania qualify for a lifetime retirement pension tied to their salary and years of service once they have worked long enough and have reached the plan's retirement age. Benefit rules depend on when a teacher was hired. Most Pennsylvania teachers hired on or after July 1, 2011, are Class T-E members of the pension plan.[2] These members must generally complete 10 years of service before vesting in the plan and qualifying for a pension, but members employed at age 65 vest after completing only three years of service. The plan pays benefits equal to 2 percent of final average salary (FAS) multiplied by years of completed service. FAS is based on the highest three years of salary.

Members may begin collecting benefits at age 65; those with at least 35 years of completed service may begin collecting as soon as the sum of their age and years of service equals 92. A teacher hired at age 22, then, could begin collecting a pension at age 57. The plan also offers an early retirement option to Class T-E members. Teachers who have completed at least 25 years of service may begin collecting a pension as early as age 55. However, the plan would reduce the annual benefit 3 percent for each year that members collect before reaching age 65. The plan does not automatically provide retirees with COLAs, although the state legislature sometimes provides them.

In exchange for these benefits, members must contribute 7.5 percent of their salary to the pension plan each year. If they separate from the plan before they can begin collecting a pension, they may leave their contributions in the plan and collect a deferred annuity when they qualify, or they may withdraw their contributions with interest.[3] The simulator assumes that the plan pays annual interest equal to the annual rate of return on plan assets. Pennsylvania teachers are also covered by Social Security.

Pennsylvania teachers hired before July 1, 2011, and on or after July 1, 2001, are Class T-D members of the pension plan. These members receive larger annual pensions than those hired later, and they can collect their pensions sooner. They now account for nearly 8 out of every 10 members of the entire Pennsylvania public school employees' retirement system (Xerox 2016). The benefit formula for this tier sets annual payments equal to 2.5 percent of FAS, not 2.0 percent, multiplied by years of completed service. Benefits vest after only five years of service, except that teachers employed at age 62 vest after completing only one year of service. Vested Class T-D members may begin collecting a pension at age 62; those with 30 years of completed service may begin collecting at age 60 and those with 35 years of completed service may collect at any age. Like those hired later, Class T-D members can collect reduced benefits at age 55 if they have completed 25 years of service. However, the penalty is less severe than for those hired later; for Class T-D members, annual benefits are reduced 3 percent for each year that they collect before reaching age 62, not age 65. The member contribution rate is 7.5 percent.

Finally, teachers hired before July 1, 2001, are Class T-C members of the pension plan. This class combines the relatively small annual pension provided to Class T-E members with the relatively early retirement ages available to Class T-D members. The plan multiplier, then, is 2.0 percent, and members may generally begin collecting full benefits at age 62. However, Class T-C members contribute only 6.25 percent of their salary to the plan. Table 1 summarizes benefit rules for each membership class.

TABLE 1

Benefit Formula Rules by Membership Class

Pennsylvania Public School Employees' Retirement System

	Class T-C	Class T-E	Class T-F
Hire dates	Before July 1, 2001	On or after July 1, 2001, and before July 1, 2011	On or after July 1, 2011
Vesting requirement (years)	5; 1 if employed at age 62	5; 1 if employed at age 62	10; 3 if employed at age 65
Years included in FAS calculation	3	3	3
Benefit multiplier	2.0%	2.5%	2.0%
Normal retirement eligibility	35 YOS; age 60 and 30 YOS; age 62 and 5 YOS (or 1 YOS if employed at age 62);	35 YOS; age 60 and 30 YOS; age 62 and 5 YOS (or 1 YOS if employed at age 62);	35 YOS and sum of age and YOS =92; age 65 and 10 YOS (or 3 YOS if employed at age 65)
Early retirement eligibility	Age 55 and 25 YOS	Age 55 and 25 YOS	Age 55 and 25 YOS
Early retirement penalty	3% for each year that member collects before reaching age 62	3% for each year that member collects before reaching age 62	3% for each year that member collects before reaching age 65
COLA	Not automatic	Not automatic	Not automatic
Employee contribution as percent of salary	6.25%	7.5%	7.5%

Source: Plan documents (Pennsylvania Public School Employees Retirement System 2012; Xerox 2016).

Notes: FAS = final average salary; YOS = years of service; COLA=cost-of-living adjustment. The benefit multiplier is the share of FAS that, when multiplied by years of service, determines the annual pension benefit.

Public Pension Simulator

The Public Pension Simulator shows how replacement rates and the value of lifetime pension benefits vary with years of completed service. It computes replacement rates by dividing annual pension benefits received at age 75 by annual salary received in a member's last year of service, both expressed in inflation-adjusted 2015 dollars. The computations use benefits collected at age 75 to capture the impact of any COLA that the plan may provide. Lifetime benefits are computed as the expected present value of the future stream of pension benefits. The simulator sums annual benefits that will be collected from the benefit take-up age until age 120, the assumed maximum lifespan, but reduces future benefits by the probability that retirees will die before receiving each payment and by a user-specified discount rate. A dollar of benefits paid sooner is worth more than a dollar paid later because earlier payments can earn interest during the waiting period. The simulator reports total lifetime benefits and lifetime benefits net of employee contributions. Replacement rates and lifetime benefits are shown for employees hired at a particular user-specified age.

The calculations assume that retirees collect single-life annuities, not joint-and-survivor annuities, and that separated employees choose the date to begin collecting their pension so as to maximize the value of lifetime benefits. However, the simulator also computes the amount of retirement benefits separating members could receive if they withdrew their contributions from the plan, invested the funds on their own, and used the balance to purchase a lifetime annuity at the plan's normal retirement age. The model assumes that members choose that outcome if it generates higher retirement incomes than a teacher pension would. For more information about how the simulator computes pension benefits, see McGee and Welch (2016a).

The simulator also estimates employer costs of providing these pension benefits. It reports the employer normal cost rate, defined as the fixed percentage of salary that must be aside each year to fully cover, with member contributions, future pension payments. The simulator computes the employer normal cost rate by dividing the expected present value of lifetime pension benefits for a newly hired member by the expected present value of her lifetime salary. This calculation requires assumptions about a pension fund's investment returns, future inflation rates, how long employees will remain on the payroll, how much they will earn, when they will retire, and how long they will live. The Public Pension Simulator uses the accession and separation assumptions adopted by a plan's actuaries to estimate the age distribution of the workforce and expected completed years of service. Mortality assumptions come from the Social Security actuaries. The simulator defaults to the plan's assumptions on investment returns, interest rates, and salary growth, but users can change these settings. For more information about how the simulator computes pension costs, see McGee and Welch (2016b).

We used the Public Pension Simulator to project benefits and costs for newly hired public school teachers in Pennsylvania. Our analysis focused on Class T-E members of the pension plan, but we also compared costs for the three different membership classes. Except where otherwise noted, we set the inflation rate equal to 2.7 percent and the nominal rate of return on plan assets equal to 6.0 percent, implying a real rate of return of 3.3 percent. These rates are similar to the long-run intermediate assumptions adopted by the Social Security trustees.[4] By comparison, Pennsylvania's Public School Employees' Retirement System assumes an inflation rate of 2.75 percent and a nominal rate of return of 7.5 percent. We simulated benefits and costs for teachers hired at ages 22, 30, 40, 50, and 60 and varied the years of completed service. The computations assumed that the state legislature will award retirees COLAs each year equal to one-half the change in the consumer price index.

Pensions Received by Newly Hired Teachers

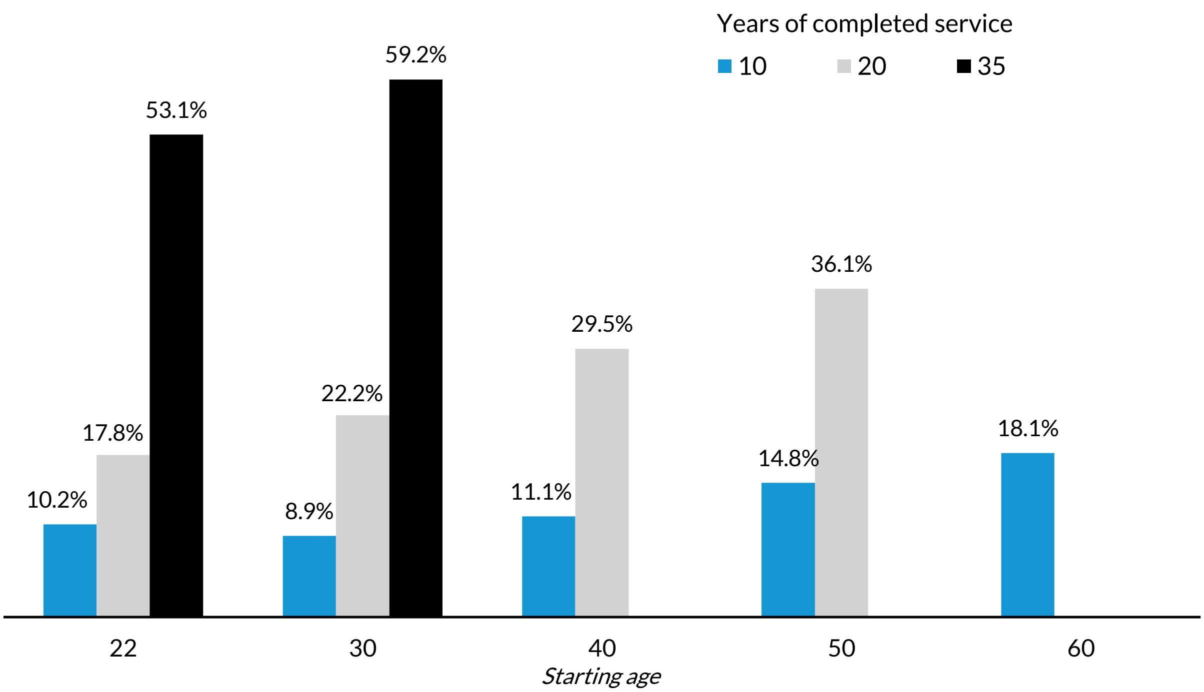
The existing pension plan enables long-term teachers in Pennsylvania to replace a substantial share of their earnings in old age. For example, teachers who complete 35 years of service can achieve a replacement rate of 53.1 percent if hired at age 22 and 59.2 percent if hired at age 30 (figure 1). These replacement rates report age-75 pension benefits as a share of share of inflation-adjusted earnings received in a teacher's final year of employment. Although the plan's benefit multiplier is 2 percent, a teacher who completes 35 years of service is not able to replace 70 percent of his or her real earnings because the multiplier is applied to earnings averaged over the highest three earnings years, less than the final-year salary as long as salary rises steadily over a career. More important, the real value of a pension received by Pennsylvania teachers erodes over time with inflation, because the plan does not automatically provide COLAs tied to changes in the consumer price index. Nonetheless, when combined with Social Security benefits, which typically replace about 35 to 40 percent of earnings, the Pennsylvania teachers retirement plan enables long-term teachers to receive nearly as much income when retired as when they were working.

Shorter-term teachers receive much smaller pensions. For example, a teacher hired at age 30 can replace 22.2 percent of his or her inflation-adjusted final-year salary at age 75 if he or she completes 20 years of service and 8.9 percent if he or she completes 10 years of service. Teachers hired at older ages can generally replace a large share of their inflation-adjusted earnings in retirement than teachers with the same number of completed service years who were hired at younger ages because inflation reduces pension benefits more for younger hires.[5] Consider a teacher hired at age 22 who is employed for 10 years. His or her pension will not begin until he or she turns 65—33 years after he or she separated—but it will be based on earnings he or she received no later than age 32 that are not adjusted for inflation. When inflation is 2.7 percent per year, the real value of his or her initial pension benefit falls 58 percent during the 33-year wait. By contrast, inflation will erode the initial pension benefit for only five years for a teacher hired at age 50 who remains employed for 10 years; a 2.7 percent annual inflation rate reduces his or her pension by only 12 percent.

FIGURE 1

Annual Pension Income at Age 75 as a Share of Final Earnings, by Starting Age and Years of Completed Service

Pennsylvania teachers hired on or after July 1, 2011 (class T-E)



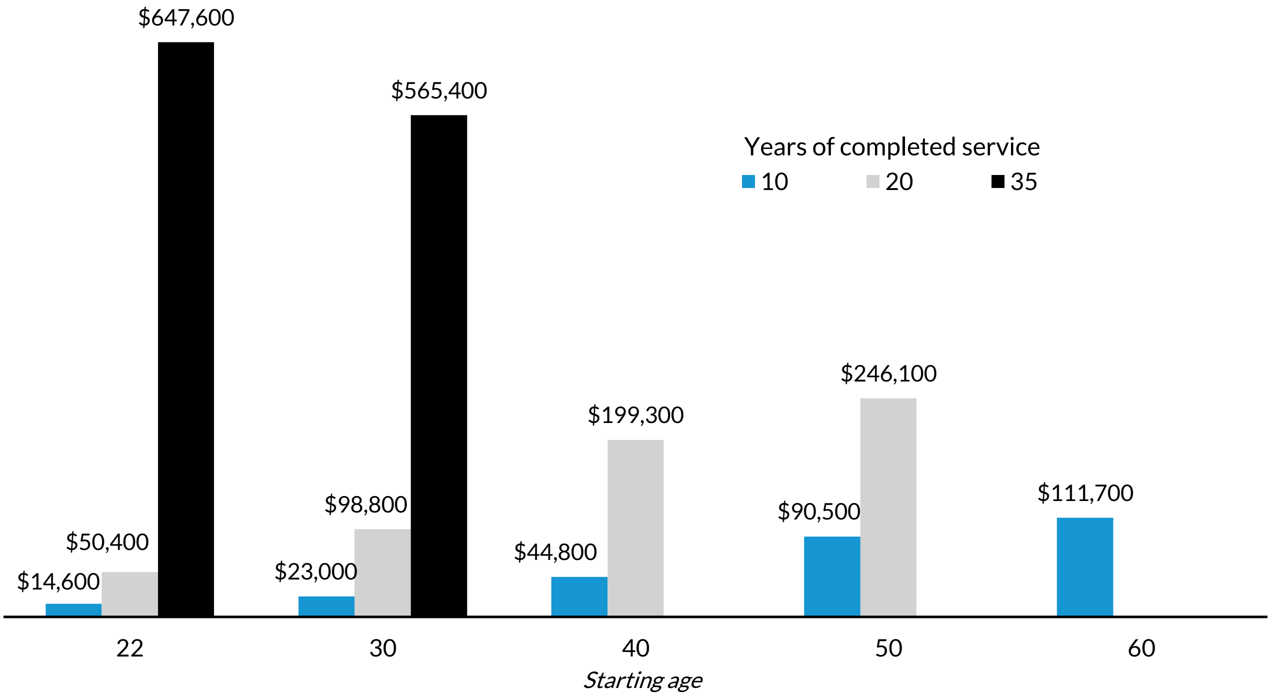
Source: Authors' estimates from the Urban Institute's Public Pension Simulator.
Notes: The figure shows annual pension income received at age 75 divided by annual salary received in a teacher's last year of service, both expressed in inflation-adjusted 2015 dollars. Estimates assume that the state legislature will award retirees annual cost-of-living adjustments equal to one-half the change in the consumer price index.

Benefit differences between short- and long-term teachers are even starker when we compare the expected value of lifetime pension benefits. Teachers who complete 35 years of service can expect to receive pensions worth $647,600 (in 2015 dollars) over their lifetimes if hired at age 22 and $565,400 if hired at age 30 (figure 2). For teachers hired at age 22, those with 35 years of completed service can expect pensions worth more than 12 times as much as pensions received by their counterparts with 20 years of completed service and 44 times as much as pensions received by their counterparts with 10 years of completed service. Teachers with 35 years of service collect so much because their final salaries are high and they qualify for early retirement. Collecting early generates more lifetime payments and prevents inflation from eroding the real value of initial pension benefits because teachers do not have to wait to collect benefits after they separate.

FIGURE 2

Expected Value of Lifetime Pension Benefits, by Starting Age and Years of Completed Service

Pennsylvania teachers hired on or after July 1, 2011 (class T-E), 2015 constant dollars



Source: Authors' estimates from the Urban Institute's Public Pension Simulator.
Notes: The analysis assumes that the state legislature will award retirees annual cost-of-living adjustments equal to one-half the change in the consumer price index. Estimates are rounded to the nearest $100 and assume an annual discount rate of 6 percent and inflation rate of 2.7 percent.

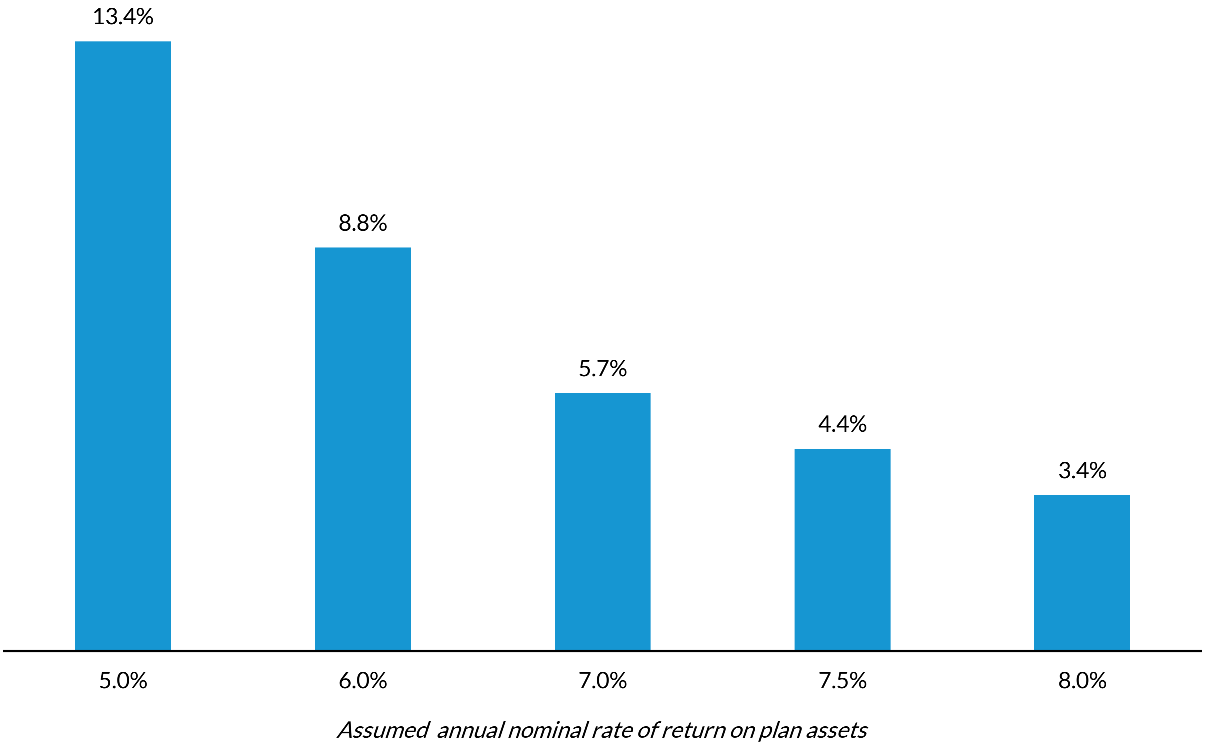
Employer Costs of Teacher Pensions

The costs of providing a pension to newly hired public school teachers in Pennsylvania varies widely depending on assumptions about the rate of return on plan assets. A 6.0 percent nominal rate of return, corresponding to a 3.3 percent real rate, generates an employer normal cost of 8.8 percent of payroll (figure 3). However, a 7.5 percent nominal rate of return—the assumption used by the plan's board of trustees—cuts the employer normal cost rate in half, to 4.4 percent. By contrast, a 13.4 percent nominal rate of return raises the employer normal cost rate to 13.4 percent. The remainder of our analysis assumes a 6.0 percent nominal rate of return on plan assets.

FIGURE 3

Employer Normal Cost Rate for Pension Benefits, by Assumed Rate of Return on Plan Assets

Pennsylvania teachers hired on or after July 1, 2011 (class T-E)



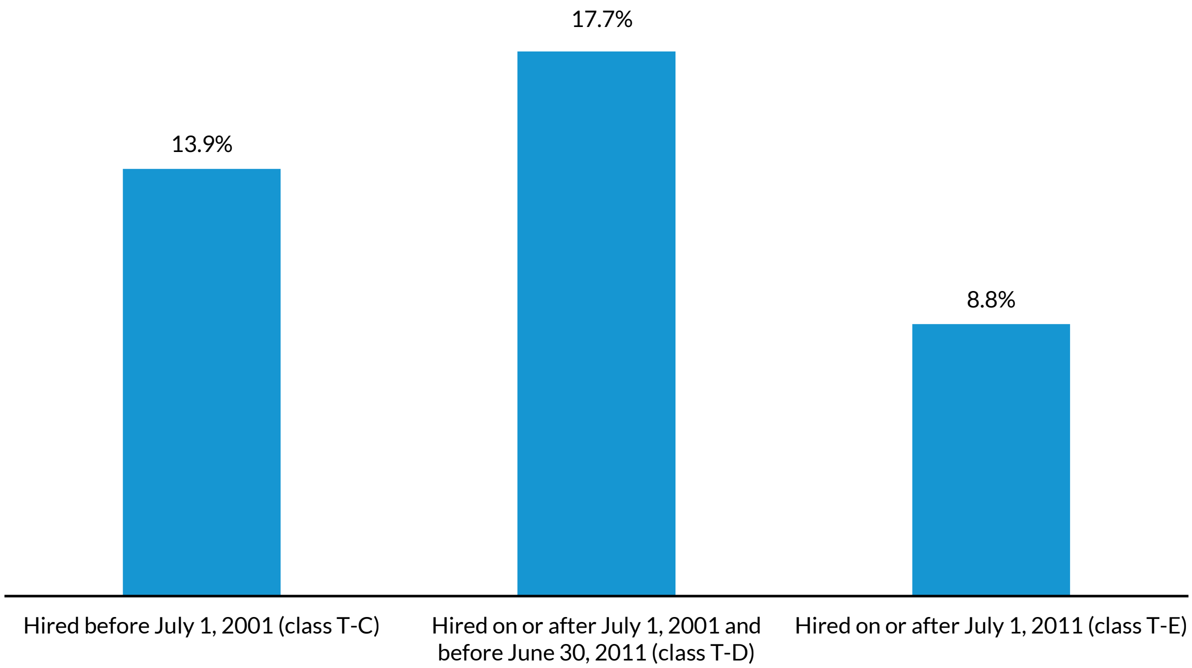
Source: Authors' estimates from the Urban Institute's Public Pension Simulator.
Notes: The figure shows the expected present discounted value of lifetime pension costs divided by the expected present discounted value of lifetime salary payments. Estimates assume an annual inflation rate of 2.7 percent. The analysis also assumes that the state legislature will award retirees annual cost-of-living adjustments equal to one-half the change in the consumer price index.

Employer normal costs are much lower for teachers hired today than for teachers hired before 2011, reflecting the sharp benefit cuts passed by the state legislature that year. Using a 6.0 percent nominal rate of return on plan assets, the Public Pension Simulator computes an employer normal cost rate of 17.7 percent for Class T-D, twice as high as for teachers in Class T-E, which covers teachers hired today (figure 4). Class T-D covers teachers hired between mid-2001 and mid-2011 and includes nearly 80 percent of all plan members. The employer normal cost for Class T-C is 13.9 percent, lower than for Class T-D but still substantially higher than for teachers hired after mid-2011.

FIGURE 4

Employer Normal Cost Rate for Pension Benefits, by Membership Class

Using a 6 percent annual rate of return on plan assets



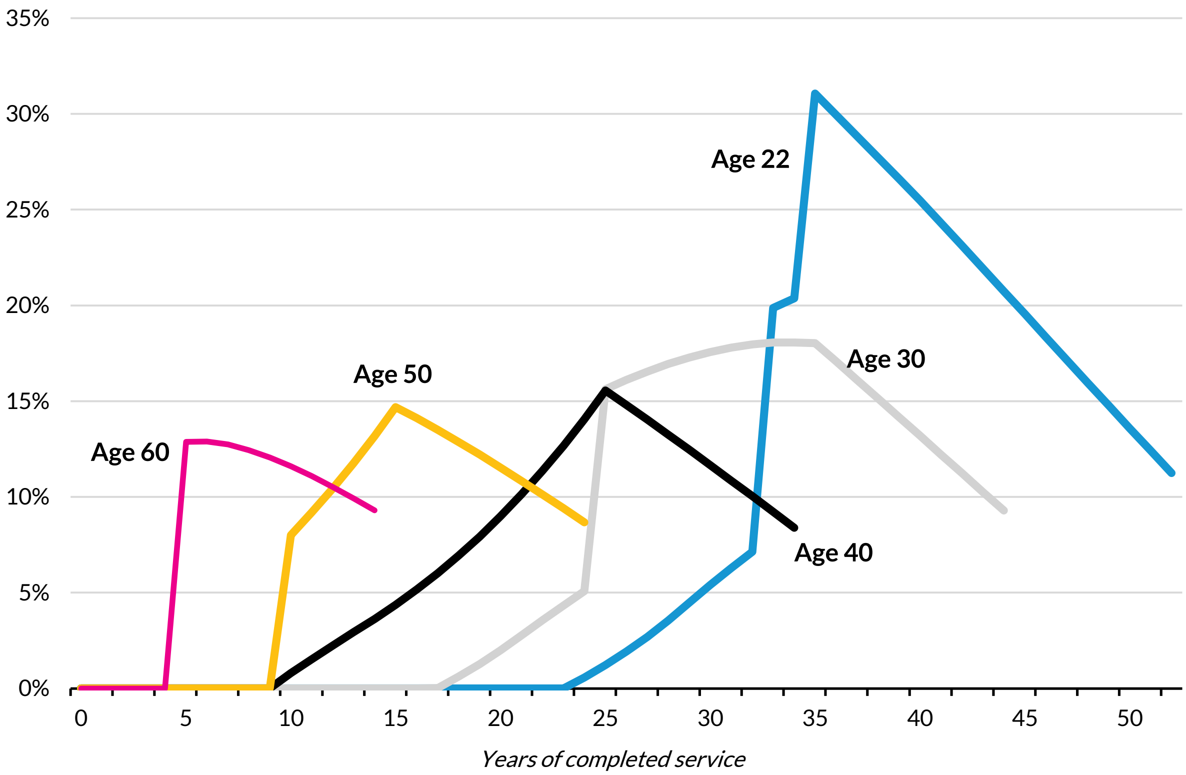
Source: Authors' estimates from the Urban Institute's Public Pension Simulator.
Notes: The figure shows the expected present discounted value of lifetime pension costs divided by the expected present discounted value of lifetime salary payments. Estimates assume an annual inflation rate of 2.7 percent. The analysis also assumes that the state legislature will award retirees annual cost-of-living adjustments equal to one-half the change in the consumer price index.

How much employers end up paying for a teacher's pension varies widely depending on when he or she joins the plan and how long he or she works. Employers do not incur any pension costs for a teacher hired at age 22 until he or she completes 24 years of service; teachers who separate with less service either do not collect a pension (because they have not satisfied the 10-year vesting requirement or because they could do better financially by withdrawing their contributions from the plan, investing the funds elsewhere until retirement, and forgoing a pension) or collect a pension that can be fully financed by their own contributions. Costs escalate quickly, however, with additional years of teaching. Employer costs for teachers hired at age 22 with 32 years of completed service increase dramatically if they teach for one more year, rising from 7 to 20 percent of salary. The spike occurs because those age-22 hires turn 55 as they complete 33 years of service and quality for early retirement. Another spike in pension costs occurs at 35 years of service when age-22 hires qualify for an immediate unreduced pension, raising the employer cost rate to 31 percent of salary. If they teach for more than 35 years, however, employer costs drop sharply. Each additional year of teaching means one less year collecting a pension, because teachers cannot collect a pension until they separate. Annual pension benefits increase with each additional service year, but not enough to offset the loss of a year of pension payments.

FIGURE 5

Employer Normal Cost Rate for Pension Benefits, by Starting Age and Years of Completed Service

Pennsylvania teachers hired on or after July 1, 2011 (class T-E)



Source: Authors' estimates from the Urban Institute's Public Pension Simulator.

Notes: The figure shows, for teachers hired at a given age who remain employed for a given number of years, the expected present discounted value of lifetime pension costs divided by the expected present discounted value of lifetime salary. Estimates assume an annual nominal rate of return on plan assets of 6.0 percent and an annual inflation rate of 2.7 percent. The analysis also assumes that the state legislature will award retirees annual cost-of-living adjustments equal to one-half the change in the consumer price index.

This pattern in the employer normal cost rate—spikes followed by sharp declines—is also evident for teachers hired at other ages. For example, the cost rate surges 11 percentage points at 25 service years for age-30 hires, when they qualify for immediate early retirement, and 13 percentage points at 5 service years for age-60 hires, when they qualify for an immediate unreduced pension. For teachers hired at ages 30 and older, employer costs as a percentage of salary decline sharply once they pass age 65, after 35 years of service for age-30 hires and after 15 years of service for age-50 hires.

These spikes and sharp declines in the service years profile of normal costs, which are common in FAS defined benefit pension plans (Costrell and Podgursky 2008; Johnson, Steuerle, and Quakenbush 2012), raise questions about the fairness of teacher pensions in Pennsylvania and how well they meet employer needs. How much members benefit from their pension reflects how much that pension costs their employer. The future pension earned by an age-22 hire who teaches for 35 years is worth 31 percent of the salary she received each year, on average, throughout his or her career, net of his or her own plan contributions. However, if he or she taught for three fewer years, his or her future pension would be worth only 7 percent of his or her salary each year, net of her own contributions, and if he or she taught for 12 fewer years he or she would not receive a pension worth more than his or her own contributions. Teachers hired at older ages can also benefit much more from the pension plan than teachers who served just as long but were hired at younger ages. For example, a teacher with 25 years of completed service would earn a pension equal to 16 percent of his or her salary each year he or she taught (net of his or her contributions) if hired at age 40, but only 1 percent if hired at age 22. These compensation differences are difficult to justify, because it is hard to imagine that teacher productivity could vary so much by tenure and age of hire.

These patterns may impede school districts' recruitment and retention goals. Plan rules require relatively young hires to remain employed for many years before they can benefit from the plan, providing them with little incentive to join the state teacher workforce unless they are confident that they will remain employed for an extended period. The plan also creates strong incentives for teachers to retire once they can begin collecting an unreduced pension, because the value of their lifetime benefits drops sharply if they continue working. These early retirement incentives may make it more difficult for school districts to meet their staffing needs, particularly as the population ages. Finally, the spikes in pension values at particular service years create strong incentives for some teachers to remain employed until reaching that seniority level, even if they are not well-suited to the job and could be more productive elsewhere.

Impact of Potential Pension Reforms

We used the Public Pension Simulator to estimate how potential pension reforms to Pennsylvania's teacher pension plan might affect employer costs and teacher benefits. We considered the following reforms:

- Eliminate all early retirement benefits so that teachers would qualify for a pension only at age 65 with 10 years of completed service.

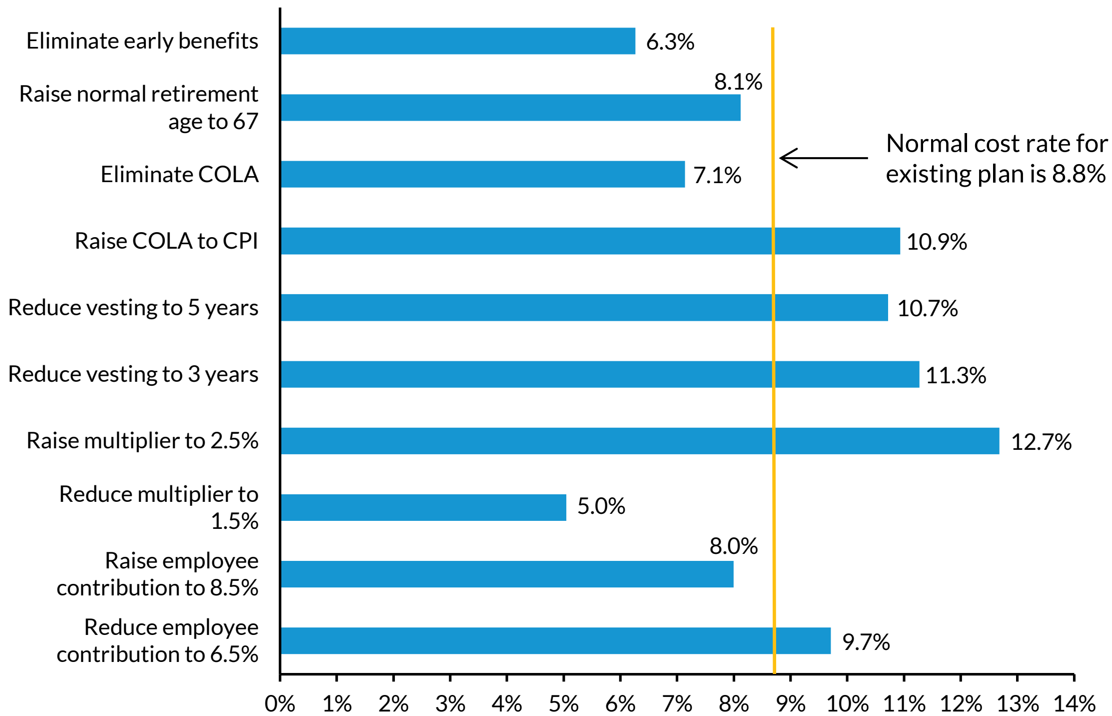
- Raise the normal retirement age to 67, and tie the age-55 early retirement penalty to age 67.
- Eliminate all COLAs.
- Create an automatic COLA that raises pension payments each year by the change in the consumer price index.
- Reduce the vesting period to five years.
- Reduce the vesting period to three years.
- Raise the benefit multiplier to 2.5 percent.
- Reduce the benefit multiplier to 1.5 percent.
- Raise the employee contribution rate to 8.5 percent.
- Reduce the employee contribution rate to 6.5 percent.

Reducing the benefit multiplier to 1.5 percent, eliminating early retirement benefits, and eliminating COLAs would lower plan costs most (figure 6). Assuming a 6.0 percent rate of return on plan assets, we find that reducing the multiplier to 1.5 percent would lower the overall employer normal cost rate from 8.8 percent to 5.0 percent, a relative reduction of 43 percent. The employer normal cost rate would fall 28 percent, in relative terms, if early retirement were eliminated and 19 percent if COLAs were eliminated. Among benefit enhancements, raising the benefit multiplier to 2.5 percent would raise costs most, followed by reducing the vesting period to three years and creating an automatic COLA equal to the change in the consumer price index. Raising the normal retirement age to 67 and increasing or decreasing the employee contribution rate by 1 percentage point would not change employer costs much.

FIGURE 6

Employer Normal Cost Rate for Pension Benefits under Various Pension Reforms

Pennsylvania teachers hired on or after July 1, 2011 (class T-E)



Source: Author's estimates from the Urban Institute's Public Pension Simulator.

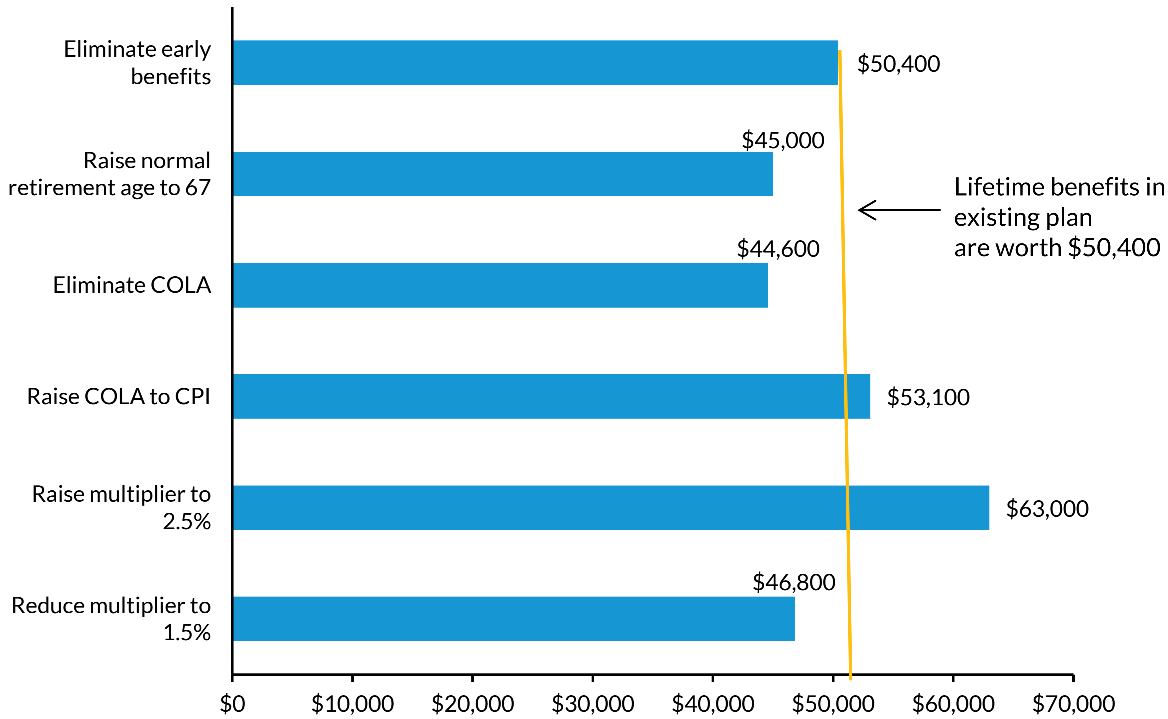
Notes: The figure shows the expected present discounted value of lifetime pension costs divided by the expected present discounted value of lifetime salary payments under each reform option. Estimates assume an annual inflation rate of 2.7 percent and an annual rate of return on plan assets of 6.0 percent.

The impact of potential plan reforms on individual teachers would depend on when they were hired and how long they were employed. None of the reforms we considered would affect teachers hired at age 22 who completed only 10 years of service, because under each of the reforms, as under the current benefit rules, they would be better off financially by withdrawing their contributions from the plan when they separate and investing their funds elsewhere until retirement. Many of the reforms would affect age-22 hires who complete 20 years of service. For example, raising the normal retirement age to 67, eliminating COLAs, and reducing the benefit multiplier to 1.5 percent would each reduce the expected value of their lifetime pension benefits by about $15,000, or about 30 percent (figure 7). Raising the benefit multiplier to 2.5 percent would boost their lifetime pension benefits by about $13,000, or 25 percent. Eliminating early retirement benefits would not affect age-22 hires who complete 20 years of service, however, because they are not currently eligible to retire early.

FIGURE 7

Expected Value of Lifetime Pension Benefits under Various Pension Reforms, Age-22 Hires with 20 Years of Completed Service

Pennsylvania teachers hired on or after July 1, 2011 (class T-E), 2015 constant dollars



Source: Author's estimates from the Urban Institute's Public Pension Simulator.

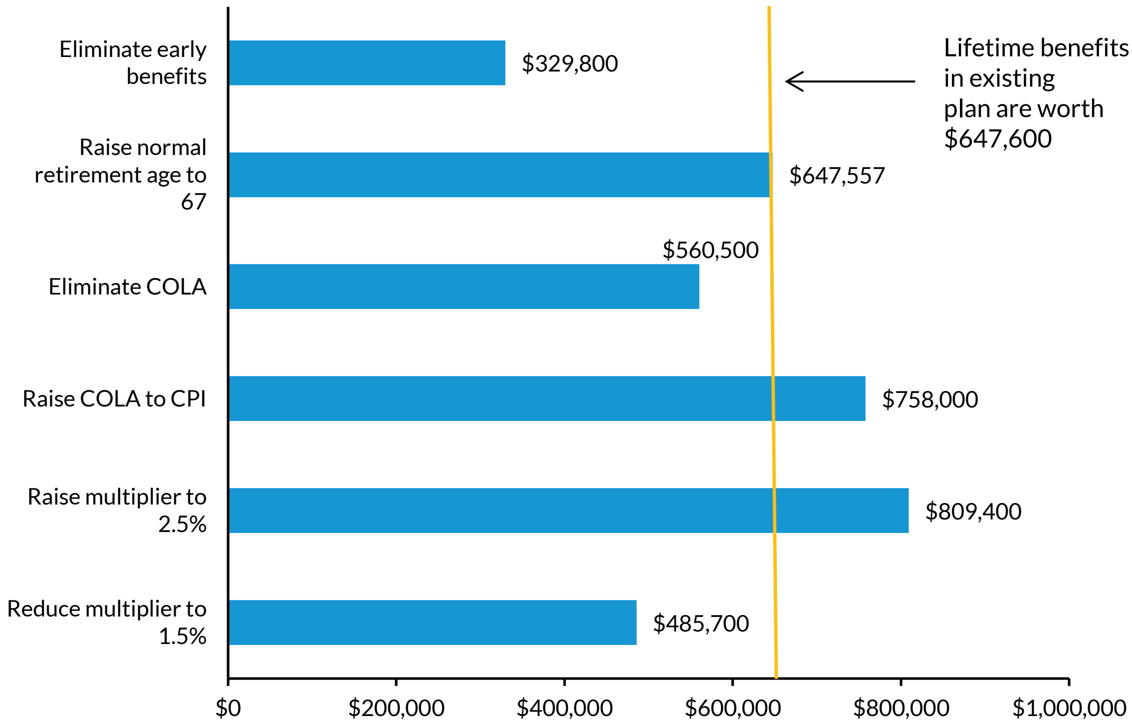
Notes: Estimates are rounded to the nearest $100 and assume an annual discount rate of 6 percent and inflation rate of 2.7 percent.

Eliminating early retirement benefits would cut the expected value of lifetime pensions nearly in half for age-22 hires with 35 years of completed service, to $329,800 (figure 8). This change would reduce their benefits more than any other reform we considered. Nonetheless, these long-tenured teachers would continue to receive substantial benefits, and their pension at age 75 would replace nearly half of their inflation-adjusted final earnings (results not shown). Raising the normal retirement age to 67 would not affect them, because their 35 years of completed service would continue to enable them to collect an immediate unreduced pension. Raising the benefit multiplier to 2.5 percent would increase their lifetime benefits by about $162,000, and creating an automatic COLA would increase their lifetime benefits by about $110,000.

FIGURE 8

Expected Value of Lifetime Pension Benefits under Various Pension Reforms, Age-22 Hires with 35 Years of Completed Service

Pennsylvania teachers hired on or after July 1, 2011 (class T-E), 2015 constant dollars



Source: Author's estimates from the Urban Institute's Public Pension Simulator.
Notes: Estimates are rounded to the nearest $100 and assume an annual discount rate of 6 percent and inflation rate of 2.7 percent.

Conclusions

The Public Pension Simulator provides researchers and policy analysts with an important tool to evaluate existing pension plans and various reform options. By showing how benefits and costs vary as employees work longer, the simulator identifies those members who get the most out of the plan and those who get the least, revealing important inequities in how different employees are compensated. It also shows how much the pension plan may encourage workers to retire early. In addition, the simulator can show how potential pension reforms would change overall plan costs, affect retirement security for plan members, and alter the distribution of pension benefits.

Results for Pennsylvania teachers highlight the dramatic disparities in pensions between short-term and long-term teachers and between those hired at relatively young ages and relatively old ages. Teachers can sometimes more than double the value of their lifetime benefits by remaining employed for a single additional year, while their benefits can plummet if they continuing working past the normal retirement age. Moreover, teachers hired a decade ago will qualify for much more generous pensions than those hired today, illustrating how new hires have often had to bear the brunt of recent pension reforms. Policymakers should consider how these recent changes have already affected new hires as they evaluate additional cuts.

Reforms that aim to reduce disparities in pensions within the state and local government workforce might consider eliminating the early retirement option, which could significantly reduce the large pensions now received by many long-term employees hired at relatively young ages while safeguarding the more meager pensions received by employees with shorter careers. The resulting savings could be devoting to raising pension benefits for shorter-term employees.

Notes

1. The current version of the Public Pension Simulator does not model the impact of structural pension reforms, such as replacing a traditional defined benefit plan with a cash balance plan or a hybrid plan that reduces the plan's defined benefit and adds a 401(k)-type component. This feature will be added to the simulator soon.
2. Newly hired teachers can instead choose Class T-F membership, which provides more generous pensions and requires higher teacher contributions, but only 15 percent choose that option (Xerox 2016).
3. Members who separate before they vest must withdraw from the plan and accept a refund of their contributions.
4. In 2015, Social Security's intermediate-cost projections assumed a long-run inflation rate of 2.7 percent and a real interest rate of 2.9 percent (Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds 2015).
5. However, for teachers with 10 years of completed service the replacement rate is higher for those hired at age 22 than at age 30. This result occurs because both groups earn higher replacement rates by withdrawing their contributions from the plan, investing them elsewhere, and then purchasing an annuity. Age-30 hires earned higher salaries and contributed more to the plan than age-22 hires, so they accumulated larger balances. However, the difference was small because age-22 hires invested their funds longer. As a result, the higher final salaries earned by age-30 hires generated a lower replacement rate.

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Risk-sharing Alternatives for Pension Plan Design: An Overview and Case Studies

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Abstract

Pension plan designs range from those that place virtually all of the risk on the plan (and plan sponsor) to those that place all of the risk on the individual covered by the plan. Traditional plans include designs that are at both ends of this spectrum, but there is increasing attention to plans that share risk. This chapter identifies different risks and discusses methods of sharing risk, both traditionally and in recent plan designs. Two case studies illustrate recent developments. We include a discussion of future directions.

Key words: Pension plan risk, risk sharing, pension plan design, defined benefit, defined contribution, risk adjustment, hybrid plan

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Risk-sharing Alternatives for Pension Plan Design: An Overview and Case Studies

Pension plan designs range from those that place virtually all of the risk on the plan (and plan sponsor) to those that place nearly all of the risk on the individuals covered by the plan. Traditional defined benefit (DB) plans may be found at one end of this spectrum, while defined contribution (DC) plans are at the other. Neither is ideal, so new alternatives are needed to provide better retirement security on a sustainable and affordable basis. Fortunately, there is increasing attention being given to new plan types that increase risk sharing and thus fit more in the middle on the risk-sharing spectrum (Fuerst 2015; Blitzstein 2015). This chapter identifies the various risks and discusses methods of sharing them, both in traditional DB plans and in hybrid plan designs. Next we discuss different methods of risk sharing and provide considerations when adopting them. Two case studies identify recent developments. We also discuss future directions for funded plans and offer a framework for selecting ideas that will work well in the future.

Our focus is on the perspectives of various stakeholder groups, primarily the plan sponsor (who is often the employer), and the benefit plan participant or retiree. Other stakeholders include financial services companies and the public at large, who also have an interest in this topic, but these broader considerations are beyond the scope of the paper.

Context and Background

The United States retirement system is made up of a combination of Social Security, employer-sponsored pension plans, personal savings, and (increasingly) continued work during retirement. Employer support for pensions has shifted over time, from DB plans to DC plan arrangements. The current system has a number of problems, including the fact that traditional DB plan costs are perceived to be too volatile. Also, many organizations are either closing traditional

DB plans to new entrants or freezing benefit accruals for all with the intention of terminating the plan when it is financially viable to do so. These actions indicate that such plans are often viewed as unsustainable. Some DB plans are in financial trouble and may not be able to pay the full promised benefits. In addition, some well-funded DB plans have moved into a state of financial trouble because they granted too many benefit increases and subsidies at early retirement.

Many individuals do not have the motivation, knowledge, or skill to provide a satisfactory retirement income on their own. Many DC plan participants will not have adequate benefits at retirement because of contributing too little, using the money too early, or not earning enough investment income due to overly conservative or poorly timed decisions. While lifetime income is the most secure way to deliver benefits during retirement, few DC plan benefits are paid as lifetime income, and many plans do not offer such an option.

There has been a major shift to DC plans underway for a number of years. The structure of DC plans has been changing to improve the benefits that they are delivering and to make them less reliant on individual decisions. At the same time, experts discussing the pension system have pointed out that risk pooling is very desirable, and that other options may better serve the societal need for a well-designed and functional retirement system.

Research Findings

Several recent projects have explored principles for better plan design along with new approaches to evaluate pension systems. The American Academy of Actuaries AGES report (2014) looks at four factors necessary for an effective and strong future pension system. These include alignment, governance, efficiency, and sustainability. While the report does not directly propose specific plan designs, several of the issues it raises are linked to plan design. Alignment speaks to linking plan management to the capabilities and needs of each of the stakeholder groups, so as to have the plan work well for both plan sponsors and participants. It also implies a plan design that works for participants with long service with a single employer as well as for those with a series of jobs or with periods in and out of the labor force. Governance refers to a plan structure that has direction and controls as part of the overall design. If adjustments are built into expectations for the plan, the combination of both design and governance is needed to make it work well. Efficiency speaks to grouping smaller plans into larger multiple-entity arrangements, providing opportunities for retirement asset accumulation through a working career, minimizing leakage during the payout and accumulation phases, encouraging pooling of risks and appropriate risk sharing, keeping expenses low, and assisting in narrowing the variability of benefits by fostering hedging of risks to support guarantees. Efficiency lowers costs and allows more contributions to be used for benefits rather than covering plan expenses. Sustainability speaks to intergenerational equity, appropriate cost allocation among stakeholders, weathering market shocks, and achieving an appropriate balance between these results while providing adequate benefits. In addition, self-adjusting systems are proposed as a method of achieving sustainability.

The Society of Actuaries Retirement 20/20 project served as a precursor to and background for the Retirement for the AGES project. It brought together a variety of stakeholders in several forums and collected papers to identify some of the best ideas internationally for building a pension system absent current regulatory constraints. Alignment of stakeholder interests, self-adjusting systems, and risk sharing were among the ideas explored. Six themes identified in that project are: (1) systems should consider new norms for work and retirement and the role of the normative retirement age; (2) systems should align stakeholders' roles with their skills; (3) systems should be designed to self–adjust; (4) systems should be better aligned with financial markets; (5) systems should clarify the role of the employer; and (6) retirement systems will not succeed without improvements in the health and long–term care systems (Society of Actuaries 2007). The discussions in the Retirement 20/20 project point to several ideas that enter the discussion on risk sharing and plan design: the importance of appropriate retirement ages, using self-adjusting features, recognizing workplace realities, and understanding the roles of various stakeholders.

The Melbourne Mercer Global Pension Index reviews the operation of the overall pension system in 20 countries and grades the systems on overall categories of adequacy, sustainability, and integrity (Mercer 2013). The ratings include both public benefits (social insurance) and the private system. The scores are based on responses to questions in each category. The degree of variation in the responses by country is much greater for some questions than for others. An individual country may be rated highly on some questions and poorly on others. Several issues raised in the index study are important to plan design and risk sharing. The areas for improvement frequently refer to retirement ages and how people retire, including raising the minimum age for retirement benefits, raising state pension ages, and improving labor force participation at older ages. There is a wide variation in ratings, and Denmark is currently the only country rated with an A grade.

Both the Melbourne Mercer index and the Society of Actuaries Retirement 20/20 project recognize the importance of retirement ages in the long-term future of retirement systems. The former study asked about time of retirement in terms of the gap between retirement ages and life expectancy today and in 2035. The low scores for average period of pension payment today are 7.3 in India and 12.4 in Mexico. The high scores are 19.7 in France and 21.4 in Korea (Mercer 2013:50). The 2013 index report also included a new question to explore phased retirement. In response to questions about whether employees could receive private plan benefits, continue working part-time, and continue accruing benefits or contributing to their plans, six of the 20 countries received a maximum score, six received a score of zero, and eight were given something in between (Mercer 2013). Additional demographic questions focused on fertility rates and expected old age dependency rates in 2035. Another major area of focus is the method used to pay benefits during retirement with a focus on the extent to which lifetime income is used. The discussion of private plans is heavily focused on DC plans. Noteworthy for this chapter are the wide variation in systems by country, the importance of sustainability, the importance of lifetime income payouts, and the recommendation for adjusting retirement ages and options with demographic changes.

Considerations Affecting Plan Design in the Future

When designing a retirement plan, a wide range of risks should be considered, both pre- and post-retirement. While investment, inflation, and longevity risk are always important, several additional risks are worth noting: these include employment risk, business risk, and the risk of poor choices. Some, such as the risk of family change, do not directly impact plan design and will not be discussed. In Table 6.1 below, we summarize the list, along with factors facing plan sponsors and participants in retirement and when they generally apply—whether in the pre- or post-retirement phase. Failure to focus on the range of risks when considering alternatives may result in incorrect conclusions.

Table 6.1 here.

In the debate about the future of the United States pension system, questions arise as to whether these plans should be voluntary or mandatory and universal. Moreover, a system can be mandatory at the employer level, but still optional for individual employees. Another area of disagreement is whether lifetime income should be mandated, or instead strongly encouraged for all or some part of retirement assets.

Sustainability, the ability of a retirement system to last through economic cycles and demographic changes, is critical to the long-term success of the retirement system (American Academy of Actuaries 2014). What is needed to maintain sustainability varies with the regulatory climate and method of accounting used by plan sponsors. The move to more transparency and use of market values has increased the focus on short-term results. While this move has not changed the underlying economics of retirement plans, it has made it more important that there be safety valves enabling pension plan sponsors to deal with extreme economic conditions. Self-adjusting systems, to be discussed below, offer examples of safety valves.

The effectiveness of a retirement system for participants depends on accumulating enough resources for retirement and on using them effectively in retirement. Lump sums are generally an inefficient way of using resources in retirement, because these eliminate the efficiency of risk pooling and place longevity risk on participants. In addition, they provide more funds to those who die earlier rather than to those who live long. This is an issue in both DB and DC plans (Mercer 2013; Society of Actuaries 2007). A discussion of designs for the future and methods of risk sharing needs to include the post-retirement period. Table 6.1 includes information on when risks apply and identifies which risks are applicable to the post-retirement period.

Different Ways to Share Risk

By risk sharing, we mean the distribution of risk between various plan or system stakeholders. The Society of Actuaries Retirement 20/20 report identified four primary stakeholders: society, employers, participants, and markets (2007). In the present context we slightly expand these categories to identify stakeholders as employer plan sponsors, participants, financial service companies, policymakers, guarantee organizations, and the public at large. Risk can also be shared by different groups of plan participants, between participants and employers, between participants and financial service companies, etc. As laid out in Table 6.2, risk can be shared in different ways, through plan design or benefit structure, financing structures, self-adjusting systems, pooling, multiple entity arrangements, third party guarantees, and backup guarantee funds. Next we offer a discussion of how risk sharing approaches can be used in pension systems, either one at-a-time or in combination.

Table 6.2 here.

Using plan design to define risk sharing and allocation. Methods of defining risk sharing and allocation through plan design include allocating risk directly in the method of determining benefits, adjusting benefits based on funding level or some other defined trigger (self-adjusting system), and/or including contingent benefits in the plan.

DB and DC plans allocate risk directly as part of plan design. Traditional DC plans with lump sum payouts place essentially all risk on plan participants (although some plans do pool investment risk in the pre-retirement phase). Variable annuity policies may include a floor guarantee on investment returns or on income to be paid out, thereby sharing risk between an insurance company and the policyholder. These plans put most risk on the individual but do place some risk on the insurance company. A charge is levied for each guarantee purchased. If the variable annuity policies are used to fund an employer-sponsored plan, the employer may share some of this risk.

Traditional non-contributory final average pay DB plans which do not offer indexing of benefits after retirement place most risk on the plan sponsor, but the post-retirement inflation risk is held by the participant. The participant is also at risk in the event of plan sponsor bankruptcy or failure to provide needed funds to the plan.[1] In addition, the participant is at risk with respect to future benefit accruals.[2] This is an important issue since the benefit accrual pattern in these plans provides for much higher accruals as the participant nears retirement. These plans involve risk pooling, so that mortality and investment risk are shared within the risk pool. The plan sponsors bear all risks assigned to these risk pools. In a single employer plan, one employer bears the risk, whereas in a multiple entity arrangement, the risks may be shared between entities depending on the structure of the arrangement. Traditional career average pay pension plans allocate investment and longevity risk to the plan sponsor, and inflation risk, both pre- and post-retirement, to the participant. The custom for many organizations that sponsored such plans was to provide for periodic *ad hoc* updates to the career average benefit, shifting some of the inflation risk to the plan sponsor. Increases were at the discretion of the plan sponsor, providing for a different method of risk allocation.

Table 6.3 provides more detail by contrasting how plan sponsors and participants face risks in the most common types of retirement plans. Table 6.3 also shows that both groups bear some risk, even in traditional DB and DC plans. Traditionally, larger employers balanced the risk borne by the individual and the employer by offering both DB and DC plans. Such combinations could be tailored to the needs of the organization and also provide some balancing between employees of different ages. Traditional final average pay DB plans provided relatively small benefits for those who left the firm early in their careers, and much better benefit accruals later, particularly at the point of approaching unreduced retirement benefits. By contrast, DC plans provided significantly greater retirement benefits for early career participants, due to investment income expected to accumulate over the many years during which the account balances were invested prior to retirement.

Table 10.3 here.

Many employers have adopted hybrid plans, and innovative ideas for new designs are emerging. A recent study on hybrid pension plans identified a wide range of hybrid arrangements and a broad range of risks (Turner 2014). The study included both actual arrangements in existence and proposed new ideas, including types of hybrid plan designs that divide risks between those that apply to the pre-retirement period versus after retirement. It also split plans between those that shift risk to participants in pre-retirement, to participants at retirement, to participants post-retirement, and to participants both pre- and post-retirement. Hybrids can be structured to start from a DB design and shift some of the risks to participants, or to start from a DC design and shift some of the risks to a third party or plan sponsor. That study also created a pension risk index and rated several plans with respect to both participant and employer risk.

Risk sharing adjustments built into plan designs may include provisions such as cost-of-living increases that are temporarily discontinued, if funding levels drop below a threshold; alternatively, cost-of-living additions can be discretionary or contingent on some funding level. This combines benefit design and financing to achieve risk sharing. Other benefit adjustments—permanent or temporary—can be used when funding levels cross certain barriers. Some newer designs, such as plans offered in the Netherlands (Bovenberg et al. 2015) and New Brunswick (Leech 2013) offer this type of risk adjustment. If funding levels return to the threshold levels, benefit adjustments may be temporary.

The participating group annuity plans used from the 1930s to the 1960s provided that insurance companies could assume most of the risk, while still sharing some with policyholders. The purchase price included a margin for adverse experience, and this amount was returned to the policyholder in the event of good experience. In this way, these plans shared risk between the insurer and the plan sponsor policyholder. They could also increase benefits in the event of good experience, and in that situation, the participant also became part of the risk sharing arrangement.

Using plan financing structure to share risk. Plans that include both employee and employer contributions can share risk through financing adjustments, when the plan's financial status influences contributions to the plan, benefits levels, or both. This is a form of sharing risk across stakeholders. If contributions are set as a level percentage of pay, risk is also shared among the current group of participants, with younger employees paying more than their current share of the cost in DB plan arrangements.

Benefits can also be adjusted up or down based on built-in adjustment rules and/or funded status. Adjusting benefits based on share values or investment returns, or indexing retirement ages with changes in life expectancy are examples of such adjustments. Benefits may also be adjusted based on funded status thresholds. These adjustments share risk across stakeholder groups and may also share risk within stakeholder groups.

Using self-adjusting systems to manage risk. The studies discussed above emphasize self-adjusting systems. Self-adjusting systems refer to programs that include built-in features that respond to specified conditions (usually adverse experience) without direct involvement of the plan sponsor. These adjustments can link to both design and funding and can be embedded in a variety of risk management strategies, which can be important when there are shifts in demographic, economic, or business conditions. For example, participating insurance contracts were an early form of self-adjusting systems. Cost-of-living increases that are contingent on the funded status of the plan, and provisions that reduce benefits or increase contributions based on funded status, are also forms of self-adjustment.

To date, many retirement systems have not responded effectively to demographic changes (Rappaport 2014). Retirement age increases are needed to enhance the system sustainability in many countries (Mercer 2013), which can also be an adjustment mechanism, if retirement ages automatically increase with life expectancy. It will be very helpful to focus on expanding opportunities for older persons to continue to work and opportunities to phase into retirement (Mercer 2013).

Using risk pooling. Risks that are most readily poolable are those which members do not control and cannot predict (such as life expectancy). When members of a risk pool can control or predict the occurrence of the event being protected, there is the potential for anti-selection.

In a mandatory system such as Social Security, mortality risks are pooled across all beneficiaries, and benefits are paid for life. Those who live longer receive benefits longer, while those who die early receive less in lifetime benefits. The mortality experience reflects the entire population. By contrast, the employer-sponsored DB plan with only an income option pools risk over the employee population that qualifies for benefits. The mortality experience reflects the types of workers in the plan sponsor organization. For example, a coal mining company will have very different mortality from a law firm. The immediate annuity business of an insurance company pools the mortality risk of its policyholders. Since healthier people tend to buy annuities, the insurer's mortality experience must recognize that this group lives longer than Social Security beneficiaries or all employees. It is possible to set up multiple risk classifications and risk pools for annuities to reflect these differences in risk levels. For annuities, this approach is used in both the United Kingdom and in the United States, though it is more common in the former.

The challenges of setting up a risk sharing arrangement using a risk pool include achieving a reasonable spread of risk and being able to charge a reasonable price for the arrangement. When life insurance is sold to individuals, it is priced according to the age and health status of the purchaser. Through a process known as underwriting, the risk is evaluated, and people in poor health may be refused personal life insurance or charged an extra premium. When life insurance is provided to an employer group, it is priced according to the demographic and industry characteristics of the group. The group, rather than the individual, is underwritten.

In a given population at a point in time, a fraction of the pool will be expected to die within the next year. Because life expectancies are changing over time, the number of people expected to die in a similar population a few years later will usually be different. When life expectancies are increasing, the number of deaths expected at each age will decrease over time. The terms 'systemic risk' and 'idiosyncratic risk' are used to understand risk related to changing mortality rates within the population. Idiosyncratic risk is the risk that a particular participant will live longer than expected. Systemic risk is the risk that life expectancy improves by more than expected for the entire cohort. Systemic risk is not poolable, whereas idiosyncratic risk is poolable. Pension and annuity plans that offer lifetime guarantees of income are subject to both types of longevity risk: idiosyncratic longevity risk is managed by pooling, but systemic risk is generally held to be unhedgeable, since few if any assets are widely available to hedge it (Turner 2014).

Establishing multiple entity arrangements. Multiple entity arrangements offer a means to share risk across groups of participants and a way to create larger pools by combining smaller entities. Employers range in size from single individuals and small employers with fewer than ten employees, to major organizations with hundreds of thousands or even millions of employees. Large entities are able to achieve economies of scale, have resources to use strong professional help, and if they pool risk, create large risk pools. Small entities are able to access a greater variety of retirement plan options on a much more economical basis if they can join with a larger entity, provided it fits their needs. Multiple entity arrangements can offer DC and DB plans, or versions of newer hybrid plans. The legal structure of the jurisdiction in which they operate governs the options available to establish such plans. These plans differ in how they operate and in their resulting success. New types of multiple entity plans may be needed in the future, particularly if smaller employers are to have access to retirement plans.

Many United States and Canadian public pensions are multiple entity plans, covering several different entities. For example, the Illinois Municipal Retirement Fund (IMRF) covers 175,000 members linked to 2,900 employers within the state. The system administers a retirement, death, and disability plan in Illinois, and it is a DB plan, with contributions shared by employers and employees. Benefits are guaranteed by the Illinois Constitution, and municipalities and counties outside of the City of Chicago are required to participate in the plan. Many other local government entities can join the plan by choice (IMRF 2012). With this type of plan, a public plan administrator deals with many different entities and offers a variety of services. It may offer a single benefit program or multiple programs from which to choose. The public plans have choice about how they set up their operations and which risks they share and how.[3] They normally would have one set of pooled investments for DB plans and one risk pool for purposes of mortality risk. They also would normally reflect entity demographics in setting contributions. Such public plan systems may be viewed as offering many of the same services as an insurance company, though they are not licensed as insurance companies. Public plans can be made mandatory for the eligible government units by action of the appropriate legislative body.

The pension operations of many religious denominations are also like multiple entity plans, again generally without being formally classified as insurance companies. They can be similar to some of the public pension entities, and if the plans are established as church plans in the United States, they are not subject to the same regulation as private plans. Two examples are the programs sponsored by the Episcopal and the United Methodist Churches (Church Pension Group 2014; General Board of Pensions of the United Methodist Church 2014).

Industry plans are used in the Netherlands (Bovenberg et al. 2015), unlike in the United States. Some U.S. observers view TIAA-CREF as similar to an industry plan for higher education (American Academy of Actuaries 2014; Richardson 2015). Multi-employer plans within the United States serve as industry plans within the unionized portion of industries including trucking and iron work.

U.S. multi-employer plans offer pension benefits to unionized employees, and they are jointly managed by employees and representatives of the company (or companies).[4] These plans negotiate contributions and provide benefits defined through a DB formula. Risk is shared across all participating entities, without any adjustment for differences in demographics or when the entity entered the plan. When an employer leaves the plan, it is assessed a withdrawal liability, with the basis of that liability set by law. Some of these plans have seen a major downward spiral as employment patterns have changed and particular occupations and/or industries represented by covered employees declined. For instance, milk deliverers and milliners are examples of occupations that have virtually disappeared today. Some of these plans did not work well, because they were not structured to manage the risk well, particularly in light of demographic and industry challenges.

Third party guarantees and guarantee funds. Risk can also be shifted to third parties through the purchase of financial instruments such as insurance, with a market price set for the risk transfer. Risk can also be partly transferred to a back-up guarantee fund. State insurance pools provide guarantees to back up some insurance contracts. The U.S. Pension Benefit Guaranty Corporation (PBGC) provides guarantees for private sector pension benefits. Bank deposits in the United States up to certain limits are guaranteed by the Federal Deposit Insurance Corporation. In addition, there are various examples of guarantee funds in other countries, such as the UK's Pension Protection Fund. Each government-sponsored guarantee fund has its own method of financing. The existence of such funds changes the risk profile of specific benefits. It can also create moral hazard if companies take excessive risks, knowing they are protected.

Risk Sharing as Applied to Different Types of Risks

This chapter has defined the risks, general methods of sharing them, and their allocation to plan sponsors and participants. Table 6.4 offers a more detailed look by identifying specific methods of managing investment risk, interest rate risk, inflation risk, and longevity risk. Here we compare risk management methods available to plan sponsors with those available to participants, expanding on the ideas presented in Tables 6.2 and 6.3 by offering a range of methods for risk sharing.

Table 6.4 here.

Investment risk. DC plans in the U.S. allocate investment risk to participants who can select their own investment mix from a menu of choices. The plan administrator is responsible for structuring the choices and usually there is a default investment option viewed as suitable for participants who do not make investment elections. Target date funds that vary the investment allocation according to the time to retirement are now a common default option in the United States. This is quite different from individual retirement accounts (IRAs) where individuals can choose any investment available in the market, and people can work with a variety of different service providers in establishing a plan.

Traditional DB plans allocate investment risk and choice to the plan sponsor. Liability driven investments offer one route to managing investment risk,[5] but this may result in a higher long-term cost, due to giving up higher expected equity returns. However, under some economic scenarios, this strategy could result in lower long-term costs.

There are variations in plan design that allocate the risk differently. For example, cash balance plans with crediting rates based on an economic index allocate investment choice and most of the investment risk to the employer, but they then share investment risk somewhat with plan participants depending on the index used for crediting investment returns and the method of linking actual fund investments to the interest credited to participant accounts. Variable annuity contracts with floor guarantees share risk between policyholders and financial institutions. The policyholder may be able to choose between funds but cannot choose individual investments. Collective DC plans such as those used in the Netherlands have a common investment fund and share investment risk across the group of plan participants.

Interest rate risk. Interest rate risk leads to changes in the value of defined plan liabilities, as well as changes in annuity prices. Current interest rates are also a major factor in immediate annuity prices as well as for returns on fixed dollar investments which may be an important component of retirement plan investments. Interest rates have been very low for the last several years; some argue they are artificially low due to government intervention. This has made immediate annuities and bonds more expensive and resulted in increasing DB obligations.

Inflation risk. Inflation risk includes both pre- and post-retirement inflation risk. Inflation is a very important risk in funded retirement arrangements, whether DB, DC, or hybrid. Plans that use a final average earnings formula implicitly provide some coverage for pre-retirement inflation and place that risk on the plan sponsor; the latter have declined in prominence.

Most public employee plans, United Kingdom pensions, and the United States Social Security system offer benefits indexed for inflation during the payout period. Private United States plans rarely include such provisions, so inflation erodes the value of benefits. When benefits are indexed, all or part of the inflation risk rests with the plan sponsor. Inflation is often a consideration in setting investment mix. Other than inflation-indexed bonds, however, no investments offer a direct hedge against inflation.

Longevity risk. Plan sponsors can manage idiosyncratic mortality risk through pooling. Systemic risk is addressed in DB plans through the choice of actuarial valuation assumptions. When mortality improvements adequate to match experience are built into the valuation, that addresses the issue. Longevity risk can also be addressed by adjusting benefits or retirement ages if longevity changes more or less than expected. The Swedish notional DC plan adjusts benefits for changes in life expectancy as of age 65 (Turner 2014).

One way to address systemic longevity would be to increase retirement ages on an indexed basis. In the United States and Canada, there has been a gradual increase in retirement ages in the last few years, but lifespans have increased far more. An expert commission in Quebec summarized the impact of changes in work life and life expectancy (Rappaport 2014). In 1970, expected work life was 46 years, and expected retirement was 13 years. By 2009, expected work life was 39 years, and expected periods of retirement were 23 years. The ten-year increase in periods of retirement is the result of a five-year increase in life expectancy and a five-year decrease in expected retirement ages (Rappaport 2014). The situation is further complicated because longevity and longevity improvement vary by economic status, occupation, and education. Long periods of retirement are creating a major challenge with regard to the sustainability of employee benefit and social benefit programs. The differences in longevity by economic status and occupation create equity concerns when there are discussions of raising or indexing retirement ages.

Business and employment risk. As noted above, final average pay plans concentrate much of the benefit accrual in the later years of employment. Accordingly, employees who leave their jobs early give up larger benefit accruals. There is also the concern that their employer may freeze or terminate the plan, or change the plan structure. In either case, the participant loses out on future benefit accruals. Employees are also subject to employment risk in the event of job loss, or business risk in the event the business does poorly, impacting employment prospects, salary increases, and maybe the future of the pension plan.

When the benefits are provided through DC plans, there is much less business risk to the employee. DC plans usually vest quickly, and most often, accruals earned in early years of employment are high relative to what is earned later. However, if accounts are invested in company stock, this poses a potentially significant business risk for participants. There is also business risk for the employer in that employees may not have adequate funds to retire. This can be troublesome to the business for workforce management reasons.

Risk of poor choices. DC plans typically allow for more individual choices than do DB plans. Non-contributory private sector DB plans may not require any choices until benefits are paid. By contrast, DC plans require choices about how much to save and how to invest those funds. At the point of retirement, these plans require choices about how benefits will be paid, and some of these choices may be irrevocable. Increasingly, many U.S. plans use default options such as auto-enrollment and auto-escalation to minimize the impact of poor choices, including using one's assets too early or taking them as a lump sum distribution and using a portion for immediate consumption. Interestingly, there is a recent challenge with regard to participant choice: some plan sponsors have offered pensioners a lump sum buyout as part of a corporate derisking strategy. This creates a challenging financial decision that some older participants may not be well equipped to make.

Fiduciary and litigation risk. Plan sponsors in the U.S. are subject to fiduciary requirements designed to protect participants against mismanagement, conflicts of interest, and fraud. Fiduciary risk refers to the risk that a sponsor fails to fulfill his requirements and can then be held responsible. For instance, the DC plan sponsor takes on fiduciary responsibility for choosing the investment options offered in private DC plans. The best defense is a demonstration that a prudent process was used to select and monitor the investment options in the fund. This responsibility helps explain plan sponsor reluctance to include annuity income payouts in their plans.

Solvency Risk. Solvency risk refers to the risk that an entity providing benefits will become insolvent or unable to pay benefits, resulting in a default on benefit payments. In DB plans, the employer or plan sponsor is responsible for plan funding. Private pensions in the United States have benefits insured by the PBGC up to specified limits in the event of bankruptcy, but participants bear risk when promised benefits exceed the PBGC limits. Participants also bear the risk of insolvency in situations where there are no back-up guarantee funds, as in the public sector. There is also some risk that a back-up guarantee fund could have solvency problems.

Public pension plans have traditionally been seen as not subject to solvency risk, since public entities usually do not go bankrupt. Moreover, public plan benefits are often protected by state constitutions. This view has recently been called into question by the bankruptcy of the city of Detroit, Michigan. A federal judge recently held that Detroit's obligations to pay pensions were not protected in a federal Chapter 9 bankruptcy, even though they were expressly protected by the Michigan Constitution (Davey 2013). The December 2013 Detroit ruling is expected to be further challenged in the courts, but it opens up the question of whether and in what circumstances pension benefit protection provided by state constitutions will prevail.

In DC plans, individual participants bear most of the solvency risk if the financial institution or particular investment funds become insolvent. Various kinds of financial institutions have some funds guaranteed by a back-up fund. For example, United States insurance companies and banks are part of guarantee arrangements, but these are subject to limits. Moreover, these guarantee funds do not protect against poor investment results, but rather the bankruptcy of the institution offering the financial product. As discussed above, U.S. employers or plan sponsors have fiduciary responsibility for determining the investment options in private plans.

Case Study: Pension Reform in New Brunswick

In 2012, the Canadian province of New Brunswick adopted a new plan framework called the Shared Risk Pension Plan. The framework included: (1) a new design that split benefits between a base benefit and ancillary benefits; (2) protocols to keep the plan's operation on track, and (3) a new risk management regulatory framework to ensure compliance with the program (Munnell 2013). This new design is available to public and private pensions, and it may be used for conversion of existing pension plans or establishment of new plans (Financial and Consumer

Services Commission 2012). The program was developed by a government appointed Task Force who recommended that each public sector plan in New Brunswick be converted to the new plan (Government of New Brunswick 2013). At the time it was announced, it was supported by a number of public and private sector pension plans and by unions representing more than one-third of provincial government bargaining employees.[6] As of late 2012, the City of Saint John and Co-op Atlantic filed for approval of shared risk plans (Government of New Brunswick 2013), and in 2014, the Shared Risk Plan model was either adopted or announced for adoption by several Canadian DB pension plans.[7]

The principles for reforming New Brunswick pensions were set forth by the Task Force designing the reform (Government of New Brunswick 2013). As shown in Table 6.5, these seek to balance sustainability and risk pooling. They speak to plan design, transparency, financing, results measurement, and governance.[8]

Table 6.5 here.

The New Brunswick model weaves together plan design and plan financing. Funding levels can trigger benefit adjustments, either up or down. The traditional method used for DB pension funding uses best estimate assumptions, implying a 50 percent probability that contributions will not need to be increased. The risk sharing model provides for more stringent funding along with a specific method of adjusting benefits. If the funding level drops too low, benefits can be reduced or put on hold. If the funding increases beyond a certain point, benefits put on hold can be restored. ‘Base’ benefits are strongly supported, using a standard of success of at least 97.5 percent likelihood that adequate funding will be maintained without adjustment of benefits over a 20-year modeling horizon. ‘Extra’ benefits, such as cost-of-living increases or early retirement provisions are considered ancillary benefits, these and are also supported using a target contribution sufficient to fund 75 percent of these benefits on average over a 20-year time horizon (Government of New Brunswick 2013:20). In rare and unforeseen circumstances, base benefits might need to be reduced; in such a case, the reduction will be borne by all plan beneficiaries including active employees, deferred vested employees, and retirees. This differs from the traditional DB approach where benefits were protected first for retirees and deferred vested participants, and where reductions generally applied first to future accruals, and then to those who had not reached retirement age.

In the Shared Risk model, the plan sponsor can offer a plan that pools risk for plan sponsors and taxpayers. In the conversions seen to date, this plan design used has replaced prior final average pay DB plan benefits with career average pay benefits, (although the legislation does not require use of a career average formula). Also, cost-of-living indexing has been replaced by contingent indexing, meaning indexing is contingent on funding levels. Final average pay accruals are frozen at the time of conversion. Contributions are shared and increased as needed based on financial results (Government of New Brunswick 2013:20-21). The legislation enabling these plans limits contribution changes to two percent of payroll and to 25 percent of the initial contribution level, intended to keep the plans affordable and sustainable. It is expected that the shared risk structure will encourage employees to work longer, leading to retirement at older ages. One report indicates that the targeted retirement year will rise three to four years for early career employees (Government of New Brunswick 2013: 13, 22).

It is worth noting that the legal structure governing these plans differs from U.S. pension requirements.[9] Specifically, the Canadian plan must be operated by independent trustees operating at arm's length from the employer. Trustees are required to have an annual actuarial valuation, a risk management structure, and an investment policy. The plan framework sets requirements for a funding policy and measurement of plan liabilities, and actuarial liabilities are to be 'prudently valued.'[10] Funding policy must be established so that, in normal times, the plan's financial position is adequate to grant indexing and other ancillary benefits. For plans with contingent indexing, the funding policy must explain when contingent indexing starts and stops, and at what levels contingent payments are to be made. The funding policy also must include an explicit deficit recovery plan. Provincial legislation allows for the Superintendent of Pensions to establish guidance with regard to a minimum standard to address underfunding (Government of New Brunswick 2013:20-21). In conversions to date, it has been common to use a funding methodology that includes an open group funded ratio of 110 to 120 percent to be achieved over 15 years. However, a plan can start at a different point if it passes risk management tests in the statute.[11]

The Canadian Shared Risk Pension Plan was possible because former Premier David Alward established an expert Task Force in 2010 (Government of New Brunswick 2013). Also, provincial demographics made pension reform quite urgent: its population is older than the rest of Canada, with nearly 20 percent of residents over age 65 (Leech 2013). In the last decade, private sector companies in New Brunswick, including the St. Anne-Nackawic Pulp Company and Fraser Paper, had gone bankrupt with inadequate funds in their DB pension plans, leading to benefit losses by both active workers and retirees (Leech 2013). At the time of the St. Anne-Nackawic Pulp Company bankruptcy, the law provided that assets must be used first to cover retirees, terminated employees, and employees age 55 and over. In 2005, the law was amended so that benefit losses were shared between retirees and active employees. Both participant groups lost benefits in multiple bankruptcies, driving the interest in reform (Leech 2013).

The government task force found major problems in the funding levels of both private and public sector plans. Of the existing DB plans registered in New Brunswick, only a few were fully funded (Leech 2013). The City of Saint John faced a pension deficit of C$130 million, an amount nearly equal to its 2011 revenue of C$138 million. These problems had arisen due to a history of inadequate funding, poor economic conditions, demographics, and extra benefits to induce early retirement (Leech 2013).

A climate for change resulted from the expert Task Force, as well as a great deal of communication and a high level of commitment from various stakeholders. Paul McCrossan, the actuary on the task force, stressed that solutions could be found provided that all parties made sacrifices. The Task Force negotiated with several key labor leaders, so that when the Premier introduced the proposed pension reforms and the Task Force report to the public, key labor leaders were at his side and part of the presentation (Leech 2013). Many of the ideas used in reform in New Brunswick had also been used in the Netherlands (Bovenberg et al. 2015).

Case study: A Different Type of Defined Contribution Plan

An alternative new model for corporate pensions is the Savings InSight™ plan offered by Buck Consultants and implemented in 2014 (Buck Consultants 2014). This plan is a DC plan designed to meet the needs of different groups of participants: those who prefer to have the plan sponsor do it for them, those who want guidance and shared responsibility, and those who wish to do it themselves. It includes auto-enrollment and auto-increases, and a modeling tool to enable participants to modify their decisions and customize them.

The plan design enables the employers to structure benefits so they fit into the firm's human resources needs. A plan sponsor participates in setting plan parameters for the target retirement age, payout period, definition of 'living standards,' investments, and salary increases. These parameters influence participants' recommended contributions and increase the potential for an adequate retirement income payable at the selected target retirement age. They also communicate an expected retirement age to the individual participant. These plan features also offer an attractive workforce management tool, compared to traditional DC plans.

Recommended contributions vary by individual, but they are usually much higher than default contribution rates typically used for auto-enrollment in DC plans (Xerox 2013; Buck Consultants 2014).[12] Contributions are tailored to each individual based on his own data..[13] Unlike many retirement calculators, this plan uses actual participant records to produce an automated calculation customized to personal situations and account balances. It has been structured to produce an 'adequate' retirement benefit for those participants who do not take action. In this way, the plan is similar to a conventional target benefit approach.[14]

The recommended contribution is a 'nudge' or suggestion. In addition to this recommendation, the modeling tool also 'nudges' participants who use it by showing how different decisions can alter retirement income streams. This structure goes beyond DB plans, in that it gives those participants who seek choices the chance to make their own decisions. Contribution percentages are also recalculated annually, and if there is a recommended increase, an automatic contribution increase is implemented. A participant can always opt out or modify the amounts. The modeling tool can also be used to evaluate alternatives. If the initial contribution or the recommended increase is too large, the tool can offer a transition program. In this plan, the default auto-investment is a target date fund, the Qualified Default Investment Alternative (QDIA). The plan uses the assumed rate of return for the QDIA, but the participant may select whatever investments he wishes. If a participant invests in funds that do not perform as well as the QDIA assumptions, his contribution rate is then recalculated to make up for the lost earnings.[15]

The benefit default is an installment payout for the number of years selected by the plan sponsor, with automatic adjustments as may be needed to maintain the targeted payout. The individual assumes his longevity and investment risk, but the payments are structured to reduce the chance that his fund will run out of money. The payment is calculated so that there is a notional side fund or buffer, to help cover market fluctuations. Good investment performance increases the side fund, and poor performance reduces it. The program sends monthly retiree benefit checks, and adjustments are made, as needed, to increase the probability that the payments will continue over the target payout period. Retirees retain full access to their funds, and they may withdraw more than the retiree check (but not less). This is reflected in the year-end gain/loss. Additional adjustments would likely be required to meet U.S. regulatory requirements.

Examples of Recent Developments

New Brunswick offers an example of a new DB structure integrating design, funding, and plan management, while the Savings InSight™ plan is a DC plan modified to produce many of the benefit delivery and human resources aspects of DB plans, (although it lacks an income guarantee). Numerous other plan sponsors have also made changes to modify risk sharing. In the U.S., for instance, some employers have frozen or terminated DB plans and moved into DC plans. This has primarily resulted in risk shifting rather than risk sharing. A smaller number of private sector employers has moved to cash balance plans.

The U.S. public sector has also made many changes to modify risk sharing and improve DB plan sustainability. For instance, the National Association of State Retirement Administrators

(NASRA 2014) documents recent changes to restore or improve sustainability in 56 statewide public plans. These changes have included increases in employee contributions and the method of determining them, changes in cost-of-living increases, increases in retirement ages, and changes primary benefit formulas. Some provisions explicitly link to the plan’s funded status. For example, in 2010, the Minnesota Teachers suspended their cost-of-living increase for existing retirees for two years, and they then reduced the cost-of-living increase from 2.5 percent per year to 2.0 percent per year until the plan funding ratio rose to 90 percent. The Montana Public Employees Retirement Association (PERA) in 2013 reduced its cost-of-living adjustment to 1.5 percent for all current and future retirees, as long as the system was less than 90 percent funded. The cost-of-living adjustment will be reduced 0.1 percent for each two percent below a 90 percent funding level (NASRA 2014). NASRA (2013) also reports a new focus on hybrid plans in the public sector, since some employers have found that closing their traditional pension plans to future employees does not meet important retirement security, human resource, and fiscal objectives.

Conclusions

To make future retirement plans more effective for risk protection, it will be useful to develop new arrangements which pool some risk and provide for different risk sharing. The two case studies described here offer some insights. Other approaches include modifications of traditional plans, generally called hybrids, which assign various risks to either the plan sponsor or participants in the plan design. The new DC-based hybrid, described above, does include ongoing adjustments to both contributions and benefit payments as part of the default options built into the plan.

Conclusion

In sum, we show that it is feasible to offer a retirement plan that pools risk and is efficient, but which also limits the sponsor's downside in adverse conditions. A relatively easy way to do this is to use a plan design that shares risk and offers some self-adjusting features. The risk-sharing mechanisms discussed here could also, in theory, be added to most DB plan designs. For instance, the de-risking effort could move final average pay DB plans to a career average pay design with self-adjusting features and added benefits contingent on financial results. The de-risking could include recognition of increasing longevity through self-adjusting increases in retirement ages or self-adjusting reductions in benefit levels. DB plans could be structured to respond to future increases in longevity. It is likewise feasible to enhance DC plans so they include self-adjusting features and offer much better retirement security. Designs can be flexible to meet individual needs while also reflecting diverse organizational needs. A key item on the future retirement policy agendas is to pursue policy changes that will support desirable plan designs including optimal risk sharing.

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Endnotes

[1] This risk is reduced to the extent plans are insured by a guarantee fund. For example, benefits provided by private sector plans in the United States are insured up to specified limits by the Pension Benefit Guaranty Corporation. Such funds also exist in other locations such as Ontario, Great Britain, Japan, etc.

[2] This statement about future accruals applies to private sector plans in the United States. The situation is much more mixed with respect to public sector plans. Some have future accruals protected and others do not.

[3] Public pension plans are normally set up by local or state legislation. The choices open to the plans depend on the legislation. The regulation is very different from private sector plans in the United States.

[4] In the United States, a 'multi-employer' plan is a specific type of plan authorized under Federal law. These plans have joint union-management governance, and are subject to different requirements with regard to plan termination and Pension Benefit Guaranty Corporation premiums. They are a subset of the broader class of multiple entity arrangements.

[5] Liability-driven investments are investments structured so that the term of the investments matches or is closely linked to the duration of the expected payments from the plan. Liability-driven investments reduce investment risk considerably.

[6] Unions supporting the plan when it was announced included the New Brunswick Nurses Union, the New Brunswick Union, the Canadian Union of Public Employees (CUPE) Local 1212 (New Brunswick Council of Hospital Unions) and New Brunswick Pipe Trades, and it had been announced that these unions would be adopting the new model for specific plans (Government of New Brunswick 2013).

[7] Information supplied by Paul Lai Fatt from Morneau Sobeco. Information on the New Brunswick plan is taken from government reports as indicated in the references and supplemented by an interview with Paul Lai Fatt, an actuary who is actively involved in working with plans in New Brunswick.

[8] The principles as shown in Table 10.5 are from the reference cited. The authors have learned from discussion with an actuary working in New Brunswick that Principle 10 was not included in the legislation as finally passed, and that Principle 7 has proved to be difficult in operation. Plan members have found it difficult to understand what is guaranteed and what is not. It was also pointed out that while accrued benefits are preserved on conversion, there are some improbable circumstances where they would be reduced.

[9] Private pension plans in the United States are subject to the Employee Retirement Income Security Act (ERISA) which sets forth detailed requirements for funding and plan governance. There is no similar requirement applicable to public plans in the United States, and there is wide variation in practice and requirements by state. The New Brunswick model authorized by legislation effective July 1, 2012 uses very different requirements. Regulations were issued in August, 2012 effective July 1, 2012 (Financial Services Commission 2012). The prompt issuance of regulations is also very different from the United States.

[10] The Task Force report on the design indicated a discount rate close to 4.5 percent based on market conditions in mid-2013 when the report was issued as well as mortality tables that include current best estimates of mortality improvement (Government of New Brunswick 2013).

[11] Actuarial valuations can use either a closed group or an open group. Funding valuations for most plans are closed group, whereas open group valuations are commonly used to plan benefit and other changes. The closed group approach focuses on the currently covered population group for

a pension plan, including active participants and participants currently receiving a benefit or due to receive a benefit in the future. A *closed group* projection requires *demographic assumptions* about how current participant are expected to withdraw, retire, become disabled and die. The open group approach includes not only the currently covered population group for a pension plan (as defined in *closed group*), but also including future anticipated new entrants (i.e., new employees) to a system. In addition to the *demographic assumptions* required for a *closed group* projection, an *open group* projection requires assumptions about the age, service, and salary profile of new entrants and whether an employee population is expected to grow, stay in a steady state, or decline. The open group funded ratio is the assets plus the present value of the next 15 years of excess contributions (employee contributions plus employer contributions less normal cost), all divided by the liability of the base benefit.

[12] The information on the Savings Insight™ program was provided partly from literature from the firm as indicated in the references and supplemented by an interview with Ted Goldman, National Retirement Leader at Buck Consultants.

[13] Adequate is defined by each company adopting the plan, and the plan sponsor has choices in that regard.

[14] A target benefit plan is a DC plan that uses an underlying formula to define a specified retirement benefit. It then calculates a recommended contribution to the plan that is expected to accumulate sufficient funds, using an assumed rate of investment earnings, to provide the targeted benefit at retirement. In such a plan a different contribution rate is calculated for each employee reflecting that employee's demographics, salary, and current account balance.

[15] QDIA is Qualified Default Investment Alternative. Under United States Federal regulations, these investment alternatives are permitted for default options in defined contribution plans governed by ERISA.

Table 6.1. Major risks facing plan sponsors and participants in retirement plans

Risk	Definition	Pre- or post-retirement risk
Investment	Risk that returns on invested assets are different from what is expected	Both
Interest rate risk	Risk of unexpected changes in interest rates leading to changes in value of defined plan liabilities, changes in annuity prices, and to changes in the interest earnings on fixed dollar investments and bank accounts	Both and also at time of retirement
Inflation risk	Risk resulting from loss of purchasing power due to unexpected increases in price levels.	Both
Longevity risk	Risk resulting from differences in the level of population mortality and/or the risk that any particular individual will live longer (or shorter) than expected	Primarily post-retirement
Employment risk	Risk that individual will lose job prior to retirement or leave and lose future benefit accruals; also includes risk of being pushed into retirement earlier than planned	Pre-retirement
Business risk	Risk that business sponsoring plan will do poorly, impacting jobs, that employer will decide to change plans, or be acquired leading to plan change	Primarily pre-retirement, but also post-retirement if benefits being paid from plan are not fully funded
Risk of poor choices	Risk that participant will not make good choices leading to insufficient savings and/or a poor plan for using funds post-retirement	Both and at time of retirement
Fiduciary risk	Risk that plan sponsors and service providers don’t meet fiduciary requirements; sponsor may be subject to penalties if they fail to meet them	As long as funds remain in the plan
Solvency risk	Risk that any entity providing benefits will become insolvent, or unable to pay benefits and that there will be a default on all or part of benefit payments	Both
Public policy risk	Risk that policy will change or be enforced in a way that creates adverse impact	Both

Source: Authors’ analysis

Table 6.2. Strategies for managing and sharing risk

Strategy	Description	Type of sharing	Comments
Plan design	Defines benefit and obligations of parties	Between plan sponsor and participant	Different types of plan structures share risk differently; variations can moderate risk sharing
Financial structure	Defines who pays for benefits and how cost shared, and allocated over time	In contributory plans, risk shared between plan sponsor and participant, risk may also be shared with third party	In noncontributory plans, no sharing of financial risk
Self-adjusting systems	Provisions in plans that adjust arrangements based on circumstances	Used to moderate risk sharing	Can apply to plan design or financial structure
Risk pooling	Spreads risk over a group of participants and defines pool	Spreads between individual participants, or entities within same risk pool	Some risks pool well, for some anti-selection is a potential problem, and some do not pool at all
Multi-entity arrangements	Uses a single plan to provide benefits to participants from multiple entities	May share risks between entities depending on type of arrangement	
Third party guarantees	If benefits are insured, then a third party, usually an insurance company, offers a guarantee	Involves sharing risk with third party in exchange for a market price	
Backup guarantee funds	Governmentally or industry sponsored arrangements to provide backup guarantees; provide protection for solvency risk	Shares risk across pension plans, banks or insurance companies; provides protection to individuals	U.S. examples are the Pension Benefit Guaranty Corporation, the FDIC, and state insurance guarantee funds. Other countries have generally similar programs.

Source: Authors' analysis.

Table 6.3. Risks assumed by various stakeholders under selected plan designs

Plan type	Plan sponsor risks	Participant risks	Comments
Final average pay defined benefit	In non-contributory plans, full risk that costs exceed expected. Risks include longevity, investment, interest rate risk, and pre-retirement inflation risk.	In most plans, post-retirement inflation risk. Risk that plan will be modified or terminated, or early employment termination. In contributory plans, participants may share risks usually borne by plan sponsor.	Costs reflect benefits already earned and expected future benefits. Benefits already earned are protected on plan termination. Risks can be moderated by adding provisions to adjust benefits based on funding levels.
Career average pay defined benefit	In non-contributory plans, full risk that costs exceed expected. Risks include longevity, investment, and interest rate risk.	Inflation risk. Risk that plan will be modified or terminated. In contributory plans, participants may share risks usually borne by plan sponsor.	It is customary in some plans to provide ad-hoc updates, covering some part of the impact of inflation. Risks can be moderated as mentioned above.
Cash balance	In non-contributory plan, full risk that costs exceed expected. Risks include investment, interest rate risk and some longevity risk (depending on participant choices).	Inflation and most longevity risk. Risk that plan will be modified or terminated. In contributory plans, participants may share risks usually borne by plan sponsor.	Cash balance plans use different return indices subjecting sponsor and participants to varying levels of investment risk. Prevalence of lump sum decisions impacts longevity risk.
Defined contribution	Fiduciary risk if plan not managed properly. Risk that employees will be unable to afford to retire and create workforce management challenges.	Longevity, investment, and inflation risk.	Investments generally not pooled. Risks can be reduced by guaranteeing a floor investment return, but this comes with a price. Such provisions offered in variable annuity contracts.
Collective defined contribution	Fiduciary risk if plan not managed properly. Risk that employees will be unable to afford to retire and there will be difficult human resource issues.	Longevity, investment and inflation risk. Longevity risk may be pooled depending on how benefits are paid. Investment risk may be shared depending on plan structure.	This is a defined contribution plan with pooled investments. Some such plans require annuity payouts.

Note: Some risks discussed in text such as solvency and business risk, and the risk of poor decisions not included in this analysis. *Source*: Authors' analysis.

Table 6.4. Summary of methods for managing key selected risks

Risk	**Plan sponsor risk management**	**Participant risk management**
Investment	Move from defined benefit to defined contribution plan Use liability-driven investments Manage investment mix, diversification, use of investment managers, choice of investment vehicles Transfer to insurance company	Transfer to financial institution Manage investment mix and investments Use advice Note: When lump sum paid at retirement, totally up to participant after that
Interest rate risk	Use liability-driven investment strategy Offer gradual purchase of annuity income over time Move to defined contribution plans Pay out lump sums Use account based defined benefit plan that credits interest to accounts based on an index	If purchasing annuity, do so gradually over time Consider risk in choice of investments
Inflation risk	Use plan design to allocate risk between plan sponsor and employee Invest in assets that help manage this risk Note: Benefits can be indexed or partly indexed: indexation changes the amount of risk management needed	Save more Use inflation indexed bonds Purchase annuity including inflation indexing
Longevity risk	Move to defined contribution plans Pay out lump sums Index retirement ages Adjust benefits for longer life spans Choose assumptions for defined benefit plan valuation that build in enough mortality improvement Use financial instruments to manage this risk	Use of lifetime income payout Spend only investment income Select withdrawal rate that is hoped to be safe – only partially manages risk Retire later Set long planning horizon

Source: Authors' analysis

Table 6.5. Principles for reformed New Brunswick pensions

	Principle
1.	Pension plans must be subject to robust risk management, including annual review and stress tests to ensure compliance.
2.	Pension plan must provide benefit security, which includes (a) risk management targets focused on a high level of benefit security and (b) governance by an independent trustee.
3.	Plan must be able to demonstrate sustainability.
4.	Plan must be affordable, which means that contributions must be stable and affordable for both employer and employees.
5.	Plan must be equitability designed – no single age cohort should unduly subsidize another, and no one should be able to 'game' the system.
6.	The plan must be transparent. Who shares in the risks and rewards and by how much must be clear and pre-established.
7.	Benefit changes as a result of conversion will apply only in the future; everyone keeps the pension amount that has already been credited.
8.	There should be no sudden shocks to members and retirees' retirement plans.
9.	All groups of employees should be treated consistently including part-time employees.
10.	At inception, the actuarial assumptions must be closely related to market benchmarks such as International Accounting Standard #19.

Notes: Language simplified and adapted. Item 10 was not included in legislation as ultimately adopted. It has been observed that Item 7 led to some participant confusion, and that there may also be some confusion about what benefit has already been earned and what benefit will be earned in the future.

Source: Government of New Brunswick (2013): 8, 9.

Artículos de investigación

Collective Defined Contribution Schemes as an Alternative to Pension Plans

Esquemas de Contribución Definida Colectivos como Alternativa de Planes de Pensiones

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Collective Defined Contribution Schemes as an Alternative to Pension Plans

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Abstract:
Traditional pension plans, such as defined contribution and defined benefit, face several risks: being the most known, the increase of the life expectancy. To reduce this risk, many hybrid pensions plans have been proposed, to mitigate this risk. The objective of this study is to explore the financial and actuarial sustainability of a hybrid pension plan known as collective defined contribution (CDC) by accumulating a pension fund with the methodology found in Aon (2020). The results of the simulations in this study show that the replacement rate defined in the design of a CDC pension plan is reached by all the members in the plan. Moreover, that through the same pension fund, deficits and gains are financed by it.

Jel code: J08, J26.

Keywords:
pensions, collective defined contribution, financial viability, actuarial viability.

Resumen:
Los planes de pensiones tradicionales, como el de contribución definida y de beneficio definido, enfrentan varios retos; siendo el más conocido, el incremento de la esperanza de vida. Ante este reto, diversos planes de pensiones híbridos surgen para solucionar este problema. El objetivo de este trabajo es explorar la viabilidad financiera y actuarial de un tipo de esquema híbrido conocido como de contribución definida colectivo (CDC), mediante la acumulación de un fondo siguiendo la propuesta

de Aon (2020). Los resultados muestran que este plan si logra alcanzar la tasa de reemplazo definida para todos los empleados. Además, que a través del mismo fondo se financian las pérdidas y ganancias para que este resultado prevalezca a lo largo del tiempo.

Palabras clave:
pensiones, contribución definida colectiva, viabilidad financiera, viabilidad actuarial.

INTRODUCTION

Pension plans can be classified into two large groups: defined benefit and defined contribution. This classification is given from how contributions are made to the pension plan and the benefit that will be obtained at the time of retirement. The main difference between these plans is the amount of benefit that the individual receives; since, on one hand in defined benefit plans, the member of the plan knows the amount of benefit that he or she will receive from the beginning because it is stipulated in the pension plan rules.

While, on the other hand in defined contribution plans, the amount of benefit received will be based on the value of the fund that the individual has accumulated throughout his working life. Another important difference is about who assumes the risk since in defined benefit schemes it is mainly the sponsor; while in defined contribution schemes, it is mainly absorbed by the individual (Gómez, 2015; Boelaars and Broeders, 2019; Van Meerten and Schmidt, 2018; Balter et al., 2018; Bennett and Van Meerten, 2019; Thurley and Davies, 2020).

It is important to point out that there is another type of plan called hybrid and that there is a transition from defined benefit plans to hybrid or defined contribution type; being the most frequent transition in the world, from defined benefit to defined contribution. This means that defined benefit plans are closing their funds to new members.

One of the reasons that have caused this change in pension systems is the increase in life expectancy since this complicates the sustainability of pension plans over time and has led to important reforms of pension systems in various countries. In this sense, the Organization for Economic Cooperation and Development (OECD) points out that pension systems must be balanced between the benefits offered and its financial sustainability. Thus, for different reasons, developed countries are the ones who have refined these pension plan systems, to face these different challenges (Gómez, 2015; Martínez-Aldama, 2013; Valero et al., 2011; Martínez et al., 2014; Alonso, 2014; Van der Zwan et al., 2019; OECD, 2009; Boelaars and Broeders, 2019; Bams et al., 2016; Balter et al., 2018;Thurley and Davies, 2020).

Each of the three pension plans (defined benefit, defined contribution, and hybrid) has certain advantages either for the worker, the employer, or for both. For example, employees opt for employer-sponsored pension plans because these types of plans contribute to reducing the risk of individual savings for retirement since they are developed to provide adequate resources for retirement, complemented by social security. In this way, the financial risk arising from individual retirement savings is eliminated when employer-sponsored plans invest workers' assets in a common fund, where administrative costs are also eliminated (Gómez, 2015; OECD, 2009; Wiman, 2019; Thurley and Davies, 2020).

Traditional pension plans such as defined contribution and defined benefit plans face several challenges, the best known being the increase in life expectancy. Consequently, several pension plans have been raised to solve these problems, which are classified as hybrid. Some of these are individual-defined contribution, collective individual defined contribution, and collective defined contribution schemes.

It should be noted that it has been pointed out that the collectivization of pension schemes allows to better face the challenges identified for traditional plans, compared to individual schemes. In this line, collective defined contribution pension plans have been proposed by several authors (Van Meerten and Schmidt, 2018; Wesbroom et al., 2013; Boelaars and Broeders, 2019; Gómez, 2015; Valero et al., 2011;Martínez-Aldama, 2013; Martínez et al., 2014; Van der Zwan et al., 2019; OECD, 2009; Boelaars and Broeders, 2019; Arends *et al.,* 2020; Wiman, 2019;Bams et al., 2016; Balter et al., 2018; Bennett and Van Meerten, 2019;Thurley and Davies, 2020).

The objective of this research study is to explore the financial and actuarial viability of the collective defined contribution schemes as an alternative pension plan for public or private institutions, through the accumulation of a fund with specific characteristics that are taken from finance and actuarial literature. Section 2, shows a review of the literature on the characteristics of collective defined contribution pension plans, as well as a review of an implemented plan. Section 3, shows the methodology that was used in this work to achieve the stated objective, showing the quantitative methods that exist to determine the financial and actuarial viability of these plans. Section 4 shows the results and section 5 shows the conclusions of that study.

LITERATURE REVIEW

The collective defined contribution pension plans are institutional agreements, where the contribution made by the members of the plan is an amount agreed from the beginning of the plan, as in the defined contribution plans. However, these contributions are assigned to a single fund or collective bag, which is invested collective to finance a pension amount for retirement.

Thus, unlike defined contribution plans, the fund is allocated collectively, rather than individually for each worker. Also, members of the plan are granted a pension upon retirement; which is not guaranteed and may vary depending on the performance of the fund (Wesbroom et al., 2013; Boelaars and Broeders, 2019; Royal Mail Group, 2020; Department for Work and Pensions, 2019;Royal Mail Group and Communication Workers Union, 2018; Arends *et al*., 2020; Wiman, 2019;Bams et al., 2016; Bennett and Van Meerten, 2019;Thurley and Davies, 2020).

The main characteristics of collective defined contribution schemes are:

- The contributions of individuals are all brought together in a single collective fund

- The amount of the pension that the member of the plan receives at retirement is not guaranteed, long-term investments are allowed

- Several risks are shared, including longevity risk

- The plan member does not make investment decisions, which are left to the fund manager (who should be a professional)

- The pension that the subject receives will be mainly a function of the return obtained by the fund or the value of the assets

- The contributions made by the plan members and the sponsor are based on a fixed rate, which can be expressed as a fixed percentage of salary or a fixed amount.

It should be added that, although the benefits are not guaranteed, normally when they are going to decrease to meet the obligations (that is when a deficit occurs), they are adjusted based on rules which are stipulated in the contracts of the plan. Also, usually in CDC plans, the employer is not obliged to make contributions when there is a deficit in the pension plan, but it is financed collectively among its members (Boelaars and Broeders, 2019; Royal Mail Group, 2020; Department for Work and Pensions, 2019; Royal Mail Group and Communication Workers Union, 2018; Wesbroom et al., 2013; Arends *et al.,* 2020; Wiman, 2019;Bams et al., 2016; Bennett and Van Meerten, 2018, 2019;Thurley and Davies, 2020).

Some of the advantages of this type of plan, in general, are the following. These plans are simpler, since members of the plan are not involved in making investment decisions, but rather have a fund manager who is usually a professional. Due to the joint nature of the fund, it can opt in the last years of the workers' working life for investment strategies that are not so conservative, which allows it to potentially achieve higher returns. Longevity risk is shared, reducing the risk incurred by the plan sponsor.

Intergenerational risk is shared among plan members, thus allowing companies or plan sponsors to avoid significant liabilities. And, as there is a common fund, its size is greater; allowing to invest resources at a lower cost and in assets that generate higher returns. It is important to note that the fund, as it is managed by professionals, avoids the risk that unprepared individuals make investment decisions for the fund, as occurs in other types of pension schemes. In this way, incorrect decisions are avoided regarding how to save or invest the fund's assets. For these reasons, it has been noted that collective defined contribution (CDC) plans are more attractive to workers and sponsors (Boelaars and Broeders, 2019; Royal Mail Group, 2020; Department for Work and Pensions, 2019;Wesbroom et al., 2013; Arends et al., 2020; Bams et al., 2016; Bennett and Van Meerten, 2019; Thurley and Davies, 2020).

Other advantages of CDC plans are that the benefits are not purchased through annuities in the insurance market, but rather the benefits received by the members of the plan are financed from the same fund. This allows the fund to keep the assets for longer, being able to achieve higher than expected returns and save costs, such as the commission of the insurer when buying the annuity. In this way, CDC plans can provide higher pension benefits compared to other types of group schemes. It should also be noted that the combination of risks of the CDC plans allows the investment returns to be optimized in the long term, thus preventing decision-making from responding to short-term problems (Wesbroom et al., 2013; Thurley and Davies, 2020).

On the other hand, it has also been argued that CDC plans can provide greater benefits than an individual defined contribution plan. This is for several reasons which are mentioned below. The grouping of assets allows collective management that makes or even improves risk management. Moreover, there exists the possibility of making long-term investments at lower costs. Furthermore, CDC plans to promote less volatile benefits compared to individual defined-contribution plans (Arends et al., 2020; Wesbroom et al., 2013; Bams et al., 2016; Thurley and Davies, 2020). The above, indicated by Wesbroom et al. (2013) and Arends et al. (2020); found that CDC pension plans obtain higher benefits, are fairer, and are more stable compared to an individual defined contribution plan. Bams et al. (2016) also reached the same conclusions that Wesbroom et al. (2013) and Arends et al. (2020), but add that CDC plans are more stable and perform better in the long term than traditionally defined benefit schemes.

Also, it should be noted that longevity risk is better covered by the CDC plan than others, such as individual schemes. Since, for example, if the individual lives longer than projected, some schemes could not maintain the amount of the benefit or it would decrease; which in the CDC schemes does not occur (Arends et al., 2020; Bams et al., 2016; Thurley and Davies, 2020).

It should be added that, in the CDC schemes, benefits for employers have been identified, among which are the following. The reduction of pension costs and possible liabilities. These attract and keep workers longer in their jobs. It reduces the possibility of working beyond their retirement date and allows companies to help their workers obtain a pension that improves their quality of life. Also, it has been pointed out that the CDC schemes can help the economies of the countries since the funds can make long-term and large investments (because of the collective fund); something that other types of plans do not allow. Due to the aforementioned advantages, even unions such as the Royal Mail Group consider that these CDC plans have a better design than individual defined contribution (CDI) plans (Department for Work and Pensions, 2019; Royal Mail Group, 2020; Wesbroom et al., 2013; Arends et al., 2020; Wiman, 2019; Bams et al., 2016; Bennett and Van Meerten, 2019, Thurley and Davies, 2020).

One of the disadvantages of CDC plans that should be pointed out is that different designs of collective pension plans arise. This is because the CDC name is used to designate several types of schemes that share certain common characteristics, which are described below. On one hand, the risks are shared. Also, the contribution is defined, and the benefit is not guaranteed. Likewise, there may be several types of CDC plan designs, although these must share certain characteristics such as those already mentioned, which makes their study and regulation a difficult task. However, it has been pointed out that this may not be a disadvantage and is a strength, since it shows the ability to adapt to multiple scenarios and under different circumstances (Arends et al., 2020; Wesbroom et al., 2013).

Notably, some concerns and other issues have also been attributed to CDC plans, including the following. There are doubts about its long-term sustainability and under different circumstances such as a decrease in the number of members. Intergenerational rate may not be desirable and therefore, be confusing; since plan members may not know or understand certain concepts such as that their pension is not guaranteed, although this also is found in other types of pension schemes (Arends et al., 2020; Wesbroom et al., 2013; Thurley and Davies, 2020).

As already mentioned, it has been pointed out that one of the concerns of the CDC schemes is that they require a continuous flow of new members. Although, plans which share this disadvantage are normally badly designed. In this sense, the models that have been used to study the CDC plans have found that these well-designed plans produce stable and fair pension benefits, even for a not continuous number of members of the plan. Also, in these models, it has been shown that a CDC plan works well upon a phase-out fund for retirees, without the need to include younger members in the plan (Arends et al., 2020; Wesbroom et al., 2013).

As previously noted, other concerns raised about these plans are that some concepts can be confusing to plan members; among them, that the pension is not guaranteed. Therefore, it has been said that it is important for the plan member to know that benefits are not guaranteed and that they may be less than expected. Faced with this type of risk, it has been suggested that, when designing a collective defined contribution plan, a mechanism can be implemented to help prevent high fluctuations in pensions.

This mechanism has been called a capital buffer or margin of prudence, which reduces the possibility that the pension plan will have to decrease the future pension benefit; but they could also limit the increase in the pension payment when this margin requires additional capital. It is important to note that this mechanism is already used in the Netherlands (Thurley and Davies, 2020; Department for Work and Pensions, 2019; Royal Mail Group, 2020; Wesbroom et al., 2013; Bennett and Van Meerten, 2019).

The operation of this mechanism is as follows. This allows withdrawing a part of the additional benefits that would have to be granted, in such a way that once the indicated fund has been accumulated, there will no longer be a need to withdraw part of the additional benefits. Also, this may be appealing to some members, but others have noted that it can be difficult to handle. Another proposal to ensure the number of benefits of the pensioners is to buy a leveled annuity for the beneficiary with which a basic level is guaranteed; however, this comes with a fund reduction (Thurley and Davies, 2020; Department for Work and Pensions, 2019; Royal Mail Group, 2020; Wesbroom et al., 2013;Bennett and Van Meerten, 2019).

METHODOLOGY

To achieve the objective of the present study, which is to explore the financial and actuarial viability of a type of hybrid scheme known as collective defined contribution (CDC), through the accumulation of a fund with specific characteristics that are taken from the literature; it is proposed in the first place, a methodology for the accumulation of a pension fund of the CDC type. However, as mentioned in section 2; few authors address this issue.

According to Nederlandsche Bank (2019), these types of CDC plans must meet some of the characteristics mentioned as follows. First, there must be a set of assets with a market value at a given moment in time. Second, that for each worker there must be a level of benefit so that when this worker reaches retirement age, he or she receives a continuous benefit or pension payment. Thus, when the worker dies, the benefit payment is terminated.

For a certain period, the accumulated fund is used to determine the regulatory present value (actuarial liabilities), which is calculated by discounting all pension payments that must be made in the future, assuming that the aforementioned benefit levels are constant, assuming a discount rate similar to the real rate for a certain time.

Finally, there must be an adjustment rule which will describe how the benefit levels and the value of pensions will vary over time, and it is defined normally as the Consumer Price Index. Considering the concepts mentioned above, it can be said that a collective defined contribution scheme (CDC) is fair for all participants if the choice of the discount rate and the process of adjusting the benefits over time, implies that the value of assets is equal to the value of liabilities.

For the simulation of this type of CDC pensions, it is used the accumulation fund formula of a defined contribution pension defined in Booth et al. (2005) and shown in equation (1).

$$f(T)= f(0) * (1+\mathrm{i})^{\mathrm{T}} (1-, e_1) * \sum_{\mathrm{t}=1}^{\mathrm{T}} c(t) * (1+\mathrm{i})^{T-t} \qquad (1)$$

Where:

- *f(T)* the accumulated real value of the fund at period

- *c(t)* the real contribution at period

- *T* the number of periods at retirement age

- *i t*he real rate of return for each period

- e_i the percentage of commissions on the value of the contributions

At the end of the accumulation period of a CD pension fund, this is converted into a pension, which corresponds to an annuity that determines the pension benefit corresponding to the individual or employee (Stewart and Gómez Hernández, 2008;Booth et al., 2005; OECD, 2017). Equation (2) shows the formula that will be used in this work to calculate the amount of the projected real pension (Booth et al., 2005).

$$\mathrm{PRP} = \frac{f(\mathrm{T})}{a_R*(1+e_2)*g(s)} \qquad (2)$$

Where:

- PRP is the amount of the projected real pension

- a_R is the projected annuity value at age *R*

- e_2 the percentage of the commission paid to the insurance company

- *g(s)* a function that depends on the workers' salary, used to calculate the pension

According to OECD (2017), the replacement rate is normally expressed as the ratio between the projected real pension and the last salary of the worker just before retirement. Furthermore, these replacement rates are like those calculated under the assumption of a salaried career, as considered in *g(s),* only if his or her wages are similar throughout his or her working life. On the contrary, if the worker's salary contains high variations during the working life, the person benefit will depend on the average of these variations and not on the last salary.

To allow that the accumulation of the fund to be of the CDC type, these formulae will be adapted by assuming the characteristics proposed in Aon (2020) and which are summarized below:

- The worker will obtain a pension after working for 30 consecutive years in the company, this pension is independent of the worker's age.

- Plan contributions are 10% of the participant's salary and are paid by the employer.

- The plan's target benefit is based on 1% for each year worked and based on the participant's average salary. That is, the target replacement rate for all workers is 30% of their last salary.

- Retiree benefits are not purchased by an annuity provider but are obtained from the same pension plan fund.

- An investment policy of 60% of the assets invested in equity instruments and the remaining 40% in government bonds.

Taking these characteristics into account, the accumulated fund for each worker over the 30 years of service are calculated using equation (1). For each period, the replacement rate is calculated for those workers who meet the conditions for their retirement with equation (2); while for the remaining workers, a deferred annuity is calculated. The value of the deferred annuity is obtained from equation (3), indicated in Bowers (1984).

$$_{n|}\ddot{a}_x = \sum_{k=n}^{\infty} v^k \; _kp_x$$

(3)

Where:

$n|\ddot{a}_x$ is the value of an *n* year deferred life annuity for a worker at age *x*

v^k is the discount factor of a certain annuity and is defined as $(i+1)^{-k}$ with *i* the value of the annual interest rate

$_kp_x$ is the probability of death of an individual at age *x* and taken from the mortality table EMSSA 09

At the end of each period, the subsequent process is followed to determine the value of the replacement rates calculated for everyone:

- If the replacement rates obtained are greater than 30%, then the surplus is distributed equitably among the members of the plan who have an anticipated replacement rate lower than this value; and this is where the collectivity of the fund characterizes these CDC plans. The surplus is added directly to the value of the fund of each of the workers in a proportional way, that is, the surpluses are added to each worker so that they reach the 30% stipulated in the rules of the plan. If there is a case in which the surplus is not enough for the other workers to reach the target value of 30%, this is added so that they all reach the same percentage.

- If the replacement rates obtained are not greater than 30%, the surplus of workers who are not in retirement conditions is distributed to those who are so that they reach the stipulated percentage of 30%. If there is a case in which there is no surplus or the replacement rate does not reach 30%, then the workers will retire with their replacement rate obtained, even if it is lower than 30%.

- At the end of this process for each of the periods, the people who retire in that period stop accumulating funds, so they start their pay-off period and the process will be repeated until all participants in the plan retire.

Finally, the actuarial assumptions used to calculate the fund and the replacement rate are as follows:

- The initial value of the fund is $0, in other words, the worker begins to accumulate his fund with 0 Mexican Pesos.

- The total accumulation period of the fund is 30 years for all employees and this process is on an annual basis.

- The salary increase is determined through the value of inflation according to a forecast model based on a weighted moving average of three periods. The weighted moving average model is taken from Acosta López and Vega Castañeda (2021) and follows equation (4) shown by Wasserman (2006).

$$\widehat{X}_t = W_1X_{t-3} + W_2X_{t-2} + W_3X_{t-1} \qquad (4)$$

Where

Where W_i represents the weight in percentage that is applied to each of the periods and the value of each period is represented by X_i.

For the application of this model, historical values from 1977 to 2019 are used.

- An annual interest rate of 2.5% (actual inflation in Mexico) to calculate the value of the life annuity.

- A rate of return is used as a vector of historical values in fixed income and equities, and, for future years, the weighted moving average model described in equation (4) is used.

- Any type of commission is not considered.

The following section shows the results of the methodology presented here. The first section shows the results of the value of the fund for each of the workers in the sample, as well as the value of the replacement rate and the year of retirement. The second section shows an actuarial analysis of the relationship between the replacement rate and age, as well as the replacement rate with salary.

RESULTS

Simulations of the fund value and replacement rates

To determine the value of the fund in equation (1) and the value of the replacement rate in equation (2) with the characteristics of a CDC pension plan mentioned in section 3, a sample of 5 workers from a database of a hypothetical institution; which will be mentioned in this work as a *Sample Institution* to maintain its anonymity. The sample of these 5 workers has the characteristics shown in table 1.

Table 1
Characteristics of the 5 workers on the sample

Number of workers	*Retirement year*	*Annual salary*
1	2023	$1,239,570
2	2025	$223,938
3	2029	$688,908
4	2031	$153,018
5	2033	$298,209

Own elaboration.

Table 1 shows 5 plan members with very different salaries levels, as well as a 10-year difference for the first worker to retire in 2023, compared to the last one in 2033. This heterogeneity among plan members is desirable to obtain representative results. Annual salary data in the third column is shown in Mexican Pesos. As mentioned before, each year a value of the fund, replacement rate, and surpluses are calculated for each member of the plan. For each specific year, a member of the plan retires, and equation (2) is used. The difference between the value of *PRP* for a worker that retires that year and the worker who does not, relies on the value of a_R, as explained previously.

The results of the calculation of the fund value, the replacement rate, and the surpluses for the year 2023, are shown in table 2. Given that the first year in which there are retirements is 2023, the results show the replacement rate that is achieved by the worker who retires in that year. On the other hand, for the worker who does not retire in that year, the deferred replacement rate is shown. Thus, the first column shows the number of workers, ordered by year of retirement.

The second column shows the year in which each of them will retire, the third column shows the years of service that each of them has reached in 2023, the fourth column shows the replacement rate that each of them reaches in that specific year, the fifth column shows the surplus or deficit that each worker obtains in that year, the sixth column shows the value of the surplus in Mexican Pesos that is deducted from the worker who shows surplus (in this caseworker 1), and that it is equitably distributed to to the other workers in an equitable way according to the rules of the plan. The last column of Table 2, shows the reevaluated replacement rate, considering the value of the reevaluated fund by adding the surplus to each of the worker's funds who presents a deficit.

It should be noted that the difference between the replacement rates in column 4 refers to the fact that for worker 1, this is the actual replacement rate with which this worker will retire, while the other 4 replacement rates refer to deferred annuities because workers 2 to 5 have not yet reached the years of service to retire.

Thus, worker 1 who retires in 2023 achieved an initial replacement rate of 39.18%, while the other replacement rates are 27.82% for the person who retires in 2025, 23.74% for those who retire in 2029, 16.91 % for those who do so in 2031 and 13% for the worker who retires in 2033.

The amount of $152,311.96 for each of the four participants who have not yet retired, is the calculation of 9.18% surplus, converted in Mexican Pesos to add it directly to the value of the accumulated fund for each worker in that specific year 2023 and start with the next calculation year 2024, to continue with the process of calculating the pension fund, replacement rate, etc.

Table 2
Simulation of the pension fund for a CDC pension plan corresponding to the year 2023

Number of workers	*Retirement year*	*Years of service*	*Replacement rate*	*Surplus (%)*	*Surplus ($)*	*Reevaluated replacement rate*
1	2023	30	39.18%	9.18%	-	30%
2	2025	28	27.82%	-2.18%	$152,311.96	30.12%
3	2029	24	23.74%	-6.26%	$152,311.96	26.04%
4	2031	22	16.91%	-13.09%	$152,311.96	19.21%
5	2033	20	13%	-17%	$152,311.96	15.29%

Own elaboration.

The results for the calculations corresponding to the years from 2024 to 2033, which is when the last worker retires, are shown in table 3. Only the results for the initial replacement rate and the surplus in Mexican Pesos from 2024 to 2026 are shown, from years 2027 to 2033 the reevaluated replacement rate is shown.

Table 3
Simulation of the pension fund for a CDC pension plan corresponding to the years from 2024 to 2033

Number of workers	*Retirement year*	*Years of service*	*Replacement rate*	*Surplus (%)*	*Surplus ($)*	*Reevaluated replacement rate*
2024						
2	2025	29	38.71%	8.71%	-	30%
3	2029	25	28.24%	-1.76%	$83,277.09	34.06%
4	2031	23	32.94%	2.94%	-	30%
5	2033	21	20.10%	-9.90%	$83,277.09	25.92%
2025						
2	2025	30	32.51%	2.51%	-	30%
3	2029	26	29.60%	-0.40%	$55,337.22	36.30%
4	2031	24	40.90%	10.90%	-	30%
5	2033	22	24.60%	-5.36%	$55,337.22	31.34%
2026						
3	2029	27	33.17%	3.17%	-	30%
4	2031	25	34.24%	4.24%	-	30%
5	2033	23	28.23%	-1.77%	$184,219.67	35.63%
Number of workers	*Retirement year*	*Years of service*				*Reevaluated replacement rate*
2027						
3	2029	28				33.17%
4	2031	26				32.02%
5	2033	24				37.24%
2028						
3	2029	29				35.32%
4	2031	27				34.21%

Own elaboration.

It can be seen from table 3 that compared to 2023 in table 2, every time more workers are reaching the target replacement rate of 30%. Another important aspect is that replacement rates eventually exceed their target value, resulting in workers obtaining a higher amount of pension. The highest replacement rate is found for worker 5, who retires with the highest amount of pension. This process seems to be logical, given that this worker is the one who receives the surpluses of the other workers and, as he or she is the last to retire in 2033, there are no more workers to distribute the surpluses left.

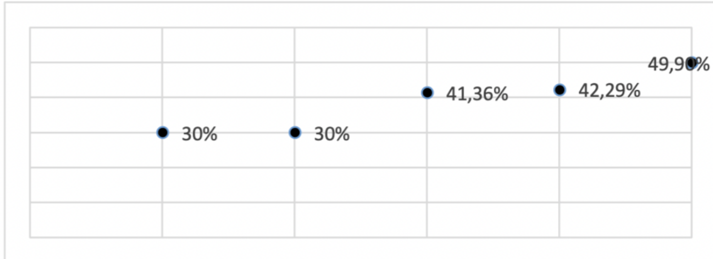
In the end, the 5 workers reach a replacement rate that is equal to or greater than 30%, which makes compliance with the rules of the plan and with the promise of a pension made to the workers. The replacement rates with which workers retire are 30%, 30%, 41.36%, 42.29%, and 49.90%; respectively, for workers 1 to 5. This result shows that the collectivity characteristic of CDC plans, is actuarially and financially sustainable; given that, with the same value of the fund without additional contributions, the target replacement rate is reached for all of them.

Actuarial analysis of the results of the replacement rate of the collective defined contribution plan (CDC)

When performing the analysis of the results obtained in the calculation of the replacement rate for a collective defined contribution pension, it can be observed that the replacement rates do not depend, at least linearly, on the age at which the worker enters the pension plan. Figure 1 shows that worker 5 who starts working at the age of 34, reached a replacement rate of 49.90%; while the two people who entered at age 40, reached replacement rates of 30% and 41.36%, respectively.

These results are obtained because the value of the fund depends entirely on the value of the rate of return assumed to simulate this value year after year. Furthermore, this is true since there are no commissions in this type of plan. That is why these replacement rates are so variable and do not depend on age. The main factor that affects the value of the replacement rate obtained is the performance of the rates of return for each year of service in which the worker contributes to the pension plan.

Figure 1
Final replacement rate at retirement ordered by each worker's entry age



Own elaboration.

Figure 2 shows additionally the relationship between the worker's salary and the replacement rate obtained by each of them. The results show that not necessarily the higher the salary, the higher the replacement rate. This is due, again, to the rates of return obtained by each of the worker's funds during the years of contributions. Thus, worker 1 obtains lower rates of return than worker 4. In addition, worker 1 is the first to retire, so his or her earnings are distributed among the other workers; thus, the last worker is the one who obtains a higher replacement rate for having accumulated the earnings of the others and because there is no other worker to whom distribute surpluses. This model increases in the same line that the rates of return are also increasing. This makes that the simulation shown here is highly dependent on the model used to project rates of return over time.

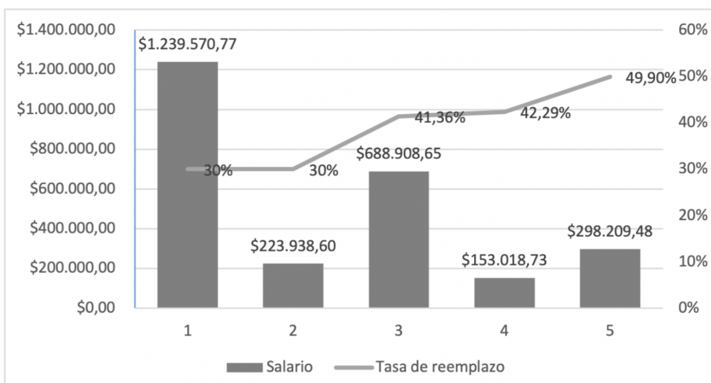


Figure 2.
Final salary vs Final replacement rate
Own elaboration.

With these results, those who have a higher replacement rate are the ones who will obtain a greater amount of money as a pension, and it would not be fair for the participants of the plan. However, the crucial element to determine this amount of money is the final salary of the workers since; for example, one of the workers who reached the lowest replacement rate (30%) gets a pension of $ 1,990,280 while the person who reached the highest replacement rate (49.90%) earns a pension of $ 1,097,826. This means that a difference of 19.9 percentage points translates into a difference of $892,453; this is by the salary difference and the difference between the ages.

CONCLUSIONS

Since traditional pension plans, such as defined contribution (CD) and defined benefit (BD), face several challenges; collective defined contribution pension plans (CDC) have been proposed as a hybrid or mixed pension plan that can function as an alternative to existing plans. However, these plans have not been fully explored, in some countries, these are already used as a novel plan design, but it has not been financially or actuarially proven. This is because in the countries where they are being explored, their plans are relatively new and it has not been possible to verify that plan members receive an adequate replacement rate.

Then, the present study explored the financial and actuarial viability of these schemes as an alternative pension plan for public or private institutions. It was analyzed whether these types of plans manage, through the collectivity that characterizes them, to solve the heterogeneity in the replacement rates received by the members of the plan at the time of their retirement. Therefore, we sought to build a methodology like the traditional methodology of accumulating defined contribution plans (CD), adapting it to the characteristics of collective defined contribution plans (CDC) found in the literature. This exposed methodology is considered novel, since no explicit quantitative formula, equation, or method was found in this literature to model this type of plan; so, this study built from scratch the methodology as a proposed to model CDC plans.

The results found, after performing the simulation exercise with 5 hypothetical workers, that the target replacement rates of 30% were achieved by all the members who participated in the sample. This result shows that the collectivity characteristic of the plan is actuarially and financially sustainable; given that, with the same value of the fund and no additional contributions, the target replacement rate is reached for all of them. This result is relevant, although it has its limitations, mainly due to the number of employees. This limitation will be explored in subsequent work to determine if, with a greater number of plan members, this continues to reach financial and actuarial sustainability.

Another conclusion found in the study was that, when performing the analysis of the results obtained in the calculation of the replacement rate, it can be observed that these rates do not depend linearly on the age at which the employee enters work or the salary of each member of the plan. This is because the replacement rate depends on the rates of return that everyone obtained in the value of the fund for the years in which they contributed (years of service), so the model largely depends on the behavior of the historical and future rates of return. This is a powerful conclusion because equity among the members is guaranteed, as well as the fulfillment of the objective of these plans, which is the collectivity, even in adverse situations in the prices of market instruments.

The simulations carried out in this study present, among others, the limitation that the exercise was carried out with a pension plan closed to new members, which we wish to explore in a later study; to determine if actuarial and financial viability remains in a group open to new members. For now, it can also be concluded that, as we have reviewed in the literature, the CDC plans are indeed a feasible alternative for many vulnerable groups of workers who now do not have a retirement savings plan and that, thanks to the collectivity of these plans, members of the plan can have access to a pension at retirement.

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Enlace alternativo

http://mercadosynegocios.cucea.udg.mx/index.php/MYN/article/view/7651/6725 (pdf)

House Bill 1039 & 1040
North Dakota Retirement and Investment Office (RIO) on behalf of the Teachers' Fund for Retirement Board of Trustees
Neutral Testimony related to HB 1039 & 1040 before the House Government and Veterans Affairs Committee
Representative Austen Schauer, Chair
Representative Bernie Satrom, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions (43%) and investment earnings (57%). During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.

Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.[1]

II. Neutral Testimony relating to HB 1039 & HB 1040

The TFFR Board of Trustees believes that defined benefit plans provide a valuable recruitment and retention tool for government entities when managed correctly and funded appropriately. TFFR employers are largely school districts which employ both TFFR and Public Employee Retirement System (PERS) members. From a public policy perspective, the TFFR Board is concerned that closing the PERS Main Defined Benefit plan will have a negative impact on the recruitment and retention efforts for the non-teaching employees of its school district employers.

[1] H.B. 1134, 62nd N.D. Legislative Assembly (2011-2013).

The TFFR Board does recognize, however, that the PERS Main Defined Benefit Plan and the TFFR plan are currently on distinctly different funding paths. While the TFFR plan is projected to reach fully funded status by 2044,[2] the PERS Main Defined Benefit Plan is not projected to reach 100% fully funded status.[3] The TFFR Board recognizes that TFFR's funding success is largely attributable to the plan design and contribution changes adopted by the Legislature through H.B. 1134 in 2011; whereas the version of S.B. 2108, the PERS funding bill, which was ultimately approved in 2011, removed the final contribution increase needed for the PERS Main Defined Benefit plan. The TFFR Board observes that the legislature must pursue some type of change to address the PERS Main Defined Benefit Plan funding shortfall. The TFFR Board is therefore not opposed to either HB 1039 or HB 1040 in their current form so long as the public policy of closing defined benefit plans does not extend to defined benefit plans that are on a correct funding path, such as the TFFR plan.

III. Summary

The changes proposed by HB 1039 and HB 1040 reflect an attempt to correct a funding shortfall for the PERS Main Defined Benefit Plan and to the extent that the public policy implications of these bills do not extend to defined benefit plans that are projected to reach 100% fully funded status the TFFR Board of Trustees takes a neutral position on this legislation.

[2] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by the Segal Group, Inc. regarding the July 1, 2022, actuarial valuation of TFFR, p. 28, 29.

[3] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by GRS regarding the July 1, 2022, actuarial valuation of PERS Main System, p. 33.

House Bill 1088
North Dakota Retirement and Investment Office (RIO)
Testimony in support of HB 1088 before the House Government and Veterans Affairs Committee
Representative Austen Schauer, Chair
Representative Bernie Satrom, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

During this past biennium RIO underwent a strategic review and plan initiative to evolve both programs and the agency to better serve the needs of our clients, members, stakeholders, and the State of North Dakota. This review has resulted in changes to our board and agency governance, identifying and implementing improvements to our infrastructure, and a concerted focus on the development of our workforce.

The RIO team worked closely with the SIB and TFFR Boards to evolve the governance structure of both Boards and Board staff relations to establish a foundation of governance that supported program growth. During this past biennium the State Investment Board established two new committees to support this growth including a Governance and Policy Review Committee as well as an Investment Committee to better support the needs of the program. These changes in particular occurred over the course of many meetings as through board discussion the SIB recognized the need to evolve its own governance to provide the agility and ability needed to manage a growing amount of assets in complex investment strategies.

Review of SIB membership was referred to the Governance and Policy Review Committee and recommendations were brought forward to the full SIB. The SIB discussion focused on whether the current membership appropriately represented the funds under management and included fiduciaries with sufficient expertise in institutional investing given the complexity of the program. HB 1088 is submitted as a result of the review and discussion conducted by the State Investment Board.

II. State Investment Board (SIB) Member Composition

The State Investment Board has the statutory responsibility to administer the investment program for 27 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 19 other non-pension funds for a total of 27 separate client funds with an overall fund value of roughly $18 billion as of October 31, 2022.

These assets under management have grown from about $4 billion in 2010 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered. Throughout this program growth the composition of the SIB has remained largely unchanged.

Currently the following members comprise the SIB:

The Lt. Governor, in place of the Governor, the State Treasurer, the Commissioner of University and School Lands, the Director of Workforce Safety and Insurance (WSI), the Insurance Commissioner, three representatives of the TFFR Board, three representatives of the Public Employees Retirement System (PERS) Board, and one member of the Legacy and Budget Stabilization Fund Advisory Board as a nonvoting member.

At the time the RIO agency was established in 1989, the SIB composition appropriately reflected the governance needed to serve the assets under management in many ways. For example, fiduciary boards comprised of lay persons, as opposed to professionals within the investment industry, are common when the AUM is relatively small. In addition, having much of the board comprised of pension trustees reflects that pension funds, up until recently, have been the largest type of funds under management by the board. As the program complexity, AUM, and type of funds evolved the board membership has not. H.B. 1088 reflects the SIB's desire to evolve board membership in a manner consistent with the needs of the investment program as it is today.

The changes proposed in H.B. 1088 accomplish two goals: 1) to introduce experienced industry professionals onto the Board in order to address program growth and complexity; and 2) to adjust current board member composition to reflect a change in the type of assets under management.

H.B. 1088 proposed the addition of two members to the SIB that are appointed by the Governor and have experience with institutional investments. This board archetype reflects not only the growth but the evolving complexity of the investment program and the need for fiduciaries with a specific type of industry experience to participate in discussions and decisions.

H.B. 1088 further adjusts board membership by reducing the number of pension trustees from three TFFR and PERS representatives to two, respectively. This adjustment is intended to reflect the change in the type of assets under management as pension funds are now the second largest type of funds under management.

Finally, HB 1088 replaces the Insurance Commissioner with the Director of the Office of Management and Budget (OMB). The Insurance Commissioner has been a vocal advocate for this change indicating that Insurance fund interests are adequately represented by the WSI Director. The addition of the OMB Director reflects the fact that until November 2021 the OMB Director had served on the Legacy and Budget Stabilization Fund Advisory Board and offers representation and coordination in administration of those funds.

III. Summary

The changes proposed in H.B. 1088 reflect a critical self-assessment by the current members of the SIB and a desire to support investment program growth by enhancing the SIB governance structure. The SIB believes the proposed changes to the SIB membership will enhance the program by including industry experts and rebalancing fiduciary representatives across client funds to better reflect the type of assets under management.

House Bill 1150
North Dakota Retirement and Investment Office (RIO) on behalf of the Teachers' Fund for Retirement Board of Trustees
Opposition Testimony related to HB 1150 before the House Education Committee
Representative Pat. D. Heinert, Chair
Representative Cynthia Schreiber-Beck, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions (43%) and investment earnings (57%). During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.

Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.[1]

II. Opposition Testimony relating to HB 1150

Opposition to HB 1150 should, in no way, be misconstrued as a lack of support for military veterans. The TFFR Board stands in staunch support of its military veterans and holds them and their service in the highest regard. The opposition of HB 1150 relates only to the concern that creating exemptions to retirement plan participation will erode the viability of the TFFR plan.

The TFFR Board of Trustees believes that defined benefit plans provide a valuable recruitment and retention tool for government entities when managed correctly and funded appropriately.

[1] H.B. 1134, 62nd N.D. Legislative Assembly (2011-2013).

TFFR employers are largely school districts which employ both TFFR and Public Employee Retirement System (PERS) members. The TFFR Board recognizes that public pension reform is a major topic under consideration by the 68th Legislative Assembly. H.B. 1039 and H.B. 1040 have been introduced and involve closing the PERS Main Defined Benefit Plan due to concerns over that plans unfunded liability. During the testimony of several individuals at the hearings on those bills last week it was noted that the PERS Main Defined Benefit Plan and the TFFR plan are currently on distinctly different funding paths. While the TFFR plan is projected to reach fully funded status by 2044,[2] the PERS Main Defined Benefit Plan is not projected to reach 100% fully funded status.[3] The TFFR Board recognizes that TFFR's funding success is largely attributable to the plan design and contribution changes adopted by the Legislature through H.B. 1134 in 2011. We note that the changes proposed by HB 1039 and HB 1040 reflect an attempt to correct a funding shortfall for the PERS Main Defined Benefit Plan and hope that the public policy implications of these bills do not extend to defined benefit plans that are projected to reach 100% fully funded status such as the TFFR plan

The passing of H.B. 1134 in 2011 reflected a concerted effort on the part of our many members, stakeholder groups, and legislators to seek solutions and compromise on plan design changes that would support the TFFR program as a viable and valuable recruitment tool for our North Dakota educators. The success of those compromises is evidenced through TFFR's improved funding status and increased membership. Any exemption, including the one proposed in H.B. 1150, erodes the viability of the plan and the compromises reached in 2011.

In addition to these public policy implications there is an actuarial and fiscal impact to the fund and its administration. So long as the exemptions were not expanded, our actuaries estimated a relatively small group of our members would qualify resulting in a delay of approximately one week to reach fully funded status. Further, we have estimated an increased cost of approximately $5000 in the next biennium to track and administer this exemption.

III. Summary

The TFFR Board observes that the legislature must pursue some type of change to address the PERS Main Defined Benefit Plan funding shortfall due in part to inaction in prior years. No action is needed to address the funding status of TFFR because of the actions taken by this legislature in 2011. We respectfully submit that the introduction of exemptions of any kind to participation in the fund by licensed teachers, regardless of how much we support and value those individuals, will nonetheless erode the work accomplished by the 62nd Legislative Assembly to the detriment of the retirement plan for all North Dakota educators. For these reasons the TFFR Board of Trustee's opposes H.B. 1150.

[2] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by the Segal Group, Inc. regarding the July 1, 2022, actuarial valuation of TFFR, p. 28, 29.

[3] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by GRS regarding the July 1, 2022, actuarial valuation of PERS Main System, p. 33.

House Bill 1219
North Dakota Retirement and Investment Office (RIO)
Testimony on behalf of the Teachers' Fund for Retirement Board of Trustees in support of HB 1219 before the House Government and Veterans Affairs Committee
Representative Austen Schauer, Chair
Representative Bernie Satrom, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

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Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.[1]

During this past biennium RIO underwent a strategic review and plan initiative to evolve both programs and the agency to better serve the needs of our clients, members, stakeholders, and the State of North Dakota. This review has resulted in changes to our board and agency governance, identifying and implementing improvements to our infrastructure, a concerted focus on the development of our workforce and a focus on improving communication and outreach efforts with our clients, members, employers, and other stakeholders.

The RIO team worked closely with the SIB and TFFR Boards to evolve the governance structure of both Boards and Board staff relations to establish a foundation of governance that supported

[1] H.B. 1134, 62nd N.D. Legislative Assembly (2011-2013).

program growth. During this past biennium the TFFR Board established a new Governance and Policy Review ("GPR") Committee to better support the needs of the program. The TFFR GPR Committee oversaw a review of program plan laws, rules, and policies in anticipation of the implementation of a new pension system modernization project ("Pioneer Project") and made several recommendations to the TFFR Board for consideration in relation to this project.

The Pioneer Project is a large multi-year IT project for the development and deployment of a modernized pension administration system. The project is currently on-time and in the development and implementation of the vendor solution phase (the third and final phase), with an expected completion date of 4th quarter 2024. During the first phase of the project TFFR retained a consultant to perform an analysis of our current business state and provide recommendations for a desired future business state. This analysis served to guide the procurement efforts of the TFFR Board, RIO agency, and Executive Steering Committee (ESC) for the vendor solution. These consultant recommendations identified the need to proactively address clarification needs in current program documents to effectively and efficiently inform how the new vendor solution would be developed, programed, and implemented. Program documents include the state laws, administrative rules, and board policies governing the TFFR plan.

The changes proposed in H.B. 1219 reflect the recommendations and requested changes of the TFFR Board related to clarifying program rules and regulations in anticipation of programing the new pension administration system. It also includes two policy related requests that the TFFR Board is requesting to incentivize retired teachers to return to the classroom as an effort to address teacher shortage in K-12 education in North Dakota.

II. TFFR Board Support of H.B. 1219

A. Sections 1 through 3, and Section 9 of H.B. 1219

Sections 1 through 3 and 9 of H.B. 1219 do not change administration of the TFFR plan, rather the requested changes clarify existing law. Section 1 clarifies the definition of retirement annuity as a payment as opposed to a timing of a payment. Section 2 clarifies that the TFFR Board is not restricted to conveying input to the State Investment Board only through resolution (as opposed to surveys, letters, staff recommendations etc.). Section 3 doesn't remove any requirements of qualified domestic relations orders (QDRO's) under the plan, rather because the model language for QDRO's is found in Title 82 of the North Dakota Administrative Code, the recommended change is an attempt to reduce confusion and provide clarify to the members and attorneys who must draft QDRO's. Section 9 doesn't change but clarifies computation of service by referring to service hours to reflect how school district employers report service hours.

B. Sections 4 through 6 of H.B. 1219

Section 4 through 6 of H.B. 1219 reflect minor adjustments to the TFFR plan design that will provide consistency in administration of the plan so as to aid in the development and programing of the new pension administration system. Section 4 relates to teachers who have withdrawn from the fund and desire to return to teach and buy back their service credit; this section provides that the cost to repurchase that service shall be based on an actuarial determined basis for all members as opposed to differentiating between those that have been out of the fund for more or less than five years. Sections 5 and 6 remove the level retirement income with social security option for members. This option is very rarely selected by members at the time of retirement and was also removed as an option in the PERS Main Defined Benefit Plan several sessions ago.

C. Sections 7 & 8 of H.B. 1219

Sections 7 and 8 of H.B. 1219 reflect the TFFR Boards support of retired teachers returning to the classroom. Section 7 serves to incentive returning retired teachers to work full time under the annual hour limit rule, and whose retirement benefit would be suspended upon returning full time to the classroom, by allowing for a recalculation of the retirement benefit to include any amount of new service upon re-retirement and clarifies that professional development and extracurricular activities do not disqualify a teacher from returning to teach under the critical shortage area rule in the following section. Section 8 merely reflects that the Education Standards and Practices Board (ESPB) does not define critical shortage areas by administrative rule.

III. Summary

The changes proposed in Section 7 of the H.B. 1219 have been reviewed by TFFR plan actuaries and are expected to extend the projected date of reaching 100% fully funded status by one month. To aide in the programming and administration of the new pension administration system, and to incentivize retired teachers to return to the classroom, the TFFR Board supports H.B. 1219.

House Bill 1227
North Dakota Retirement and Investment Office (RIO)
Neutral Testimony relating to HB 1227 before the House Finance & Taxation Committee
Representative Craig Headland, Chair
Representative Jerad Hagert, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director
Scott Anderson, CFA, MBA – Chief Investment Officer

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

The State Investment Board has the statutory responsibility to administer the investment program for 27 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 19 other non-pension funds for a total of 27 separate client funds with an overall fund value of roughly $18 billion as of October 31, 2022.

II. Neutral Testimony relating to H.B. 1227

SIB assets under management have grown from about $4 billion in 2010 to over $18 billion currently and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

The Retirement and Investment office does not have any concerns with HB 1227. Providing business cases for proposed legislative, initiated or referred measures is a good practice that can lead to rational decisions and best-case outcomes for the Legacy Fund. Where decision independence is required, the hiring of an independent third party can bring external experience with precedence of similar initiatives implemented in other contexts, a fact-based analysis unencumbered by bias, and a diligent, economically grounded business case.

III. Summary

The Retirement and Investment Office recognizes that the intent of H.B. 1227 provides a foundation for good business practice and due diligence processes relating to investment of the Legacy Fund and has no concerns at this time.

House Bill 1271
North Dakota Retirement and Investment Office (RIO) on behalf of the Teachers' Fund for Retirement Board of Trustees
Opposition Testimony related to HB 1271 before the House Education Committee
Representative Pat. D. Heinert, Chair
Representative Cynthia Schreiber-Beck, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions (43%) and investment earnings (57%). During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.

Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.[1]

[1] H.B. 1134, 62nd N.D. Legislative Assembly (2011-2013).

II. **Opposition Testimony relating to HB 1271**

Attached following this testimony is the analysis performed by the fund actuaries which indicates that if passed, HB 1271 would significantly negatively impact the TFFR plan because instead o being on a path to fully funded status, the fund would never reach 100% funded. The pertinent section of the actuarial analysis may be found on page 2 which states:

"If adopted, HB 23.0374.01000 would increase the active Actuarial Accrued Liability by $130 million (an increase of 3% of AAL). The funded percentage would decrease by 1.9%. Because of the increase in liability and the decrease in expected payroll, the plan is no longer projected to ever reach 100% funding (as indicated by the "infinite" effective amortization period metric)."[2]

The TFFR Board of Trustees believes that defined benefit plans provide a valuable recruitment and retention tool for government entities when managed correctly and funded appropriately. TFFR employers are largely school districts which employ both TFFR and Public Employee Retirement System (PERS) members. The TFFR Board recognizes that public pension reform is a major topic under consideration by the 68th Legislative Assembly. H.B. 1039 and H.B. 1040 have been introduced and involve closing the PERS Main Defined Benefit Plan due to concerns over that plans unfunded liability. During the testimony of several individuals at the hearings on those bills last week it was noted that the PERS Main Defined Benefit Plan and the TFFR plan are currently on distinctly different funding paths. While the TFFR plan is projected to reach fully funded status by 2044,[3] the PERS Main Defined Benefit Plan is not projected to reach 100% fully funded status.[4] The TFFR Board recognizes that TFFR's funding success is largely attributable to the plan design and contribution changes adopted by the Legislature through H.B. 1134 in 2011. We note that the changes proposed by HB 1039 and HB 1040 reflect an attempt to correct a funding shortfall for the PERS Main Defined Benefit Plan and hope that the public policy implications of these bills do not extend to defined benefit plans that are projected to reach 100% fully funded status such as the TFFR plan.

The passing of H.B. 1134 in 2011 reflected a concerted effort on the part of our many members, stakeholder groups, and legislators to seek solutions and compromise on plan design changes that would support the TFFR program as a viable and valuable recruitment tool for our North Dakota educators. The success of those compromises is evidenced through TFFR's improved funding status and increased membership. H.B. 1271 would eliminate the viability of the TFFR plan and negate the compromises reached in 2011.

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[2] 1-18-23 letter from Segal Group, Inc. to ED Jan Murtha, Retirement & Investment Office (TFFR).

[3] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by the Segal Group, Inc. regarding the July 1, 2022, actuarial valuation of TFFR, p. 28, 29.

[4] 10-26-22 ND Legislature Employee Benefits Programs Committee meeting, Presentation by GRS regarding the July 1, 2022, actuarial valuation of PERS Main System, p. 33.

III. Summary

The TFFR Board observes that the legislature must pursue some type of change to address the PERS Main Defined Benefit Plan funding shortfall due in part to inaction in prior years. No action is needed to address the funding status of TFFR because of the actions taken by this legislature in 2011. We respectfully submit that the introduction of HB 1271 will nonetheless erode the work accomplished by the 62nd Legislative Assembly to the detriment of the retirement plan for all North Dakota educators. For these reasons the TFFR Board of Trustee's opposes H.B. 1271.

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Via Email

January 18, 2023

Janilyn Murtha
Deputy Executive Director/Chief Retirement Officer
ND Retirement & Investment Office
3442 E. Century Avenue
Bismarck, ND 58507-7100

Re: Actuarial Impact Analysis of House Bill 23.0374.01000

Dear Jan:

As requested, we have prepared an actuarial impact analysis on the North Dakota Teachers' Fund for Retirement (TFFR or Fund), regarding the proposed modifications to current TFFR provisions if enacted under HB 22.0374.01000. Under current law, a retired member who returns to teaching is required to pay member contributions. Similarly, participating employers are required to pay contributions on behalf of the rehired retirees.

The proposed bill would allow the following:

- Retired members who return to active service would be able to opt to not pay member contributions, and
- If such a member opts to not pay member contributions, the participating employer would not be required to make employer contributions on behalf of the member.

Such changes would apply to both regular and critical shortage retirees returning to active service, as described in Section 15-39.1-19.1 and Section 15-39.1-19.2 of TFFR's ordinances.

Summary of Actuarial Impact

Because the bill would allow for eligible members to retire and immediately return to work while receiving retirement benefits, the effect of HB 22.0374.01 was modeled by assuming all active members eligible for unreduced retirement will retire immediately and projected payroll for the upcoming fiscal year does not reflect salary for new entrants. In addition, we would anticipate that this change would cause the level of total covered payroll to increase at a much slower rate than currently assumed (current assumption is 3.25% increase per year), or potentially even result in year-over-year decreases in covered payroll. As a result, it would be appropriate to change the basis for determining the actuarially determined contribution rate from level percentage of payroll to level dollar; this change is reflected in the actuarially determined contribution rate and effective amortization period illustrated in the table below:

Plan Year Beginning July 1, 2022	Valuation	HB 23.0374.01000	Increase/ (Decrease)
Actuarially determined contribution rate	12.12%	19.62%	7.50%
Actuarial Accrued Liability (AAL)			
Retired participants and beneficiaries	$2,606.5	$2,606.5	$0.0
Inactive vested members	133.5	133.5	-
Active members	1,722.4	1,852.7	130.3
Inactive vested members due a refund of employee contributions	17.6	17.6	-
Total AAL	4,480.0	4,610.3	130.3
Employer normal cost	98.8	95.8	(3.0)
Fair value of assets (FVA)	$3,023.9	$3,023.9	$0.0
Actuarial value of assets (AVA)	3,133.0	3,133.0	-
Unfunded AAL based on FVA	$1,456.1	$1,586.4	$130.3
Funded percentage on FVA basis	67.5%	65.6%	(1.9%)
Unfunded AAL based on AVA	$1,347.0	$1,477.3	$130.3
Funded percentage on AVA basis	69.9%	68.0%	(1.9%)
Effective amortization period on an AVA Basis	19	Infinite	N/A
Projected Annual Payroll for Fiscal Year Beginning July 1	$810.0	$733.4	($76.60)

$ in Millions

Change in Plan Costs

If adopted, HB 23.0374.01000 would increase the active Actuarial Accrued Liability by $130 million (an increase of 3% of AAL). The funded percentage would decrease by 1.9%. Because of the increase in liability and the decrease in expected payroll, the plan is no longer projected to ever reach 100% funding (as indicated by the “infinite” effective amortization period metric). The proposed bill would have a significant impact on ND TFFR’s actuarial valuation.

Note that the analysis of the proposed bill assumes that it will have no actuarial impact on deferred vested participants. That is because the actuarial valuation already assumes that 100% of deferred vested participants retire at their earliest available unreduced retirement age.

Actuarial Assumptions

For purposes of this analysis, the AAL amounts are calculated using the actuarial assumptions and plan provisions as described in the Actuarial Valuation Report and Review as July 1, 2022, for TFFR, dated October 20, 2022, for illustrative purposes unless stated otherwise. Active members as of July 1, 2022, that are currently eligible for unreduced retirement are assumed to retire immediately. Remaining active members are assumed to retire at the first age they reach eligibility for unreduced retirement. Any proposed legislation would not change the July 1, 2022, actuarial valuation results, and these are used as a proxy for the effect on plan costs.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Certification

Use of this information is subject to the caveats and limitations of use described in the July 1, 2022, actuarial valuation report. This report has been prepared in response to a request from the North Dakota Retirement & Investment Office on behalf of the Employee Benefits Programs Committee of the North Dakota Legislature.

The signing actuaries 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 herein.

Please let us know if you have any questions, comments, or concerns.

Sincerely,

Matthew A. Strom

Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

Tanya Dybal

Tanya Dybal, FSA, MAAA, EA
Vice President and Actuary

Brad Ramirez, FSA, MAAA, FCA, EA
Vice President and Consulting Actuary

House Bill 1368
North Dakota Retirement and Investment Office (RIO)
Testimony in opposition to HB 1368 before the House Industry, Business, and Labor Committee
Representative Scott Louser, Chair
Representative Mitch Ostlie, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director
Scott Anderson, CFA, MBA – Chief Investment Officer

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

The State Investment Board has the statutory responsibility to administer the investment program for 28 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 20 other non-pension funds for a total of 28 separate client funds with assets under management (AUM) of roughly $18 billion as of October 31, 2022.

This AUM has grown from about $4 billion in 2010 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

Currently, the SIB relies entirely on an external investment manager structure; ie RIO does not have internal investment management authority or operations. RIO contracts with over forty investment managers, vendors, and consultants in the administration of our two programs.

II. Opposition to HB 1368

Opposition to HB 1368 should in no way be construed as opposition to prohibiting commercial activities or investment activities with Israel. On the contrary, RIO implements business practices that would not restrict any investment or business activities with Israel for non-pecuniary reasons. The investment program as a matter of policy and in compliance with North Dakota law as set forth under NDCC Ch. 21-10, only invests for the exclusive benefit of its beneficiaries in a way that seeks to maximize return for a given level of risk. Any restriction of its investment or commercial set of opportunities for non-pecuniary reasons such as restricting investment in Israel is already prohibited by policy and law.

Our concerns relate to the potential conflict this bill may create with other existing or future legislation, or mandated business practices, the cost and complexity of implementing the bill, and the potential that the bill may unintentionally reduce commercial opportunities even with vendors who support Israel because of the cost the bill imposes on the vendor.

The vast majority of RIO's vendor's conduct business in many if not all states, and the regulation and oversight of these vendors is largely concurrent between state and federal regulatory systems, especially within the securities industry. Uniformity among regulatory requirements is therefore a critical issue for both the vendors and for government entities attempting to procure their services. The proposal, though well intentioned, would impose non-uniform conduct requirements on our vendors and require a level of administration from RIO that may be infeasible to implement. The proposal requires that RIO not only negotiate additional contract provisions with every vendor but also monitor the public statements and private contracts that the vendor may engage in with other clients or providers that have no direct business with RIO or the State of North Dakota. It would be infeasible for RIO to monitor public statements of vendors without a significant increase in compliance personnel and cost; and infeasible for RIO to access information related to the private contracts or dealings the vendor may engage in with other private third parties. In the event that outside vendors are unable or unwilling to work with RIO due to these additional requirements RIO would need to internalize functions that are currently contracted out, significantly increasing costs for the agency.

III. Summary

Pursuant to both North Dakota law and SIB policy, RIO implements business practices that would not restrict any investment or business activities with Israel for non-pecuniary reasons. The proposal, though well intentioned, may be infeasible to administer and significantly increase the cost and resources needed to perform compliance monitoring as well as have the unintended consequence of requiring the agency to internalize many functions that are currently performed by external partners. An additional consequence of impairment to contracting with third parties and a subsequent need to internalize operations at a speed beyond our current phased proposal would have a detrimental impact to the investment program and client fund earnings.

House Bill 1400
North Dakota Retirement and Investment Office (RIO)
Neutral Testimony relating to HB 1400 before the House Industry, Business, and Labor Committee
Representative Scott Louser, Chair
Representative Mitch Ostlie, Vice Chair

Scott Anderson, CFA, MBA – Chief Investment Officer
Janilyn Murtha, JD, MPAP – Executive Director

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

The State Investment Board has the statutory responsibility to administer the investment program for 28 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 20 other non-pension funds for a total of 28 separate client funds with an overall fund value of roughly $18 billion as of October 31, 2022.

These assets under management have grown from about $4 billion in 2010 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

The RIO team worked closely with the SIB and TFFR Boards to evolve the governance structure of both Boards and Board staff relations to establish a foundation of governance that supported program growth. During this past biennium the State Investment Board established two new committees to support this growth including a Governance and Policy Review Committee as well as an Investment Committee to better support the needs of the program. These changes in particular occurred over the course of many meetings as through board discussion the SIB recognized the need to evolve its own governance to provide the agility and ability needed to manage a growing amount of assets in complex investment strategies.

Anticipating that this question might come before the legislature during the current session, the feasibility of management of the Land Trust was referred by the SIB to the Governance and Policy Review Committee and recommendations were brought forward to the full SIB. The SIB discussion focused on whether there was a business case for management of these assets.

II. Neutral to HB 1400

RIO is testifying as a neutral party relating to this bill because we recognize that the decision regarding management of Land Trust assets is a policy decision for the Land Board and the Legislature. We can provide information on the business case prepared by RIO staff relating to management of Land Trust Assets. The attached presentation summarizes this business case. We also recognize that there are existing provisions in NDCC 21-10 that allow the assets of the Land Trust to be outsourced and managed by the SIB. Specifically, NDCC 21-10-06(3) allows any North Dakota government entity to engage the investment services of the SIB. Respectfully, RIO believes that management of the assets of the Land Trust by RIO would have many positive benefits to the State of North Dakota and to the Land Trust itself. The managing of the Land Trust assets by RIO would lower the cost and increase capabilities of the Land Trust by taking advantage of scale benefits as outlined in the attached presentation which will be provided to you.

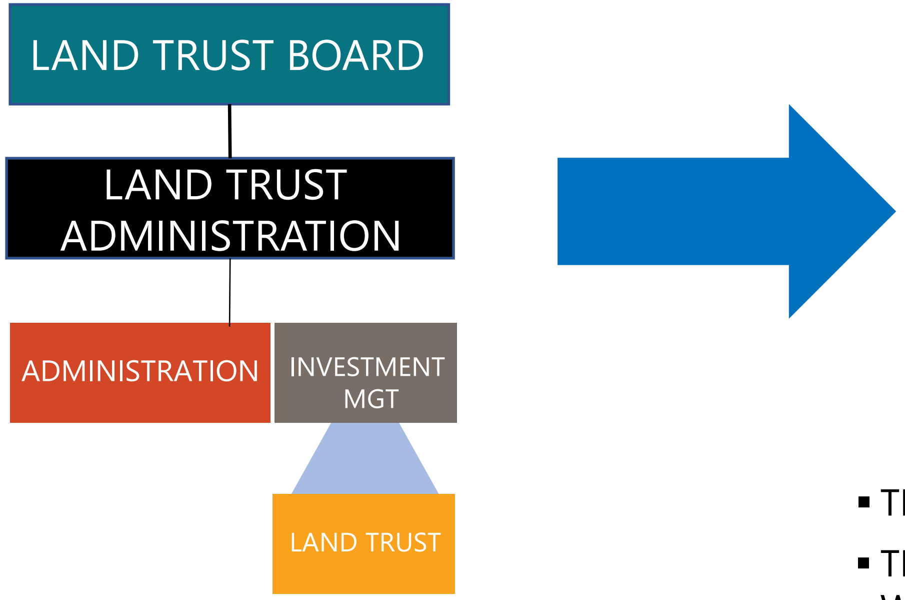
LAND TRUST INVESTMENT OPPORTUNITIES

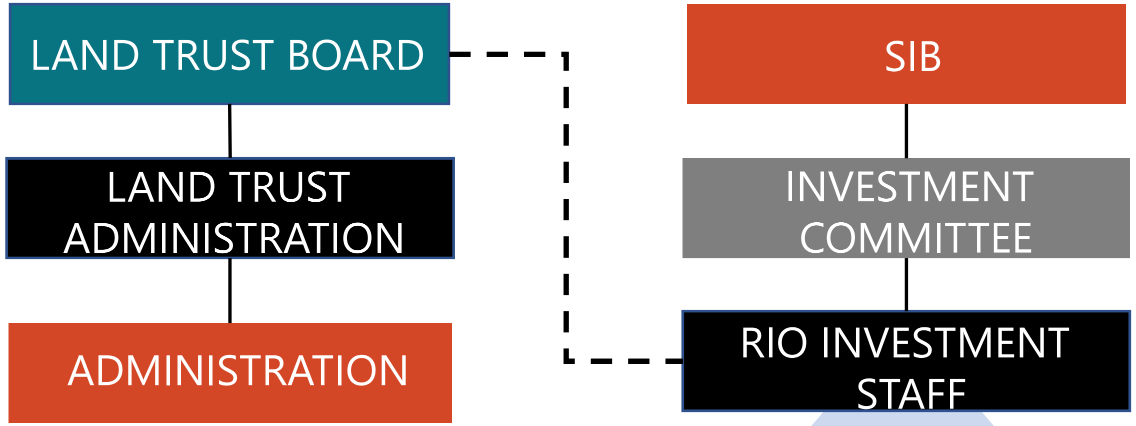
Scott M Anderson, CFA
Ryan Skor, CPA
Jan Murtha, JD, MPAP
October 25, 2022

NORTH Dakota | Retirement & Investment
Be Legendary.

CONCEPT: TRUST FUND OUTSOURCED AS A CLIENT FUND TO THE STATE INVESTMENT BOARD (SIB)

NORTH Dakota Be Legendary.™





- TRUST BOARD APPROVES ALLOCATION
- TRUST BOARD MONITORS THE INVESTMENT WITH PERIODIC UPDATES FROM STAFF

- RIO MANAGES THE ASSETS
- RIO GOVERNED BY SIB WITH ITS COMMITTEE STRUCTURE
- LAND TRUST BENEFITS FROM THE SCALE AND FOCUS OF THE RIO INVESTMENT GOVERNANCE, OPERATIONS AND INVESTMENT MANAGEMENT

ENABLES A MORE ADVANCED SCALED GOVERNANCE PROCESS AND LOWER GOVERNANCE COSTS

NORTH Dakota Be Legendary.™

STATE INVESTMENT BOARD

AUDIT

GOVERNANCE

EXECUTIVE REIVIEW AND COMPENSATION

INVESTMENT COMMITTEE

RIO INVESTMENT STAFF

- LAND INVESTMENT PROGRAM CAN GROW WITHOUT NEEDING TO GROW THE SIZE OF THE BOARD AND NUMBER OF COMMITTEES
- SIB GOVERNANCE SPECIALIZES IN ASSET MANAGEMENT AND IS STRUCTURED FOR THAT PURPOSE
- LAND TRUST DOES NOT NEED TO RECREATE OR DUPLICATE ANY GOVERNANCE PROCESSES
- ENHANCEMENTS TO INVESTMENT GOVERNANCE ARE DEVELOPED, RESOURCED AND IMPLEMENTED ACROSS MANY MORE FUNDS AND ASSETS

THREE INVESTMENT COMMITTEE ARCHETYPES

NORTH Dakota
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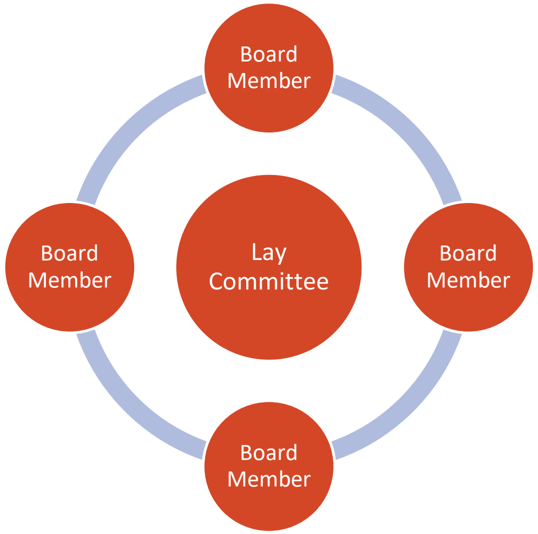
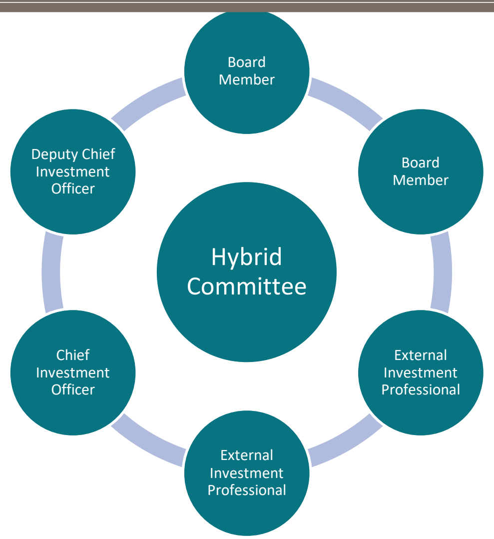


- Operates like the board but can meet more frequently or more quickly
- Able to have focused and in-depth investment conversations
- Able to summarize for full board approval
- Lacks investment expertise
- Most investment decisions are at the board level with little delegation to staff

More Board Level

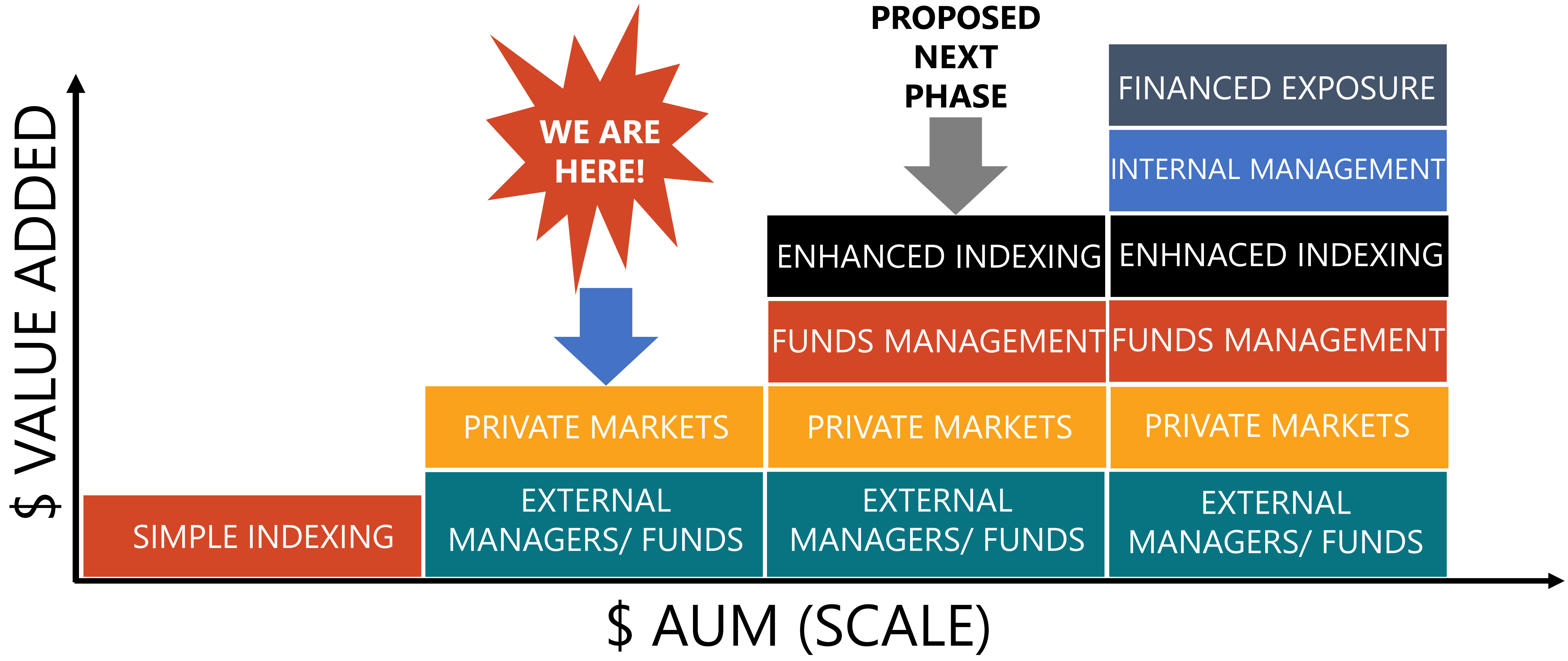


- Able to meet more frequently or more quickly
- Able to have focused and in-depth investment conversations
- Able to summarize for full board approval when necessary but also can delegate decisions to staff
- Staff participation enables delegation, quick decision and better implementation
- Outside and independent investment expertise
- Most investment decisions are at the investment committee or staff level

More Advisory

- Can meet more frequently or more quickly
- Able to have focused and in-depth investment conversations
- Able to summarize for full board approval
- Outside and independent investment expertise but need to ensure shared decision making
- Most investment decisions are at the board level
- Less delegation and associated benefits

UNLOCKS SIGNIFICANT OPPORTUNITY FOR IMPROVED RETURNS AND LOWER COSTS

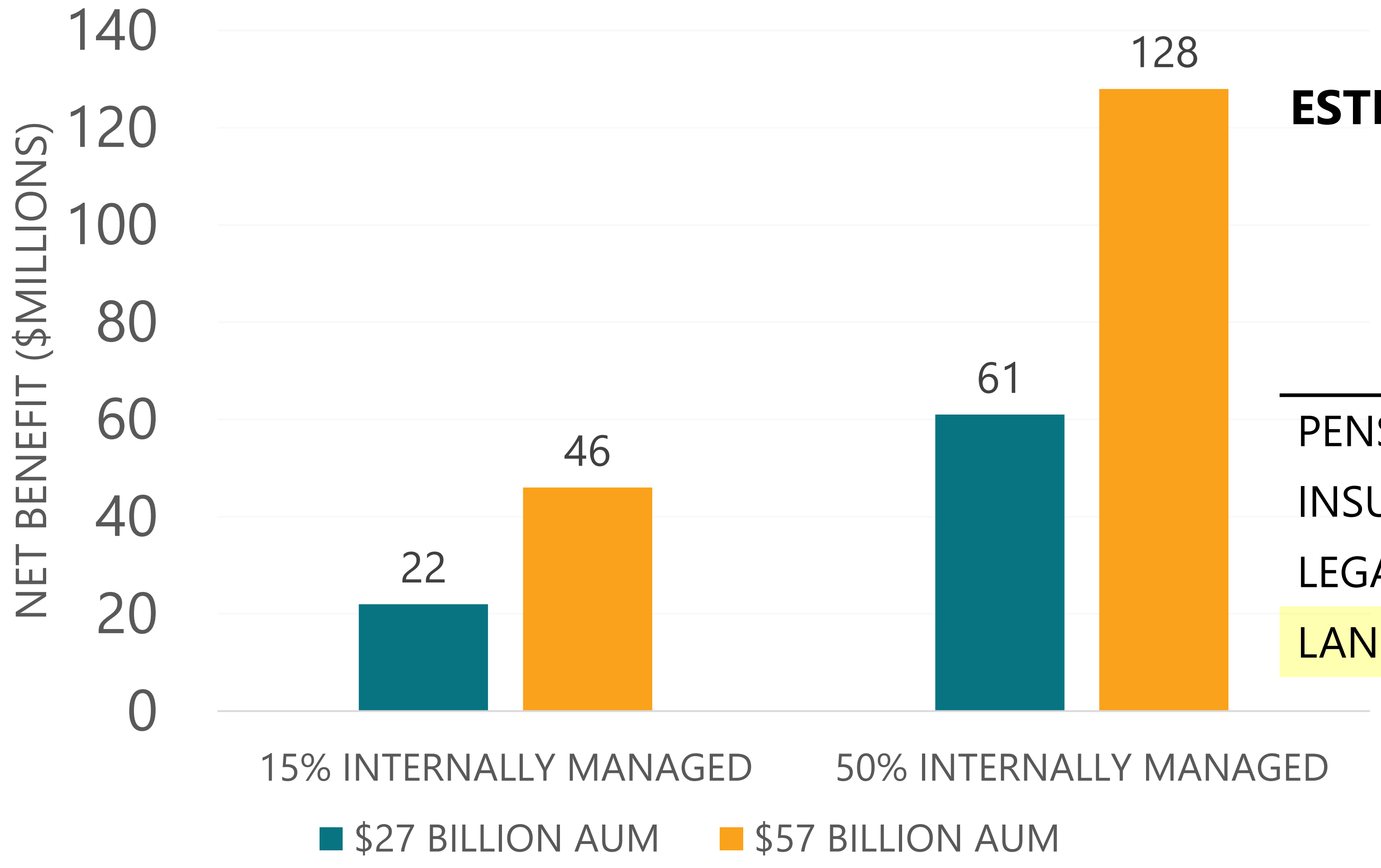


INTERNAL INVESTMENT MANAGEMENT

NORTH Dakota Be Legendary.™

- LOWER COST THAN WITH EXTERNAL MANGERS
- APPLIED WHERE THERE IS A COST/BENEFIT
- ENABLES ENHANCED LIQUIDITY MANAGEMENT, REBALANCING AND EXPOSURE MANAGEMENT

THE BENEFIT OF INTERNAL INVESTMENT SCALES WITH THE SIZE OF THE COMMITMENT



ESTIMATED ANNUAL SAVINGS PER YEAR ($27 BILLION AUM)

	15% OF ASSETS		50% OF ASSETS	
PLAN	$(MIL)	%	$(MIL)	%
PENSION	$6	0.08%	$16	0.23%
INSURANCE	$3	0.10%	$8	0.26%
LEGACY	$7	0.09%	$21	0.25%
LAND TRUST	$7	0.08%	$16	0.23%

THERE ARE OTHER COST AND RETURN/RISK BENEFITS OF COMBINING ASSETS

1. REDUCED FEES FOR FUND OF FUND MANAGERS, REDUCED FEES ON DIRECT FUND INVESTMENTS FROM SCALE, AND ACCESS TO HIGHER QUALITY MANAGER RELATIONSHIPS FROM A LARGER PORTFOLIO OF COMMITMENTS
2. A DIVERSIFIED PRIVATE MARKETS PORTFOLIO WITH A MORE CONSISTENT ALLOCATION TO MANAGERS, ENCOURAGING ACCESS TO BETTER MANAGERS, HIGHER AVERAGE RETURNS AND LOWER RISK
3. MORE SOPHISTICATED INVESTMENT STRATEGIES ENABLED BY SCALE TO ACHIEVE HIGHER RETURNS PER RISK AT A LOWER COST PER AUM IN BOTH INTERNAL AND EXTERNAL PORTFOLIOS

A COMBINED INVESTMENT PROGRAM COST GROWS AT A LOWER RATE THAN TWO SEPARATE PROGRAMS

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1 PROCUREMENT AND IMPLEMENTATON

EXECUTIVE DIRECTOR/CIO

DEPUTY CIO

- CHIEF RISK OFFICER
- INVESTMENT ANALYSTS

2 SELECTION AND PORTFOLIO STRUCTURE

CHIEF INVESTMENT OFFICER

- CHIEF RISK OFFICER
- DEPUTY CIO/FUNDS MANAGEMENT
- PRIVATE MARKETS

3 ADVANCED FUNDS MANAGEMENT (RIO + LAND)

CHIEF INVESTMENT OFFICER

- CHIEF RISK OFFICER
- DEPUTY CIO/FUNDS MANAGEMENT
- PRIVATE MARKETS
- PUBLIC MARKETS INTERNAL INVESTMENT MANAGEMENT

4 ASSET AND RISK ALLOCATION/ ACTIVE RETURN OPTIMIZATION

CHIEF INVESTMENT OFFICER

- ASSET AND RISK ALLOCATION
  - RESEARCH
  - EXPOSURE MANAGEMNT
  - RISK MANAGEMENT
- PRIVATE MARKETS/ FUNDS MANAGMENT
  - CO-INVESTMENT
- PUBLIC MARKETS INTERNAL INVESTMENT MANAGEMENT
  - INDEXING
  - HIGH YIELD
  - SMALL CAP

EXAMPLE: VERSUS 2X PROGRAMS

3 ADVANCED FUNDS MANAGEMENT

CHIEF INVESTMENT OFFICER

- CHIEF RISK OFFICER
- DEPUTY CIO/FUNDS MANAGEMENT
- PRIVATE MARKETS
- PUBLIC MARKETS INTERNAL INVESTMENT MANAGEMENT

PLUS 2X PROGRAMS OPERATIONS

A LARGER COMBINED ENDOWMENT STRUCTURE CAN BE MANAGED WITH A UNITIZED POOLED ALLOCATION

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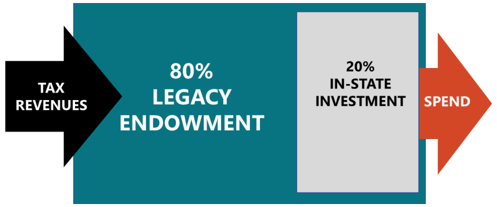
LEGACY FUND



- EARNINGS/3.5% SPENDING
- UP 15% CALL ON ASSETS

Asset Class	Policy Target
DOMESTIC EQUITY	20% – 30%
INTERNATIONAL EQUITY	20%
FIXED INCOME	25% - 35%
REAL ESTATE	5%
DIVERSIFIED REAL ASSETS	10%
IN-STATE FIXED INCOME	0% - 10%
IN-STATE EQUITY	0% - 10%

LAND TRUST

- 5% SPENDING

Asset Class	Policy Target
DOMESTIC EQUITY	14% – 24%
INTERNATIONAL EQUITY	14% - 24%
FIXED INCOME	17% - 27%
ABSOLUTE RETURN	10% - 20%
REAL ESTATE	10% - 20%
PRIVATE EQUITY	0% - 10%
PRIVATE INFRASTRUCTURE	0% - 10%
OPPORTUNISTIC INVESTMENTS	0% - 5%

ILLUSTRATION

Asset Class	Policy Target
DOMESTIC EQUITY	20% – 30%
INTERNATIONAL EQUITY	14% - 24%
FIXED INCOME	25% - 35%
ABSOLUTE RETURN	0% - 5%
REAL ESTATE	0% - 10%
PRIVATE EQUITY	0% - 10%
PRIVATE INFRASTRUCTURE	0% - 10%
OPPORTUNISTIC INVESTMENTS	0% - 5%
CASH	-15% -0%
IN-STATE FIXED INCOME	0% - 10%
IN-STATE EQUITY	0% - 10%

- OPPORTUNITY TO POOL ALLOCATIONS AND UNITIZE
- UNIQUE SPENDING FEATURES OF EACH PLAN CAN BE ACCOMODATED
- DYNAMIC LEVERAGE MIGHT BE USED TO OFFSET 15% CALL RISK AND ADD ADDITIONAL DIVERSIFICATION TO INCREASE RETURN PER RISK

BENEFITS FROM RIO MANAGING THE INVESTMENTS OF THE LAND TRUST

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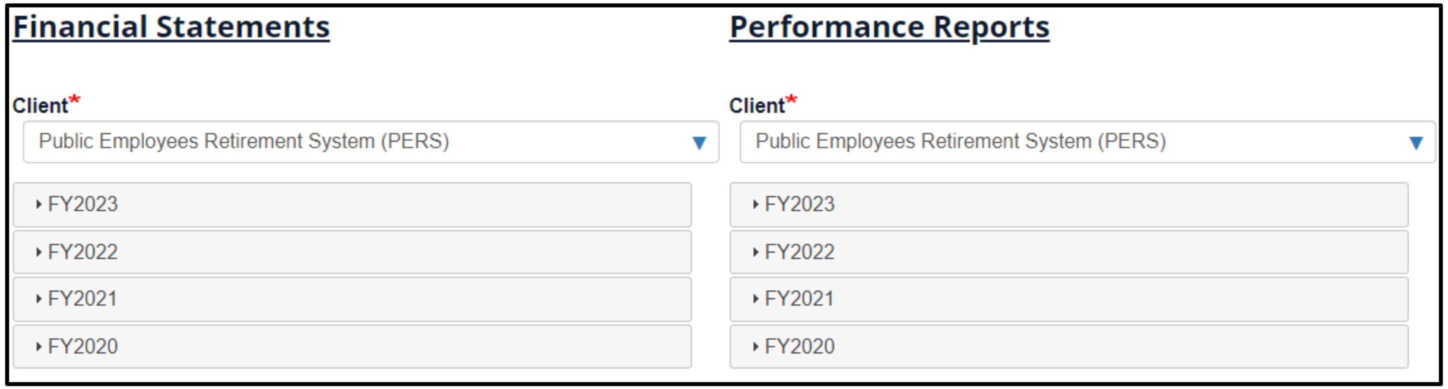
- THE LAND TRUST BOARD OUTSOURCES THE TRUST FUND AS A CLIENT FUND TO THE STATE INVESTMENT BOARD (SIB) AND MAINTAINS THE DISCRETION AND CONTROL OF A CLIENT; **EXISTING STAFF CAN BE TRANSFERRED TO RIO**
- AN SIB GOVERNANCE OF THE INVESTMENT MANAGEMENT ENABLES A MORE ADVANCED SCALED GOVERNANCE PROCESS AND LOWER GOVERNANCE COSTS
- A COMBINED INVESTMENT PROGRAM PROVIDES SCALE ADVANTAGES IN OPERATING COSTS, FEES, OPERATIONS, AND INVESTMENT MANAGEMENT STAFF
- A COMBINED INVESTMENT PROGRAM COST GROWS AT A LOWER RATE THAN TWO SEPARATE PROGRAMS
- A LARGER COMBINED ENDOWMENT STRUCTURE CAN BE MANAGED WITH A UNITIZED POOLED ALLOCATION THAT HAS MORE ADVANCED INVESTMENT FEATURES AND IMPLEMENTATION THAN EITHER STAND-ALONE FUND

INVESTMENT ACCOUNTING & PERFORMANCE REPORTING

- RIO CURRENTLY PREPARES AND MAINTAINS SEPARATE ACCOUNTING AND PERFORMANCE REPORTING FOR EACH OF ITS CLIENT FUNDS ON A MONTHLY BASIS.



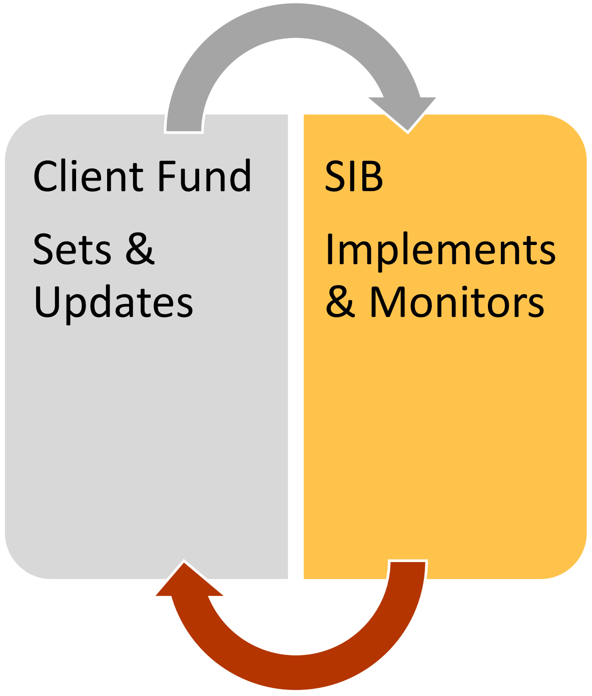
- ABILITY TO ADD LAND TRUST FUNDS TO PORTFOLIO AND SIMILARLY ACCOUNT FOR EACH OF THE 13 PERMANENT TRUSTS AS WELL AS SIIF, CAPITOL BUILDING FUND, COAL DEVELOPMENT TRUST FUND, INDIAN CULTURAL EDUCATION TRUST, AND THEODORE ROOSEVELT PRESIDENTIAL LIBRARY AND MUSEUM ENDOWMENT FUND.

Proposal Summary

- Enhanced Performance Opportunities
- Governance for Growth
- Evolving Operations Support through Collaboration
- ND state government Unification of Efforts

And above all:

- **Control Remains with the Client Board**
  - Per NDCC 21-10-02.1
  - The governing body of each fund… shall establish policies on investment goals and objectives and asset allocation for each respective fund..
  - The asset allocation and any subsequent allocation changes for each fund must be approved by the governing body of that fund and the state investment board.



House Bill 1429
North Dakota Retirement and Investment Office (RIO)
Testimony in opposition to HB 1429 before the House Industry, Business, and Labor Committee
Representative Scott Louser, Chair
Representative Mitch Ostlie, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director
Scott Anderson, CFA, MBA – Chief Investment Officer

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

The State Investment Board has the statutory responsibility to administer the investment program for 28 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 20 other non-pension funds for a total of 28 separate client funds with assets under management (AUM) of roughly $18 billion as of October 31, 2022.

The AUM has grown from about $4 billion in 2010 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

Currently, the SIB relies entirely on an external investment manager structure; ie RIO does not have internal investment management authority or operations. RIO contracts with over forty investment managers, vendors, and consultants in the administration of our two programs.

II. Opposition to HB 1429

Opposition to HB 1429 should in no way be construed as a lack of support for investment in the agriculture or energy sectors. The SIB recognizes the importance of the energy and agriculture sectors for a thriving economy and continues to invest in companies in this sector and implements business practices that would not restrict any investment or business activities within these sectors for non-pecuniary reasons. The investment program as a matter of policy and in compliance with North Dakota law as set forth under NDCC Ch. 21-10, only invests for the exclusive benefit of its beneficiaries in a way that seeks to maximize return for a given level of risk. Any restriction of its investment or commercial set of opportunities for non-pecuniary reasons such as restricting investment in either of these sectors is already prohibited by policy and law.

Our concerns relate to the potential conflict this bill may create with other existing or future legislation, or mandated business practices, the cost and complexity of implementing the bill, and the potential that the bill may unintentionally reduce commercial opportunities with vendors who support these sectors because of the cost the bill imposes on the vendor.

The vast majority of RIO's vendor's conduct business in many if not all states, and the regulation and oversight of these vendors is largely concurrent between state and federal regulatory systems, especially within the securities industry. Uniformity among regulatory requirements is therefore a critical issue for both the vendors and for government entities attempting to procure their services. The proposal, though well intentioned, would impose non-uniform conduct requirements on our vendors and require a level of administration from RIO that may be infeasible to implement. The proposal requires that RIO not only negotiate additional contract provisions with every vendor but also monitor the public statements and private contracts that the vendor may engage in with other clients or providers that have no direct business with RIO or the State of North Dakota. It would be infeasible for RIO to monitor public statements of vendors without a significant increase in compliance personnel and cost; and infeasible for RIO to access information related to the private contracts or dealings the vendor may engage in with other private third parties. In the event that outside vendors are unable or unwilling to work with RIO due to these additional requirements RIO would need to internalize functions that are currently contracted out, significantly increasing costs for the agency.

III. Summary

Pursuant to both North Dakota law and SIB policy, RIO implements business practices that would not restrict any investment or business activities within either the energy and agriculture sectors for non-pecuniary reasons. The proposal, though well intentioned, may be infeasible to administer and significantly increase the cost and resources needed to perform compliance monitoring as well as have the unintended consequence of requiring the agency to internalize many functions that are currently performed by external partners. An additional consequence of impairment to contracting with third parties and a subsequent need to internalize operations at a speed beyond our current phased proposal would have a detrimental impact to the investment program and client fund earnings.

Senate Bill 2022
Senate Appropriations
January 6, 2023
North Dakota Retirement and Investment Office

Jan Murtha, JD, MPAP – Executive Director

Chad Roberts, MAc – Deputy Executive Director/Chief Retirement Officer

Scott M Anderson, CFA, MBA – Chief Investment Officer

Ryan Skor, CPA, MBA – Chief Financial Officer/Chief Operating Officer

NORTH Dakota | Retirement & Investment

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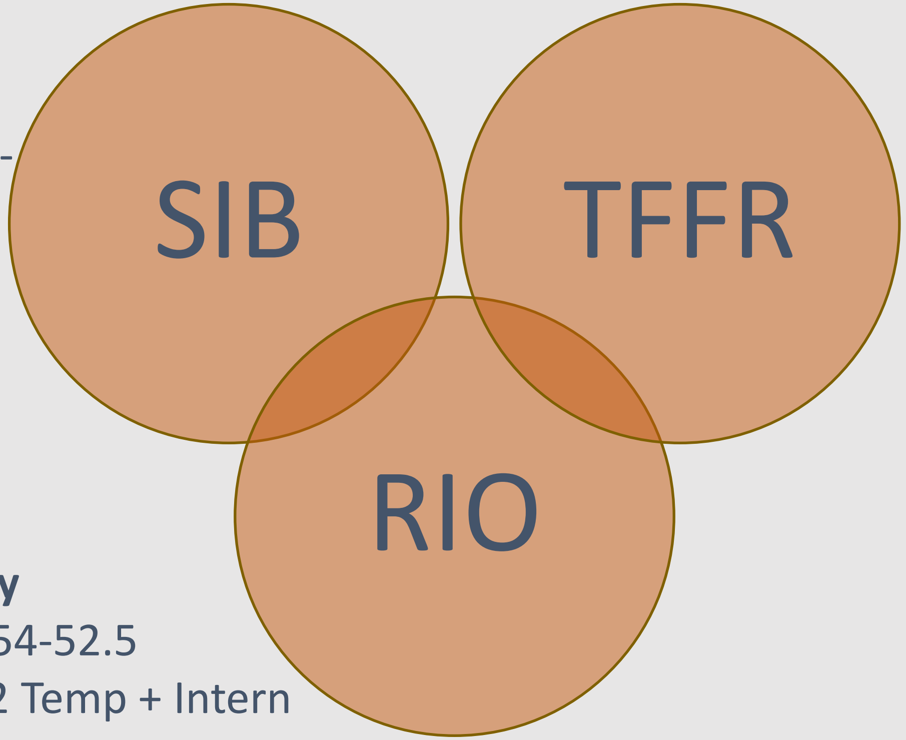
NORTH DAKOTA RETIREMENT AND INVESTMENT SUPPORTS TWO SPECIAL FUND PROGRAMS

RIO was established in 1989 to coordinate the activities of the State Investment Board (SIB) and the Teachers' Fund for Retirement (TFFR). The SIB is the oversight board for RIO and TFFR Board is responsible for the administration of the TFFR benefits program.

State Investment Board -
Investment Program
NDCC Ch. 21-10
~$18 Billion in AUM
As of 10/31/22



Teachers' Fund For Retirement –
ND Teachers' Retirement Program
NDCC Ch. 15-39.1
~$3.0 Billion in Fund Assets
Over 21,000 active and retired members and beneficiaries

RIO Agency
NDCC Ch. 54-52.5
25 FTEs + 2 Temp + Intern

WE CHOSE TO LEARN

- Spring 2020: Top 2 Managers in Retirement Program left within 60 days (Including Deputy Executive Director).
- Summer 2021: Top 2 Managers in Investment Program left within 60 days (including Executive Director).
- Fall 2021: additional retirements resulted in a significant staff reduction from 19 to a low of 13 filled FTE's to support both programs – contributing to *significant operational risk*.
- Fall of 2022: 25 FTE's (22 filled) + 2 Temp + 1 Intern of which 13 have started since Fall of 2021.

"Kites rise highest against the wind - not with it."

- Winston Churchill

Courtesy of *www.brainyquote.com*

RETIREMENT AND INVESTMENT'S CORE PRIORITIES

Engaging our Workforce:
Growth Mindset
Remote/Hybrid Office
Governance/Change Initiatives

WE CHOSE TO LISTEN

- Fall 2021 Gallup Results - Increase in team member engagement over the prior year despite strain on agency resources.
- Significant Increase in Mission/Purpose.

Gallup Q[12] Items

Questions	Total N	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q00: Overall Satisfaction	12	4.00	3.69	▲+0.31	46	3.69
Q01: Know What's Expected	12	4.08	4.06	+0.02	18	4.19
Q02: Materials and Equipment	12	4.33	4.31	+0.02	58	4.03
Q03: Opportunity to do Best	12	3.92	4.00	-0.08	31	3.89
Q04: Recognition	12	4.17	4.06	+0.11	68	3.41
Q05: Cares About Me	12	4.58	4.19	▲+0.39	68	4.07
Q06: Development	12	4.17	4.00	+0.17	55	3.75
Q07: Opinions Count	12	4.00	3.69	▲+0.31	54	3.52
Q08: Mission/Purpose	12	4.92	4.19	▲+0.73	93	3.91
Q09: Committed to Quality	12	4.42	4.50	-0.08	66	3.95
Q10: Best Friend	11	3.55	3.63	-0.08	39	3.28
Q11: Progress	12	4.08	3.94	+0.14	49	3.69
Q12: Learn and Grow	12	4.42	4.13	▲+0.29	65	3.88

ɔt shown if n < 4 for Mean, Top Box, Verbatim Responses, and Sentiment, n < 10 for Frequency, or data is unavailable.
Scores are not available due to data suppression. Respondents can select multiple responses for multi-select questions.
ɔcentile Rank in Gallup Overall Database ■ < 25th Percentile ■ 25-49th Percentile ■ 50-74th Percentile ■ 75-89th Percentile ■ >= 90th Percentile

WE CHOOSE TO LISTEN

- Fall 2022 Gallup Results -.
- Statistically Significant Increases in 8 of 12 categories.
- Decrease in Mission/Purpose.

- Let's talk Mission/Vision.

EMPLOYEE ENGAGEMENT REPORT |Q12 ENGAGEMENT SURVEY - TRENDING - REGULAR STAFF - OCTOBER 2022

Q12 Mean

The Gallup Q12 score represents the average, combined score of the 12 elements that measure employee engagement. Each element has consistently been linked to better business outcomes.

Respondents	Engagement Mean	Change	Mean Percentile Rank - Gallup Overall	Engagement Index
12	4.42	↑ +0.20	76	Engagement Index is unavailable for the currently selected scorecard.

	Respondents	Current Mean	Last Mean	Change	Mean Percentile Rank - Gallup Overall	Company Overall Current Mean
Q00: On a five-point scale, where 5 means extremely satisfied and 1 means extremely dissatisfied, how satisfied are you with your agency as a place to work?	12	4.17	4.00	0.17	53	3.72
Q01:I know what is expected of me at work.	12	4.25	4.08	0.17	30	4.21
Q02:I have the materials and equipment I need to do my work right.	12	4.33	4.33	0.00	58	4.04
Q03: At work, I have the opportunity to do what I do best every day.	12	4.17	3.92	↑ +0.25	48	3.90
Q04: In the last seven days, I have received recognition or praise for doing good work.	12	4.42	4.17	↑ +0.25	80	3.37
Q05: My manager, or someone at work, seems to care about me as a person.	12	4.92	4.58	↑ +0.34	90	4.08
Q06: There is someone at work who encourages my development.	12	4.42	4.17	↑ +0.25	71	3.77
Q07: At work, my opinions seem to count.	12	4.00	4.00	0.00	56	3.54
Q08: The mission or purpose of my agency makes me feel my job is important.	12	4.58	4.92	↓ -0.34	77	3.92
Q09: My coworkers are committed to doing quality work.	12	4.67	4.42	↑ +0.25	82	3.96
Q10:I have a best friend at work.	11	3.91	3.55	↑ +0.36	69	3.22
Q11: In the last six months, someone at work has talked to me about my progress.	12	4.58	4.08	↑ +0.50	77	3.65
Q12: This last year, I have had opportunities at work to learn and grow.	12	4.83	4.42	↑ +0.41	91	3.90

GALLUP 2

STRATEGIC – HORIZON BASED TRANSFORMATION

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Experimental

Public/Private partnerships & Intern development to support agency resource needs & talent development – In Budget Request for 2023.

Governance to Support Growth – 2 new standing committees for SIB, 1 revised committee for SIB, 1 new standing committee for TFFR – Proposal to Adjust SIB composition.

Internal Investment Proposal –Legislature to Determine Q2 2023

Aspirational

Programs facilitate through education & outreach a feedback loop to inform public policy. Recognized leaders in the field and a model for other states.

In-State Investment Program Roll-Out Continues but currently one of the largest in US

Investment Data Management Project – In Progress

Communication Plan
For Internal & External Partners & Stakeholders –Targeted Q1 2023

Enhancements to Talent Management Plan – Legislature to Determine Q2 2023

TFFR PAS Project Implementation – Targeted Q4 2024

Incremental

H1

H2

H3

Evolutionary

TEACHERS' FUND FOR RETIREMENT

- Qualified defined benefit public pension plan for North Dakota public school teachers and administrators providing them with a foundation for retirement security.

- 11,800+ Active Members
  - 16.4% increase over past decade
- 9,400+ Retired Members and Beneficiaries
  - 26.0% increase over past decade
- ~$3.0B Fund balance

- On-track to be 100% fully funded by 2044

- New Pension Administration System in development (est. Q4 2024)

STATE INVESTMENT BOARD – INVESTMENT PROGRAM

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- State Investment Board (SIB) has the statutory responsibility for the administration of the investment program of several funds including:
  - TFFR, PERS, WSI, Legacy Fund
- SIB also maintains contractual relationships for investment management with multiple political subdivisions and governmental funds

- Currently ~$18 Billion in Assets Under Management (AUM)
- 27 client funds
- 43 fund managers

Fund/Pool	AUM (10/31/22)
Pension Pool	$6.79B
Insurance Pool	$2.81B
Legacy Fund	$8.12B
Other Funds	$0.23B

BUDGET REQUEST SUMMARY

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Line Item	Base Level	Workforce Initiative	Pension System Upgrade	Internal Investment*	Total Request
Salaries & Benefits	$6,785,839	358,756	486,000	1,404,996	$9,035,591
Operating Expenses	1,323,528	300,250	1,116,319	266,840	3,006,937
Contingencies	100,000	100,000	-	-	200,000
Total Special Funds	**8,209,367**	**759,006**	**1,602,319**	**1,671,836**	**12,242,528**
(Included in Exec. Recom.)		349,012	1,552,319	-	
FTEs	25.0	1.0	-	7.0	33.0

* Amounts represent only 2nd year of biennium.
Requires authorization for performance pay within internal investment plan.

Estimated cost savings = $16M+/year

RIO AGENCY INITIATIVES

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INCREMENTAL

TO

EVOLUTIONARY

- WORKFORCE – ORG CULTURE - CONTINUE
- TFFR “PIONEER” PROJECT - COMMIT
- INTERNAL INVESTMENT - EVOLVE

ORGANIZATION CULTURE – WORKFORCE INITIATIVE

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SALARIES

- ED/CIO SPLIT AND OTHER AGENCY RE-ORGANIZATION INCLUDING ACCOUNTING MANAGER, CFO-COO.
- Support Intern Program.

SUPPORT

- 1 ADDITIONAL ADMIN TO SUPPORT NEW INVESTMENT FTE'S.
- CURRENTLY HAVE 3 FULL TIME AND 1 TEMP PART-TIME TO SUPPORT 17.

CERTS.

- COST OF PROFESSIONAL CERTIFICATIONS THAT ARE EITHER REQUIRED OR ENCOURAGED TO PERFORM DUTIES
- SUPPORT HIGH PERFORMANCE AND GROWTH MINDSET.

INFLATION

- COST OF TRAVEL, TRAINING, AND SUPPORT OF A HYBRID/REMOTE WORKPLACE.

CONTINGENCY

- REQUEST FOR CONTINGENCY FUNDS.

INFRASTRUCTURE/TECHNOLOGY ENABLED PROCESSES- TFFR PIONEER PROJECT INITIATIVE

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2022

TEMP STAFF TO ASSIST WITH MANUAL PROCESSES UNTIL NEW SYSTEM LAUNCH.

IMPROVED DEATH AUDITING FUNCTION.

2023

START OF SUBSEQUENT ONGOING SYSTEM MAINTENANCE COSTS.

INCREASED NDIT SUPPORT COSTS.

2024

ANTICIPATED LAUNCH IN 4^{TH} QUARTER, 2024.

POST LAUNCH: ROI REALIZED.

ASSETS UNDER MANAGEMENT GROWTH

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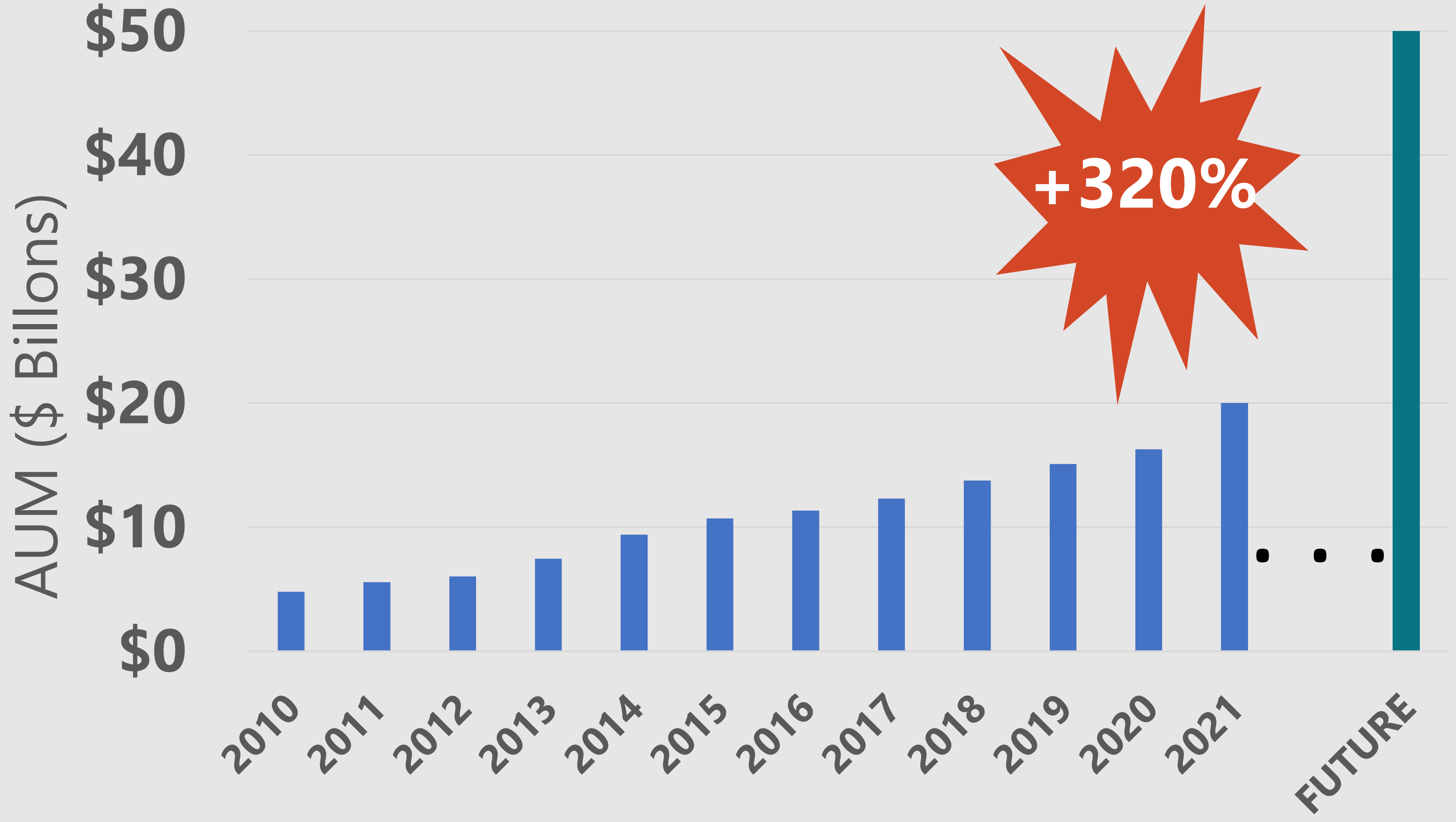

INTERNAL INVESTMENT/ TALENT MANAGEMENT

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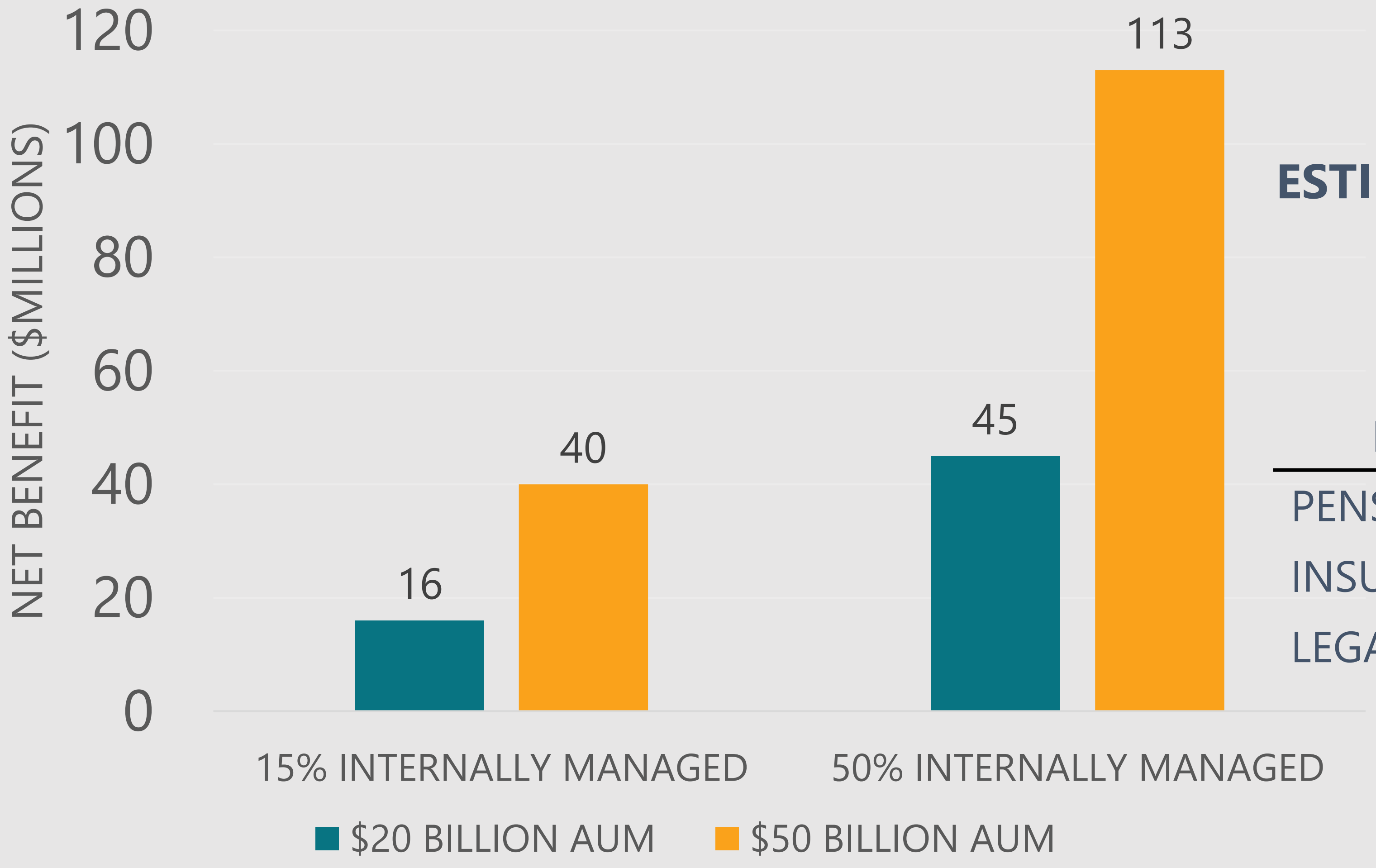
- LOWER COST THAN WITH EXTERNAL MANAGERS
- APPLIED WHERE THERE IS A COST/BENEFIT
- ENABLES ENHANCED LIQUIDITY MANAGEMENT, REBALANCING AND EXPOSURE MANAGEMENT

THE BENEFIT SCALES WITH THE SIZE OF THE COMMITMENT



ESTIMATED ANNUAL SAVINGS PER YEAR ($20 BILLION AUM)

	15% OF ASSETS		50% OF ASSETS	
PLAN	$(MIL)	%	$(MIL)	%
PENSION	$6	0.08%	$16	0.23%
INSURANCE	$3	0.10%	$8	0.26%
LEGACY	$7	0.09%	$21	0.25%

THE COST OF THE PROGRAM IS LOW WHEN COMPARED TO THE FEES IT REPLACES

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PROGRAM COST

+0.07%

INCLUDES TOTAL REWARDS AND INFRASTRUCTURE

CURRENT COST

+0.28%

DOMESTIC EQUITY

+0.35%

INVESTMENT GRADE FIXED INCOME

MINIMAL REQUIREMENTS WHEN COMPARED TO THE BENEFITS[1,2,3]

5 INVESTMENT PROFESSIONALS[1]:
2 X SENIOR PORTFOIO MANAGERS
3 X INVESTMENT ANALYSTS
2 X INVESTMENT OPS

+

TALENT MANAGEMENT:

- ADEQUATE CLASSIFICATION OF ROLES
- INCENTIVE COMPENSATION FUNDED ON A CONTINUING BASIS (Ex: OHIO, WISCONSIN, SOUTH DAKOTA, NORTH CAROLINA)

THE STRATEGY AND STRUCTURE WOULD EVOLVE WITH THE SIZE OF THE PROGRAM

1. The cost of staff is estimated to be approximately 10% of the total net cost savings.
2. Positive Client Fund feedback.
3. Supports greater control over investment strategies.

EXAMPLE STATES WITH INTERNAL INVESTMENT MANAGEMENT AND INCENTIVE COMPENSATION

ARIZONA
FLORIDA
NEW MEXICO
NORTH CAROLINA
OHIO
SOUTH DAKOTA
TEXAS
VIRGINIA
WISCONSIN

Questions?

NORTH Dakota
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Retirement & Investment

Senate Bill 2022
North Dakota Retirement and Investment Office (RIO)
Testimony before the Senate Appropriations Committee
Senator Brad Bekkedahl, Chair
Senator Karen Krebsbach, Vice Chair

Janilyn Murtha, JD, MPAP – Executive Director
Chad Roberts, MAC – Deputy Executive Director/Chief Retirement Officer
Scott Anderson, CFA, MBA – Chief Investment Officer
Ryan Skor, CPA, MBA – Chief Financial Officer/Chief Operating Officer

I. RIO Statutory Authority and Responsibilities

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

During this past biennium RIO underwent a strategic review and plan initiative to evolve both programs and the agency to better serve the needs of our clients, members, stakeholders, and the State of North Dakota. This review has resulted in changes to our board and agency governance, identifying and implementing improvements to our infrastructure, and a concerted focus on the development of our workforce. We are excited to share with you the foundational changes we have already made, the aspirational goals we have for the future, and the path we are asking you to approve.

The State Investment Board is responsible for oversight of approximately $18 billion of investments for 27 different client funds including TFFR and PERS within the nearly $7 billion Pension Pool and WSI in the nearly $3 billion Insurance Pool in addition to more than $8 billion in the Legacy Fund. Funding for administration of the SIB Investment Program comes directly from investment clients' invested assets (both statutory and contracted).

The TFFR Board of Trustees is responsible for oversight and administration of the TFFR retirement program. TFFR is a qualified defined benefit public pension plan for K-12 North Dakota educators. Funding for administration of the TFFR plan comes from member and employer contributions (43%) and investment earnings (57%).

RIO currently has 25 full-time FTEs across the two programs and four divisions along with two temporary positions and an intern. The four divisions include Investment, Retirement Services, Fiscal Services, and Internal Audit. The two temporary positions are directly attributable to additional workforce needs during the development and implementation of a large IT project for the TFFR program. The hiring of an intern position reflects an intent to consciously develop a robust internship program at RIO that will provide an opportunity to college and graduate students studying in North Dakota to participate in investment, accounting, benefit services, and public policy processes within the public sector.

RIO's revised approach to workforce development over the last biennium has resulted in the successful recruitment of highly skilled team members within competitive industries. 13 of our current team members have been onboarded since Q3 2021.

II. RIO's Core Priorities

RIO has undergone many changes during the course of the last biennium. The impetus for these changes was the recognition that while the agency had been doing very well for many years managing the growth in both the investment and retirement programs, future growth couldn't be supported under the current governance structures or with the current infrastructure, technology or processes.

The RIO team worked closely with the SIB and TFFR Boards to evolve the governance structure of both the Boards and Board staff relations to establish a foundation of governance that supported program growth. During this past biennium the State Investment Board established two new committees to support this growth including a Governance and Policy Review Committee as well as an Investment Committee to better support the needs of the program. As well as expanding the scope of the Executive Review Committee to an Executive Review and Compensation Committee. These committees are in addition to a Securities Litigation Committee as well as an Audit Committee that provides internal audit oversight of both the SIB and TFFR programs. The TFFR Board also created a standing Governance and Policy Review Committee. These changes occurred over the course of many meetings of both boards during the biennium; the SIB needed to evolve its own governance to provide the agility and ability needed to manage a growing amount of assets in complex investment strategies; while the TFFR Board recognized changes to governance was needed to respond to increasing membership and information dissemination needs.

One critical change the SIB approved during this time was to approve the split of the Executive Director and Chief Investment Officer (ED/CIO) roles into two different positions. This position had been combined for many years at RIO. Subsequent to the departure of our prior ED/CIO Dave Hunter in June 2021, the SIB recognized that investment program growth over the last 10 years necessitated splitting the roles and allowing a Chief Investment Officer to focus on investments. The Board voted to approve the split of these positions in Q3 2021; filling the Executive Director position permanently in Q4 2021 followed by filling the Chief Investment Officer position in Q1 2022.

While our Board were undertaking a review and evolution of their governance, a similar review was occurring inside the agency. RIO's technology processes, infrastructure, and communications efforts had changed little since agency inception in 1989. The ability to accommodate growth without change was accomplished largely because of the low turnover rate of employees (i.e. the majority of our workforce was comprised of employees with 10 to 25 years of experience within the agency). In Q1 and Q2 2020, however, both the Deputy Executive Director- Chief Retirement Officer, and the Retirement Services manager within 60 days of each after decades of experience with the agency. This was followed by the departure of the Executive Director – Chief Investment Officer and the Deputy Chief Investment Officer in Q2 and Q3 of 2021. In addition to the loss of these team members, many long-term employees became eligible and subsequently retired in 2021. The turnover in team members coincided with the start of major program initiatives. The departures in Retirement Services staff occurred towards the start of a long-term large IT project to modernize our current pension administration system. While the departures in Investment staff occurred at the start of the launch of the in-state investment program.

The loss of institutional knowledge from these departures coinciding with the large of major program initiatives highlighted the need for the agency to establish a strategic planning process. During the course of this biennium, RIO team members across all four divisions participated in planning sessions resulting in the creation of RIO's strategic plan. The strategic plan resulted in the identification of the following core priorities for the agency: Communication, Infrastructure, Organizational Culture, Talent Management, and Technology Enabled Processes. This strategic plan was presented to the Governor's office, the SIB, and TFFR Board in March 2022. Each of the budget initiatives we are submitting for your consideration and approval support these core priorities and are consistent with furthering RIO's strategic plan.

III. <u>State Investment Board (SIB)</u>

The State Investment Board has the statutory responsibility to administer the investment program for 27 funds including the Legacy Fund, TFFR, PERS, and WSI. It also maintains contractual relationships for the investment management of multiple political subdivisions and governmental funds. Currently SIB is responsible for the investment of the Legacy Fund, seven pension funds and 19 other non-pension funds for a total of 27 separate client funds with an overall fund value of roughly $18 billion as of October 31, 2022.

With the passage of H.B. 1425 during the 2021 Legislative Session, an in-state investment program was codified, and RIO has been working on implementing that program during the course of the biennium. Additional FTE's were approved during the November 2021 Special Legislative session to help support investment program growth. With almost $300 million committed, the North Dakota in-state investment program is already one of the largest in-state investment programs in the nation.

IV. <u>Teachers' Fund for Retirement</u>

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions and investment earnings. During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.

Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.

We are also in the midst of pension system modernization project to replace our current system. This is ongoing and is estimated to be complete in Q4 of 2024. Carry-over funding for the Pension Administration System Modernization Project (TFFR "Pioneer" Project) is included and the anticipated implementation date is 4th quarter 2024. New costs associated with the TFFR "Pioneer" Project are included in an optional request that includes temporary costs due to the increased workload and agency partner assistance (such as Procurement and NDIT unification costs) required to implement along with some new ongoing cost associated with the software solution. Upon completion of the "Pioneer" Project it is anticipated there will be significant efficiencies gained through the leveraging of the new enhanced technology. Through this leveraging, TFFR anticipates being able to hold flat FTE growth due to the reallocation of staff time that are presently required to maintain the antiquated software to upcoming initiatives such as compliance measures that would otherwise require growth in staffing numbers.

V. Budget Overview

The salary and benefits line represents funding for 25.0 FTE. 11.15 FTE of that total is dedicated to and responsible for administering the TFFR retirement program, down from 11.70 previously due to agency restructuring and NDIT unification. The remaining 13.85 FTE (up from 8.3 previously) provide all the accounting, financial and administrative support, and investment performance services for the funds under management.

The operating funds are split between TFFR and the investment program. The significant expenditures needed to administer both the TFFR retirement program, and the SIB investment program include NDIT data processing, IT contracts, building rent, staff and board travel and education, and professional development.

Within the investment program, significant resources have been allocated to the in-state investment initiative and management of the Legacy Fund as a result of H.B. 1425 and H.B. 1380 (2021 Legislative Session).

Historically, contingency funds were requested in case of an unexpected budget shortfall, generally related to turnover of executive staff and the need to perform an executive search. As part of our budget request, we are asking to move our base contingency amount into our operating line to cover some of the necessary increases we have identified. Based on recent experience, however, we fully understand the need to have these contingency funds available in specific scenarios and as such we are requesting additional contingency funding as part of an additional ask in Initiative #1.

We will go into much more detail about our additional funding requests, but as you see highlighted on the slide, what we are proposing will conservatively generate cost savings in multiples of any of the additional costs incurred.

VI. RIO Agency Initiatives

As we worked through our strategic planning process, there were several key areas we identified which required changes or enhancements to accomplish the goals we have set out for RIO and support the growth in both programs. We have consolidated our additional asks of the legislature into three key initiatives. As you will see, these three initiatives range from incremental to evolutionary.

A. Initiative #1 – Organizational Culture/Workforce

As an addition to our base budget request, we are requesting specific funding in a few key areas to ensure we are able to continue performing our statutory responsibilities at a very high level. We consider these requests to be a vital part of our organizational culture and workforce initiative.

During the current biennium, RIO went through a thorough reorganization that led to several position changes throughout the agency. The ED/CIO position was split into two positions to reflect the workload more accurately for each position as the investment program continues to grow exponentially. The salary attributable to the previously combined position was assigned to the Chief Investment Officer role, which resulted in a lack of salary budgeted for the Executive Director position. We have been able to pay the ED salary during the current biennium due to roll-up funding resulting from vacancies, but the full salary amount is not covered by the proposed base budget. In addition, the CFO position was restructured into the CFO/COO position, and an accounting was used to create an accounting manager position to support the CFO/COO combine role. We reclassified a vacant position in the Retirement Services division into a retirement accountant position which is now included under the Fiscal division. We also reorganized administrative support services, which had previously been under a separate Administrative Services division and instead assigned each administrative support position to an individual division (i.e. Retirement Services, Fiscal/Investment, and the Executive Administrative Assistant which supports the four executive team members and all the Boards and committees). While the cost of the reorganization of most of these positions could be covered by our base budget request, we are asking for additional salaries and wages to cover board member salaries as well as to support our commitment to a robust internship program within the agency.

An additional FTE for administrative support is requested to provide assistance to the new investment FTEs granted during the last special legislative session. We currently have three full-time and one temporary administrative team members supporting the entire agency. One administrative support FTE currently supports both the entirety of the Fiscal and Investment Divisions and we recognize that with the growth of the investment team, additional administrative support is needed.

Agency reorganization/restructuring and our new strategic plan requires many employees to pursue or maintain professional certifications relevant to the performance of their duties and the associated increase in cost of agency reimbursed certifications is reflected in this proposal as well.

Additional cost for work related travel due to both inflation and the increased need for continuing education of existing FTEs requires an increased allocation to this line item. Work related travel is necessary not only for investment and retirement program operations but also for continuing education for positions to maintain certifications relevant to the performance of their duties.

While the agency is committed to a hybrid work environment, such a work environment does require the availability of some additional office space to support the growing and increasingly collaborative teams during the implementation of aforementioned initiatives for both retirement and investment programs and the cost of some additional equipment and space is included in this proposal.

Finally, within this request, we are asking for contingency funding to support at least two executive searches during a biennium. During the last two biennium's the agency lost its top two managers in both the retirement and investment programs within 60 days of each other (respectively for each program) and while turnover of these positions is not planned in the short term, prudence requires preparing for what is not an unusual event.

The total ask of this package is $760,000. Of which, roughly $350,000 was included in the executive recommendation.

B. Initiative #2 – "Pioneer" Project

The second of our additional funding request packages seeks to support the TFFR Pension System Modernization Project (TFFR "Pioneer" Project) for the development and deployment of the modernized pension administration system pursuant to its authority under NDCC 15-39.1-05.2. The project is currently in the development and implementation of the vendor solution phase (the third and final phase). While our project is currently on time with an expected completion date of 4th quarter 2024, the agency must continue to utilize its current system until the new system is ready and program efficiencies can be realized. This package is intended to provide necessary interim support and resources for the agency until the new system is ready to deploy such as: an increase for personnel costs of existing staff as it relates to additional workload and overtime; continuing cost for temporary FTEs to support the manual processes needed to make the existing system work until it can be retired; and the funding needed for ongoing hosting and support fees associated with the new software vendor solution.

The implementation project will be completed using existing FTEs; however, continued funding for two temporary employees is necessary to sustain operations under the existing pension administration system while the new system is being developed and the time of permanent FTE's can be dedicated to that development and launch. The current system is quite antiquated and requires significant manual data entry; these processes will be significantly improved with the new system and therefore the services of the temporary employees will no longer be needed subsequent to the launch of the new system. Overtime costs are needed for current non-exempt staff, and temporary increases for current exempt staff, due to the increased work hours and workload involved in the development and implementation of the system. It is expected that these additional costs, including limited term employee costs will be eliminated upon implementation of the new pension administration system, while the hosting and support fees will be ongoing.

The total ask of this package is $1,602,319. Of which, $1,552,319 was included in the executive recommendation.

C. Initiative #3 – Internal Investment/Talent Management

The third and final additional request is predicated on the exponential growth of our investment program. The assets under management by the RIO investment division have grown from about $4 billion to nearly $20 billion from the year 2010 to the beginning of the year 2022 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

There is an opportunity to create significant benefits from the scale advantages of the growth of $20 billion of assets under management. A typical public fund with similar assets under management as RIO has more internal investment management which creates the opportunity of better investment returns while decreasing costs from the advantages of more internal management versus money placed with external managers.

Generally, investment management costs fall within the scope of continuing appropriation authority granted by the legislature in NDCC 21-10-06.2; however, because this proposal involves cost savings achieved by internalizing investment operations through additional permanent FTE's and infrastructure it falls within the scope of NDCC 54-52.5-03.

Our proposal includes five investment professionals, one fiscal operations professional, and one administrative staff to manage approximately $3 billion of assets internally. Implementing this proposal can lower the net costs for RIO investments by $8 million per year and create opportunities for better liquidity management and rebalancing that may result in up to another $8 million in savings per year, for a conservative estimate of approximately $16 million in savings per year that as a special fund agency directly benefits our client funds. The net costs and opportunities grow with assets under management and with the amount of assets managed internally. We have discussed this proposal with many of our client funds and have received positive feedback and support from our clients for this initiative.

Due to the complexity of this plan, we are only asking for a salary budget for one year of the biennium for these additional staff as we believe it would take significant time to receive the necessary classification approvals and fill the positions.

Additionally, the market for investment professionals shows they typically receive both a market-based salary and incentive compensation even in the public sector. A well-designed incentive compensation system, based on fair criteria, can stimulate employees to deliver quality work, reach set targets, and maintain motivation and productivity. For investment managers, it provides incentives to make smart and risk-appropriate investment choices that result in an appreciation of invested assets. The incentive system also aligns the risk of the investment manager's compensation with the risk of the underlying assets being managed, thus acting as a control mechanism incentivizing good risk/return choices. Lastly, an incentive system is good for investment plan beneficiaries in that the incentive is paid when there is superior investment performance and not paid when there is not superior investment performance. As a result, a well-designed incentive compensation system results in added net investment performance and reduces the overall cost of compensation by paying only when the benefits exceed the cost. The incentive compensation plan would assume a targeted bonus of 50% of salary and a max of 100% of salary and would only pay out when benefits exceed costs. This proposal is contingent on an incentive compensation plan approved by the legislature and administered by the State Investment Board. During our subsequent hearing we would like to request an amendment to our budget that would provide the necessary authority to implement incentive compensation under Initiative #3 if approved.

We estimate the cost of this proposal for the first biennium to be $1,671,836. This includes one year of salaries and benefits for each of the new positions as well as the necessary operational costs to support them. In addition, we would ask for specific statutory language changes to facilitate the incentive compensation plan including exemptions from the state's classified system.

Senate Bill 2022
North Dakota Retirement and Investment Office (RIO)
Testimony before Senate Appropriations – Human Resources Division
Senator Dick Dever, Chair

Janilyn Murtha, JD, MPAP – Executive Director
Chad Roberts, MAc – Deputy Executive Director/Chief Retirement Officer
Scott Anderson, CFA, MBA – Chief Investment Officer
Ryan Skor, CPA, MBA – Chief Financial Officer/Chief Operating Officer

I. RIO Statutory Authority and Responsibilities

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

II. State Investment Board (SIB)

The State Investment Board is responsible for oversight of nearly $19 billion of investments for 28 different client funds including TFFR and PERS within the over $7 billion Pension Pool and WSI in the nearly $3 billion Insurance Pool in addition to more than $8.5 billion in the Legacy Fund. Funding for administration of the SIB Investment Program comes directly from investment clients' invested assets (both statutory and contracted).

SIB members include the Lt. Governor, State Treasurer, State Insurance Commissioner, State Land Commissioner, Workforce Safety & Insurance designee, three PERS board members, and three TFFR board members as voting members; and the Legacy and Budget Stabilization Fund Advisory Board Chair serves as a non-voting member.

Investment guidelines and asset allocations are established by the governing bodies of the individual funds, with assistance from consultants and/or RIO staff, and subject to review and approval by the SIB prior to implementation. The SIB selects investment managers to manage different types of portfolios within each asset class with the goal of maximizing return within the clients' acceptable risk levels.

	Fair Value (as of 11/30/22)
PENSION POOL PARTICIPANTS	
Teachers' Fund for Retirement	$3,020,572,488
Public Employees Retirement System	3,784,833,438
Bismarck City Employee Pension Fund	121,362,655
Bismarck City Police Pension Fund	49,535,582
City of Grand Forks Pension Fund	72,377,252
Grand Forks Park District Pension Fund	8,539,500
Subtotal Pension Pool Participants	$7,057,220,915
INSURANCE POOL PARTICIPANTS	
Workforce Safety & Insurance Fund	$2,024,412,186
State Fire and Tornado Fund	19,634,332
State Bonding Fund	3,583,709
Petroleum Tank Release Fund	5,883,077
Insurance Regulatory Trust Fund	1,187,663
State Risk Management Fund	3,613,522
State Risk Management Workers Comp	2,542,778
Cultural Endowment Fund	538,719
Budget Stabilization Fund	716,784,865
ND Assoc. of Counties (NDACo) Fund	6,886,387
City of Bismarck Deferred Sick Leave	751,278
PERS Group Insurance	57,989,586
State Board of Medicine	3,127,522
City of Fargo FargoDome Permanent Fund	41,125,558
Lewis & Clark Interpretive Center Endowment	804,710
Attorney General Settlement Fund	2,348,881
Veterans' Cemetery Trust Fund	432,423
ND University System Capital Building Fund	1,605,124
Arts Across the Prairie Maintenance Fund	1,002,029
Subtotal Insurance Pool Participants	$2,894,254,350
INDIVIDUAL INVESTMENT ACCOUNTS	
Legacy Fund	8,583,989,914
Retiree Health Insurance Credit Fund	156,903,188
Job Service of North Dakota Pension Fund	84,568,987
TOTAL	$18,776,937,353

(Amounts are unaudited)

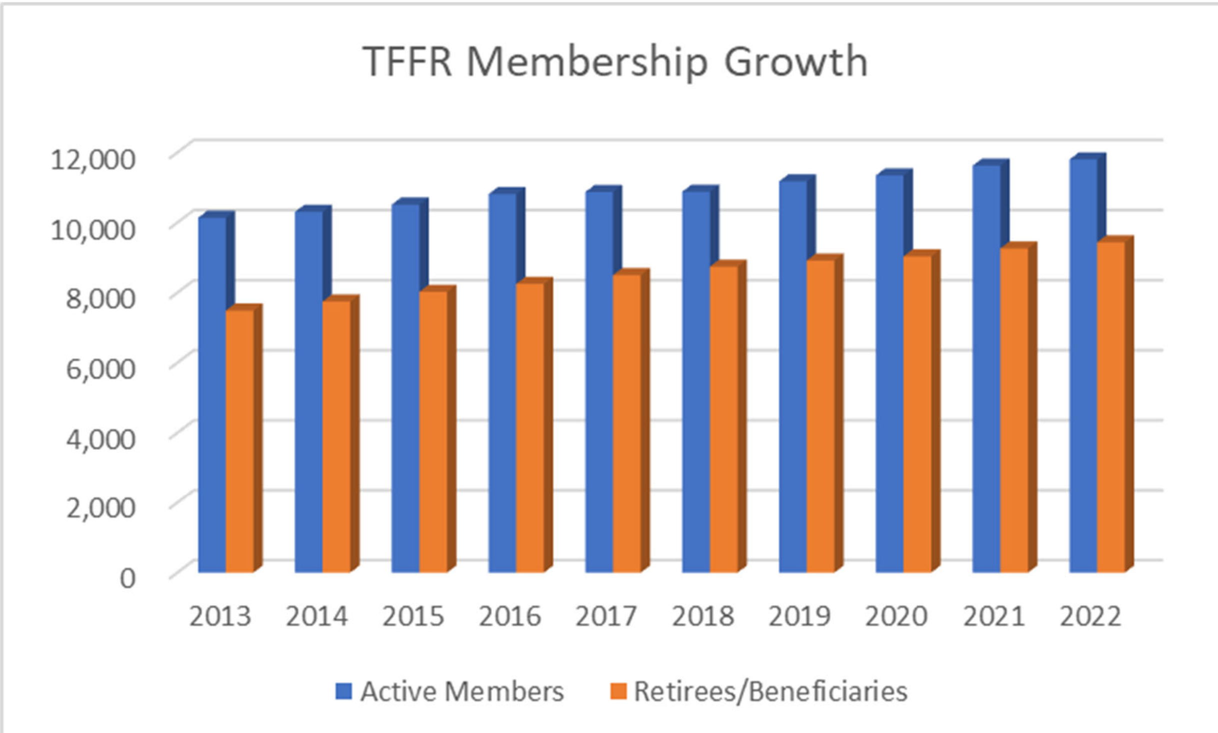
Similar client funds are pooled together when possible to receive lower fees and better terms from investment managers and achieve efficiencies in staff monitoring.

Over the past two decades, the average assets under management (AUM) of the investment program have nearly quadrupled in size. Amounts have grown from an average of roughly $4 billion during the 2003-2005 biennium to an average of over $19 billion during the current 2021-2023 biennium.

III. Teachers' Fund For Retirement (TFFR)

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions and investment earnings. During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.



The mission of TFFR, a trust fund, is to advocate for, develop, and administer a comprehensive retirement program for all trust fund members, North Dakota k-12 educators, in a manner consistent with its fiduciary obligations and approved resource allocation.

The TFFR Board reaffirmed its commitment to evolving governance to respond to program growth by establishing a Governance and Policy Review committee that is tasked with reviewing program policies and public policy affecting statutes and administrative rules to make recommendations to the full Board for making policy or requesting changes from the Legislature.

The TFFR program is currently in Phase 3 of 3 of a multi-year large IT Pension Administration Modernization Project (TFFR "Pioneer" Project) that will provide a better ROI for the agency and improve the member and employer experience with TFFR while aligning with state-wide initiatives to better utilize technology enabled processes.

TFFR plan is designed to provide lifetime normal retirement benefits, disability benefits, and death benefits for ND public school educators and certain state teachers. It provides ND educators with a financial foundation for the future that includes a secure and stable retirement. This is possible due to TFFR's plan design, professional plan management, strong investment performance, and outstanding customer service.

The TFFR plan is an important feature in the recruitment and retention of high-quality teachers and administrators in North Dakota, and not lose these quality individuals to out of state programs.

IV. RIO Organizational Chart

(See attached)

RIO currently has 25 full-time FTEs across the two programs and four divisions along with two temporary positions and an intern. The four divisions include Investment, Retirement Services, Fiscal Services, and Internal Audit. The two temporary positions are directly attributable to additional workforce needs during the development and implementation of a large IT project for the TFFR program. The hiring of an intern position reflects an intent to consciously develop a robust internship program at RIO that will provide an opportunity to college and graduate students studying in North Dakota to participate in investment, accounting, benefit services, and public policy processes within the public sector.

V. Audit Findings

RIO has received no financial audit findings in the past 20+ years.

VI. 2021-23 Accomplishments and Challenges

RIO accomplishments during the 2021-2023 biennium have included:

1. Creating and beginning implementation of a new agency strategic plan identifying core priorities and transformational initiatives.
2. Reorganizing agency to achieve greater economies of scale and support new strategic plan.
3. Developing and implementing intra-agency communication and training plan to support organizational culture as a core agency priority.
4. Posting, filling, and onboarding over ten new employees in the last fiscal year including two interns and three part time employees for an agency with twenty-five approved FTE.
5. Assisting governing boards with the creation of three new standing committees to create governance that supports program growth: a Governance & Policy Review committee of the SIB; an Investment Committee of the SIB; and a Governance & Policy Review committee of the TFFR Board (previously and ad hoc committee, standing committee status pending second reading).
6. Continuing to implement an in-state investment initiative with the creation of the ND Growth Fund, increasing funding of the BND match loan program, and supporting a Legacy Fund Asset Allocation Study project commissioned by the Legacy and Budget Stabilization Advisory Board.
7. Completing two out of three phases of the TFFR Pension Administration System Modernization Project (TFFR "Pioneer" Project), with the third and final phase underway.

VII. 2023-25 Goals and Plans

Goals for RIO during the 2023-2025 biennium include:

TFFR Investment and Funding Goals

1. Improve the Plan's funding status to protect and sustain current and future benefits.

2. Minimize the employee and employer contributions needed to fund the Plan over the long term.
3. Avoid substantial volatility in required contribution rates and fluctuations in the Plan's funding status.

TFFR Service Goals

1. Create and implement an enhanced Outreach and Communication Plan for our members, employers, and other stakeholder groups related to the program in general and the TFFR "Pioneer" Project specifically.
2. Administer an accurate, efficient, and responsive pension benefits program.
3. Deliver high quality, friendly service to members and employers.

SIB Strategic Investment Plan

1. Reaffirm our organizational commitment to the importance of continuing board education and strong board governance to create and maintain an innovative and agile investment program. The SIB has moved forward with the creation of two new standing committees within the last year to support this goal: a Governance and Policy Review committee and an Investment committee.
2. Enhance understanding of our core goals and beliefs while enhancing overall transparency.
    a. Remain steadfast in our commitment to the prudent use of active investment management.
    b. Expand awareness to downside risk management which is essential to achieving our long-term investment goals.
    c. Given actual and projected growth of SIB client assets and the heightened public awareness of the Legacy Fund, align our investment platforms to promote greater clarity and efficiency in reporting and implementing client investment policies.
3. Expand RIO's influence and ability to create positive and sustainable change by building deeper relationships with existing clients, organizations, and legislative leaders.
    a. Enhance community outreach to build upon public awareness and confidence.
    b. Develop concise presentations which highlight our overall risk, return and cost control framework including our progress towards attaining our long-term goals.
    c. Continue to implement an in-state investment initiative and provide education and outreach efforts consistent with the roll-out of that initiative.
4. Encourage employee participation in staff meetings, offer team members more opportunities to impact RIO's change initiatives and improve the office environment for staff and clients.
5. Enhance our internal control environment by improving use of proven risk management solutions relating to fraud risk assessments, investment risk management and overall enterprise risk management.
    a. A robust risk management framework serves as a foundation to support a sound internal control environment and lessen downside risks.
    b. Broaden stakeholder awareness of the challenges faced in estimating Legacy Fund earnings for future budget planning.
    c. Evaluate and expand the efficient use of technology in our investment program activities including risk management, compliance monitoring, client satisfaction surveys, website design and communications.

RIO Strategic Plan

1. Continue to develop our organization culture as a recruitment and retention tool to develop a growth mindset and encourage employee engagement.
2. Create, develop, and maintain a robust internship program across both programs.
3. Continue to identify additional process areas where efficiencies can be gained through technology enabled processes and implement such processes.

VIII. Comparison between base and request budgets

Line Item Description	2021-23 Base Budget		2023-25 Executive Recommendation		2023-25 Total Agency Request
Salaries and Wages	$ 6,785,839		$ 8,744,148		$ 10,696,123
Operating Expenses	1,323,528		2,570,347		2,869,937
Contingencies	100,000		100,000		200,000
Total Special Funds	**$ 8,209,367**		**$ 11,414,495**		**$ 13,766,060**
			-		-
FTE	25.0		25.0		34.0

During the current 2021-23 biennium, RIO has a base budget of $8.2 million. The vast majority of which consists of salaries and benefits for the 25 FTE and temporary team members.

The 2023-25 executive recommendation leaves the FTE count at 25 but includes cost to continue salary amounts for investment positions that were appropriated during the November 2021 special session and only funded for a portion of the current biennium. It also includes the executive compensation recommendation. The majority of the increase in the operating line is related to the continuation of our pension administration system modernization project and the related IT costs.

The 2023-25 total agency request includes added funding for an additional administrative support FTE as well as a fiscal operations FTE to support the investment team as it is currently structured. It also includes 7 FTE related to our strategic internal investment request package to make up the total 34 FTE.

IX. Budget Summary

The Retirement and Investment Office (RIO) serves two important program boards: the State Investment Board (SIB) and the Teachers' Fund for Retirement (TFFR) Board. As such, its agency budget is separated into two separate programs, both of which are regarded as special funds.

Investment Program (SIB)
Funding for administration of the SIB Investment Program comes directly from investment clients' invested assets (both statutory and contracted).

Salary and benefits represent funding for 13.85 FTEs, which provide all the accounting, financial and administrative support, and investment performance services for the funds under management.

Operating funds needed to administer the SIB investment program include building rent, staff and board travel and education, and NDIT data processing.

Retirement Program (TFFR)
Funding for administration of the TFFR Pension Plan comes from member and employer contributions and investment earnings.

Salary and benefits represent funding for 11.15 FTEs responsible for administering the TFFR retirement program, down from 11.70 previously due to agency restructuring and NDIT unification.

The operating funds required to administer the TFFR retirement program include NDIT data processing, IT contracts, building rent, staff and board travel and professional development.

Carry-over funding for the Pension Administration System Modernization Project (TFFR "Pioneer" Project) is included and the anticipated implementation date is 4th quarter 2024. New costs associated with the TFFR "Pioneer" Project are included in a decision package including one-time costs due to the increased workload and agency partner assistance (such as Procurement and NDIT unification costs) required to implement and some new ongoing cost associated with the software solution.

Historically contingency funds were requested in case of unexpected budget shortfall, generally related to turnover of executive staff and the need to perform an executive search. No contingency funds are included in the base budget request for 2023-25, though a contingency funding request is included as a decision package request.

Due to restructuring/reorganization of the agency in the last biennium some FTE were reclassified and the corresponding salaries and equity adjustments for other team members increased the salary line in the base budget.

ND RETIREMENT AND INVESTMENT OFFICE
BUDGETED EXPENDITURE REPORT
AS OF DECEMBER 31, 2022

	BIENNIUM TO - DATE INVESTMENT	BIENNIUM TO - DATE RETIREMENT	BIENNIUM TO - DATE TOTAL
BUDGETED EXPENDITURES			
1. SALARIES & BENEFITS			
SALARIES	1,682,575	1,112,627	2,795,202
OVERTIME/TEMPORARY	35,410	72,274	107,684
TERMINATION SALARY & BENEFITS	4,149	3,569	7,718
FRINGE BENEFITS	509,726	425,308	935,034
TOTAL SALARY & BENEFITS	2,231,861	1,613,778	3,845,639
2. OPERATING EXPENDITURES			
TRAVEL	28,171	24,679	52,850
IT - SOFTWARE/SUPPLIES	103	82	185
PROFESSIONAL SUPPLIES & MATERIALS	641	1,680	2,321
MISCELLANEOUS SUPPLIES	1,072	541	1,613
OFFICE SUPPLIES	846	1,370	2,216
POSTAGE SERVICES	3,886	28,140	32,027
PRINTING	410	8,008	8,417
IT EQUIPMENT UNDER $5000	419	385	805
OFFICE EQUIP. & FURNITURE UNDER $5000	524	986	1,509
INSURANCE	1,234	1,198	2,432
BUILDING/LAND RENT & LEASES	69,454	84,998	154,451
REPAIR SERVICE	311	343	654
IT DATA PROCESSING	109,161	384,689	493,850
IT COMMUNICATIONS	7,173	7,299	14,472
IT - CONTRACTUAL SERVICES	3,060	205,173	208,233
DUES & PROF. DEVELOPMENT	7,754	20,818	28,571
OPERATING FEES & SERVICES	23,163	19,284	42,447
PROFESSIONAL SERVICES	1,840	341,841	343,681
TOTAL OPERATING EXPENDITURES	259,221	1,131,514	1,390,736
3. CAPITAL ASSETS	0	1,434,489	1,434,489
4. CONTINGENCY	85,832	0	85,832
TOTAL BUDGETED EXPENDITURES	2,576,914	4,179,781	6,756,695

2023-2025 Budget Request:								
Line Item Description	**Base Budget**	**Cost to Continue/Other Adjustments**	**Executive Recommendation Pay Package**	**Adjusted Base**	**Workforce Initiative #1**	**Pioneer Project #2**	**Internal Investment #3**	**Total Agency Request**
Salaries and Wages	$ 6,785,839	890,933	549,864	$ 8,226,636	578,491	486,000	1,404,996	$ 10,696,123
Operating Expenses	1,323,528	(37,000)	-	1,286,528	200,250	1,116,319	266,840	2,869,937
Contingencies	100,000	(100,000)	-	-	200,000	-	-	200,000
Total Special Funds	**$ 8,209,367**	**753,933**	**549,864**	**$ 9,513,164**	**978,741**	**1,602,319**	**1,671,836**	**$ 13,766,060**
				-				-
FTE	25.0	-	-	25.0	2.0	-	7.0	34.0

Request package #1 - Workforce Initiative

As an addition to our base budget request, we are requesting specific funding in a few key areas to ensure we are able to continue performing our statutory responsibilities at a very high level. We consider these requests to be a vital part of our organizational culture and workforce initiative.

During the current biennium, RIO went through a thorough reorganization that led to several position changes throughout the agency. The ED/CIO position was split into two positions to reflect the workload more accurately for each position as the investment program continues to grow exponentially. The salary attributable to the previously combined position was assigned to the Chief Investment Officer role, which resulted in a lack of salary budgeted for the Executive Director position. We have been able to pay the ED salary during the current biennium due to roll-up funding resulting from vacancies, but the full salary amount is not covered by the proposed base budget. In addition, the CFO position was restructured into the CFO/COO position, and an accounting manager position was created to support the CFO/COO combined role. We reclassified a vacant position in the Retirement Services division into a retirement accountant position which is now included under the Fiscal division. We also reorganized administrative support services, which had previously been under a separate Administrative Services division and instead assigned each administrative support position to an individual division (i.e. Retirement Services, Fiscal/Investment, and the Executive Administrative Assistant which supports the four executive team members and all the Boards and committees). While the cost of the reorganization of most of these positions could be covered by our base budget request, we are asking for additional salaries and wages to cover additional board member salaries as well as to support our commitment to a robust internship program within the agency.

To support the 6 new FTE granted during the November 2021 special session we are requesting two additional FTE. One additional administrative support FTE and one additional fiscal/operations FTE. Currently, one administrative support FTE supports both the entirety of the Fiscal and Investment Divisions and we recognize that with the growth of the investment team, additional administrative support is needed. The onboarding of the new investment team members during the biennium has created abundant opportunities to enhance our investment operations and, subsequently, increase the investment returns for all client funds. However, these enhancements require administrative and operational support to be fully realized. Adding these two FTE will further enhance the ability of the investment team to be more agile and effective in managing investment strategies and provide significant benefit to all of our client funds.

Agency reorganization/restructuring and our new strategic plan requires many employees to pursue or maintain professional certifications relevant to the performance of their duties and the associated increase in cost of agency reimbursed certifications is reflected in this proposal as well.

Additional cost for work related travel due to both inflation and the increased need for continuing education of existing FTE requires an increased allocation to this line item. Work related travel is necessary not only for investment and retirement program operations but also for continuing education for positions to maintain certifications relevant to the performance of their duties.

While the agency is committed to a hybrid work environment, such a work environment does require the availability of some additional office space to support the growing and increasingly collaborative teams during the implementation of aforementioned initiatives for both retirement and investment programs and the cost of some additional equipment and space is included in this proposal.

Finally, within this request, we are asking for contingency funding to support at least two executive searches during a biennium. During the last two biennium the agency lost its top two managers in both the retirement and investment programs within 60 days of each other (respectively for each program) and while turnover of these positions is not planned in the short term, prudence requires preparing for what is not an unusual event.

The total ask of this package is $978,741. Of which, $349,012 was included in the executive recommendation.

	Total Agency					
#1: Workforce Request	**Salaries & Benefits**	**Operating Expenses**	**Contingency**	**Total Special Funds**	**Executive Recommend**	**Difference**
Fully fund salaries after completion of reorganization, compensation for additional board members, fund internship program	203,870	-	-	**203,870**	81,512	122,358
Addition of an administrative support FTE to support investment personnel added during special session	154,886	-	-	**154,886**		154,886
Addition of a fiscal/operations FTE to support investment personnel	219,735	-	-	**219,735**		219,735
Increased travel for board & staff	-	74,000	-	**74,000**	74,000	-
Governance manual codification & update software	-	30,000	-	**30,000**	30,000	-
IT equipment for hoteling	-	5,000	-	**5,000**	5,000	-
Rent for hoteling	-	15,000	-	**15,000**	15,000	-
Staff development/certifications/dues	-	25,750	-	**25,750**	8,000	17,750
Increased SWCAP (as determined by OMB)	-	35,500	-	**35,500**	35,500	-
Communications subscriptions	-	15,000	-	**15,000**		15,000
Contingency for Exec Searches	-	-	200,000	**200,000**	100,000	100,000
	578,491	200,250	200,000	**978,741**	349,012	629,729

NOTES:
- Adds Investment Admin to support new team members added in Special Session
- Adds Fiscal/Operations FTE to support new investment team members added in Special Session
- Additional funding for salaries (fully funds reorganization adjustments, a continuing intership program, and additional board member pay)

Request package #2 - Pioneer Project

The second of our additional funding request packages seeks to support the TFFR Pension System Modernization Project (TFFR "Pioneer" Project) for the development and deployment of the modernized pension administration system pursuant to its authority under NDCC 15-39.1-05.2. The project is currently in the development and implementation of the vendor solution phase (the third and final phase). While our project is currently on time with an expected completion date of 4th quarter 2024, the agency must continue to utilize its current system until the new system is ready and program efficiencies can be realized. This package is intended to provide necessary interim support and resources for the agency until the new system is ready to deploy such as: an increase for personnel costs of existing staff as it relates to additional workload and overtime; continuing cost for temporary FTE to support the manual processes needed to make the existing system work until it can be retired; and the funding needed for ongoing hosting and support fees associated with the new software vendor solution.

The implementation project will be completed using existing FTE; however, continued funding for two temporary employees is necessary to sustain operations under the existing pension administration system while the new system is being developed and the time of permanent FTE can be dedicated to that development and launch. The current system is quite antiquated and requires significant manual data entry; these processes will be significantly improved with the new system and therefore the services of the temporary employees will no longer be needed subsequent to the launch of the new system. Overtime costs are needed for current non-exempt staff, and temporary increases for current exempt staff, due to the increased work hours and workload involved in the development and implementation of the system.

For example, between September 8, 2022, and December 15, 2022, each staff member assigned to the new pension administration project participated in as many as 185 hours of meetings and development sessions directly attributable to the project. Those 185 hours attributed to the project account for 33% of the 552 total normal work hours for that period based on 8-hour days and 69 workdays during the period. Because the work the staff does daily could not be deferred, this required a significant additional effort from the assigned staff. As a further example, for the period of January 9, 2023, through May 11, 2023, there are 86 working days for a total of 688 regular work hours. During this time assigned staff will be participating in as many as 225 hours of meetings and development sessions related to the project. This again represents a 33% increase in required time from staff to complete both their normal work duties and the duties they have on the project. This increased tempo and workload will continue through the end of the project which is scheduled for the 4th quarter of the 2024 calendar year.

It is expected that these additional costs, including limited term employee costs will be eliminated upon implementation of the new pension administration system, while the hosting and support fees will be ongoing. As on offset of the increased hosting and support fees, the one-time increase for NDIT charges for unified staff support should also decrease substantially after the implementation of the project. This expectation is due to the conclusion of the NDIT staff in PAS meetings and development sessions, and due to the modernization and automation of processes that NDIT staff presently support daily in the antiquated system being replaced.

The total ask of this package is $1,602,319. Of which, $1,552,319 was included in the executive recommendation.

#2: Pension System Continuation	Total Agency: Salaries & Benefits	Operating Expenses	Contingency	Total Special Funds	Executive Recommend	Difference
Temp Increases & Temp Salaries	270,000	-	-	**270,000**	220,000	50,000
Overtime for Pension Staff	216,000	-	-	**216,000**	216,000	-
Postage for educational mailers	-	5,000	-	**5,000**	5,000	-
Printing for educational mailers	-	1,900	-	**1,900**	1,900	-
Increased NDIT charges for unified staff	-	132,000	-	**132,000**	132,000	-
Increased hosting and support fees	-	937,419	-	**937,419**	937,419	-
New contract to track membership	-	40,000	-	**40,000**	40,000	-
NOTES:	486,000	1,116,319	-	**1,602,319**	1,552,319	**50,000**

- Temp increases and funding for temp positions to finish designing and implementation of new PAS system
- Increase in hosting/support costs for new system
- $40K for PBI for death audit solutions

Request package #3 - Internal Investment

The third and final additional request is predicated on the exponential growth of our investment program. The assets under management by the RIO investment division have grown from about $4 billion to nearly $20 billion from the year 2010 to the beginning of the year 2022 and continue to grow from investment returns and contributions to the Legacy Fund, pension plans, and insurance funds. The combination of the growth of AUM, the number of individually managed funds, and the complexity of mandates such as the Legacy Fund have increased the need for staff resources, infrastructure, and new scalable investment processes that can enhance the performance of client funds while reducing the net cost of management of those funds when manager fees are considered.

There is an opportunity to create significant benefits from the scale advantages of the growth of nearly $20 billion of assets under management. A typical public fund with similar assets under management as RIO has more internal investment management which creates the opportunity of better investment returns while decreasing costs from the advantages of more internal management versus money placed with external managers. Some additional benefits of an internal asset management program include:

- Enhanced liquidity management, better fund rebalancing processes, and the ability to manage risk exposures for improvement of return/risk and lower cost;
- Improved investment capabilities at RIO rather than outsourcing those capabilities;
- Scalable savings that grow with the assets under management or with a larger portion of assets under management
- Additional flexibility and agility to implement new investment strategies or respond to market or international events as the assets are controlled locally;
- Attraction of top talent with a remote hybrid workforce where some senior, more expert investment officers can be located remotely if they choose yet still train more junior talent

that are local. RIO has been able to attract top talent with this approach. Internal investment management will increase the number of professional opportunities with RIO to be the employer of choice.

- Attraction of local talent from universities using internship programs where talent can be trained to be the next generation of leaders, bootstrapping a market for investment talent in North Dakota.

Generally, investment management costs fall within the scope of continuing appropriation authority granted by the legislature in NDCC 21-10-06.2; however, because this proposal involves cost savings achieved by internalizing investment operations through additional permanent FTE and infrastructure it falls within the scope of NDCC 54-52.5-03.

Our proposal includes five investment professionals, one fiscal operations professional, and one administrative staff to manage approximately $3 billion of assets internally. Implementing this proposal can lower the net costs for RIO investments by $8 million per year and create opportunities for better liquidity management and rebalancing that may result in up to another $8 million in savings per year, for a conservative estimate of approximately $16 million in savings per year that as a special fund agency directly benefits our client funds. The net costs and opportunities grow with assets under management and with the amount of assets managed internally. We have discussed this proposal with many of our client funds and have received positive feedback and support from our clients for this initiative.

Additionally, the market for investment professionals shows they typically receive both a market-based salary and incentive compensation even in the public sector. A well-designed incentive compensation system, based on fair criteria, can stimulate employees to deliver quality work, reach set targets, and maintain motivation and productivity. For investment managers, it provides incentives to make smart and risk-appropriate investment choices that result in an appreciation of invested assets. The incentive system also aligns the risk of the investment manager's compensation with the risk of the underlying assets being managed, thus acting as a control mechanism incentivizing good risk/return choices. Lastly, an incentive system is good for investment plan beneficiaries in that the incentive is paid when there is superior investment performance and not paid when there is not superior investment performance. As a result, a well-designed incentive compensation system results in added net investment performance and reduces the overall cost of compensation by paying only when the benefits exceed the cost. The incentive compensation plan would assume a targeted bonus of 50% of salary and a max of 100% of salary and would only pay out when benefits exceed costs. This proposal is contingent on an incentive compensation plan approved by the legislature and administered by the State Investment Board.

Due to the complexity of this plan, we are only asking for a salary budget for one year of the biennium for these additional staff as we believe it would take significant time to receive the necessary classification approvals and fill the positions.

We estimate the cost of this proposal for the first biennium to be $1,671,836 or approximately 10% of the cost savings from implementation. This includes one year of salaries and benefits for each of the new positions as well as the necessary operational costs to support them. In addition, we would ask for specific statutory language changes to facilitate the incentive compensation plan including exemptions from the state's classified system.

#3: Internal Investment Plan	Total Agency					
Item Description	Salaries & Benefits	Operating Expenses	Contingency	Total Special Funds	Executive Recommend	Difference
7 new FTE (5 investment/1 fiscal/1 admin) (1/2 biennium)	1,173,326	-	-	**1,173,326**	-	1,173,326
Equity Increases for current Investment Staff	231,670	-	-	**231,670**	-	231,670
Advertising	-	17,500	-	**17,500**	-	17,500
Travel	-	53,000	-	**53,000**	-	53,000
Software/Data Processing/Telephone	-	44,240	-	**44,240**	-	44,240
Office Furniture/Supplies	-	12,600	-	**12,600**	-	12,600
Rent for new offices	-	86,500	-	**86,500**	-	86,500
Prof Development	-	3,000	-	**3,000**		3,000
Pay Study	-	50,000	-	**50,000**		50,000
NOTES:	1,404,996	266,840	-	**1,671,836**	-	**1,671,836**
- 5 Investment positions (2 Sr. Portfolio Mgrs/2 Inv. Analysts/1Inv. Funds Mgr)						
- 1 Admin to assist investment professionals						
- 1 Investment accountant						
- Operating costs to support additional team members						

X. Purpose and use of one-time funding in current biennium

Although there was no one-time funding specified in our budget for the 2021-2023 biennium, we did request to carryover unexpended one-time funding appropriated in the prior biennium to continue work on our pension administration system (PAS) modernization project. As this project is in progress and not expected to be completed until 2024, we will be requesting to carryover all remaining one-time funding related to this project into the 2023-2025 biennium.

ND RETIREMENT AND INVESTMENT OFFICE
PENSION ADMINISTRATION SYSTEM EXPENDITURE REPORT
AS OF DECEMBER 31, 2022

	2019-2021 Biennium Approved Budget	2019-2021 Biennium Actual	Carryover to 2021-2023 Biennium	2021-2023 Biennium Actual	Total PAS Project to Date	Remaining PAS Budget
TEMPORARY SALARIES	50,000	0	50,000	0	0	50,000
IT - DATA PROCESSING (NDIT PROJECT MGMT)	775,000	34,025	740,975	78,457	112,483	662,517
PROFESSIONAL SERVICES	1,875,000	297,099	1,577,901	444,377	741,476	1,133,524
CAPITAL ASSETS	6,300,000	0	6,300,000	1,434,489	1,434,489	4,865,511
TOTAL PAS PROJECT BUDGET	**9,000,000**	**331,125**	**8,668,875**	**1,957,324**	**2,288,448**	**6,711,552**

XI. Identify and justify need for any one-time funding requested

We are requesting carryover authority for unexpended one-time funding related to our PAS modernization project that is expected to be completed in the 4th quarter of 2024.

In addition, we are requesting one-time funding for temporary salary increases to team members engaged in the development of the new system along with temporary salary dollars for continuation of our temporary employees that are currently supporting TFFR's legacy system while we design and develop the new system. The nature of the building of the new system requires significant institutional knowledge of the plan and current structure such that hiring temporary employees from outside the agency to design the system would not be feasible. This requires current team members to put in extra time and effort into design meetings while still completing their daily duties. Thus, the need for temporary workload increases and overtime.

XII. Agency collections deposited in general or special fund

Not applicable to RIO.

XIII. Need for any other sections requested to be included

As part of our strategic investment plan and our desire to move forward with an internal investment program at RIO, we are requesting to be excluded from the state's classified system. This would require an amendment to NDCC 54-44.3-20 to add "Officers and employees of the state retirement and investment office" to the list of positions excluded from classified service.

Additionally, as discussed in the internal investment request package, we feel an appropriate incentive compensation plan is vital for the success of our investment team. And, as such, we are requesting legislative approval to move forward on designing and implementing a plan that would be annually approved by the SIB.

Finally, we are requesting exemption language be added to our bill similar to last biennium to allow for the carryover of any unexpended funds related to the pension administration system project to allow for the planned implementation of the new system in 2024.

XIV. Any other bills being considered and potential impact on our budget

RIO reviews all submitted bills to monitor for potential impact on the agency. Through the first couple weeks of the session, we have identified several bills that may impact our agency and/or budget including, but not limited to (see attached for complete current list of tracked bills):

- HB 1039/1040 – Closure of the PERS DB Plan
- HB 1088 – SIB Membership Changes
- HB 1150 – Veteran Opt-out from TFFR
- HB 1219 – TFFR Program Changes
- HB 1227 – Legacy Fund/Requiring Cost-Benefit Analysis
- HB 1271 – Retired Teachers Return to Service/TFFR
- HB 1278 – Requiring Contracts to Include Written Support of Fossil Fund and ND Ag Industries
- HB 1368 – Prohibiting Investment and Contracts with Companies that Boycott Israel
- HB 1379 – Legacy Fund Earnings Streams
- HB 1400 – Common Schools Trust Fund Investments
- SB 2239 – Contributions to PERS Main Plan

- SB 2258 – Retired Teachers Benefits if Returning to Teach
- SB 2330 – Legacy Fund Advisory Board/Legacy Fund Earnings Definition

Potential fiscal impacts of these bills are still being determined. Some minor changes may require small amounts of monitoring and compliance and require just a few thousand dollars of temporary salaries. While others may have a more pronounced effect on RIO and require full scale effort on behalf of the investment team requiring upwards of $10 - $15 million in extra agency costs. We will continue to monitor these and numerous other bills to determine if any additional budget action would be necessary.

XV. One-page itemized listing of changes we're requesting to the executive recommendation

(See attached)

XVI. Comparison of major requests to those recommended in executive budget

(See section IX above for specific amounts included in executive budget)

The executive budget included portions of our major requests as follows:

- Workforce initiative (#1)
  - Included:
    - Portion of additional salaries for board members/interns
    - Increased travel for board and staff
    - Increased SWCAP
    - Additional hoteling rent & IT equipment
    - Staff development and certifications
  - Additional request:
    - Fully fund reorganized salaries
    - 2 FTE to support investment team (admin & fiscal)
    - Additional staff development/certifications/dues/subscriptions
    - Additional contingency funds for one more executive search
- Pioneer project (#2)
  - Included:
    - Portion of temporary increases and temporary salaries
    - Overtime for pension staff
    - Postage/Printing for educational mailers on new system
    - NDIT hosting, support, and staff charges
    - Contract for membership death tracking
  - Additional request:
    - $50K of temporary salary dollars
- Internal investment (#3)
  - Included
    - None included in exec recommendation
  - Additional request:
    - 7 FTE (5 investment/1 fiscal/1 admin) for one year of biennium

- Equity increases for current investment staff
- Advertising/travel/professional development costs
- Software and data processing costs
- Office rent/furniture/supplies
- Pay study

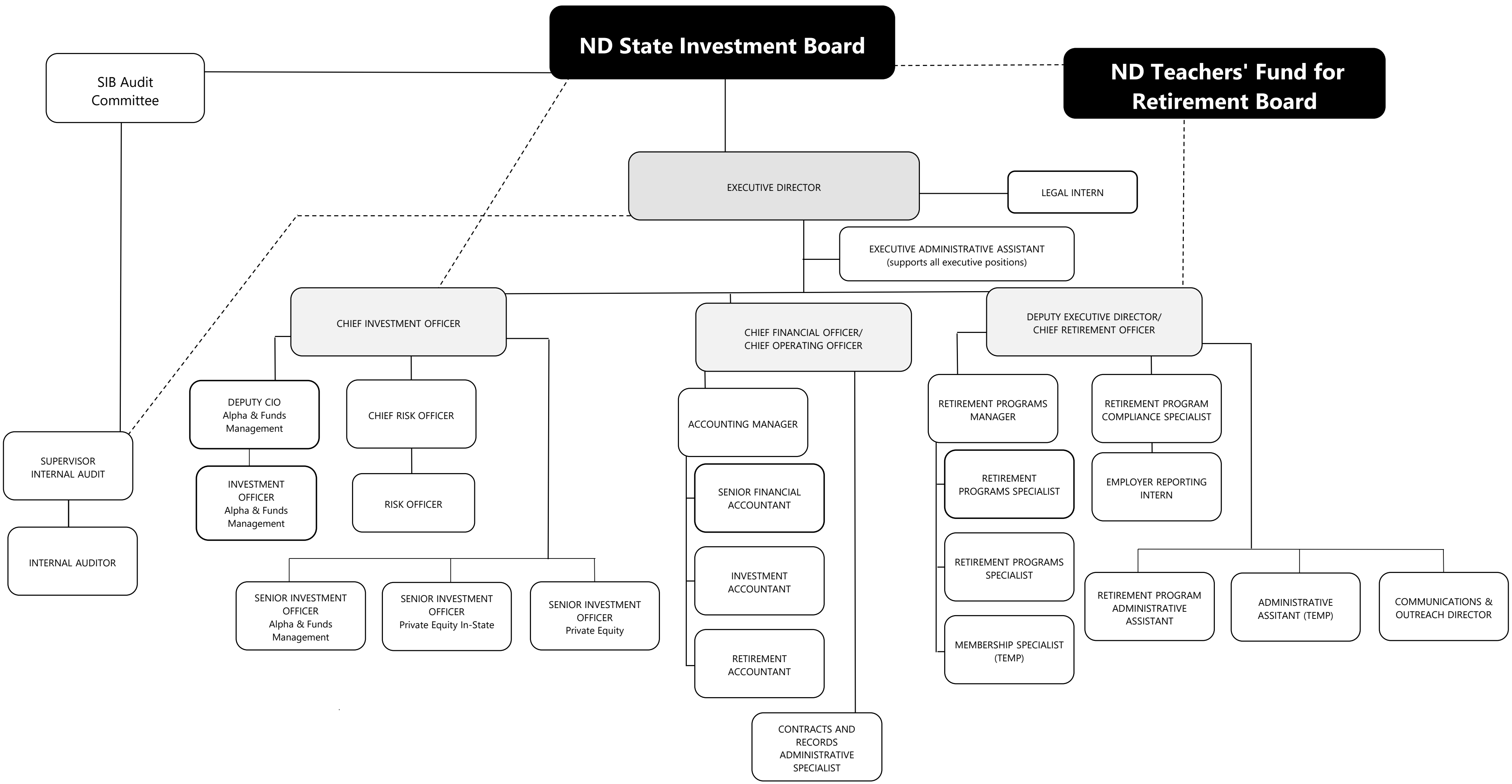
XVII. Federal State Fiscal Recovery Funding

RIO was not appropriated any federal state fiscal recovery funds during the November 2021 special legislative session.

XVIII. Federal Funding available

RIO does not have, nor does it anticipate having any federal funding available for the 2023-2025 biennium.

RETIREMENT AND INVESTMENT OFFICE



North Dakota Retirement and Investment Office
Changes requested in addition to executive recommendation

	Salaries & Benefits	Operating	Contingency	Total	FTE
Legislative Base Budget	**6,785,839**	**1,323,528**	**100,000**	**8,209,367**	**25.0**
Base Budget Changes	**143,721**	**(43,721)**	**(100,000)**	**-**	**-**
Executive Recommendations					
Cost to continue salary increases	41,345			41,345	
Increase funding for FTE approved during special session	506,929			506,929	
Salary package increase	549,864			549,864	
Health insurance increase	128,580			128,580	
Increase funding for salary equity increases	151,870			151,870	
Increase funding for ITD rates		6,721		6,721	
Operating expense inflationary increase (part of optional request #1)		167,500		167,500	
Contingency funds for executive search expenses (part of optional request #1)			100,000	100,000	
Funding for pension administration software fees (optional request #2)		977,419		977,419	
One-Time: Pension administration software implementation (part of optional request #2)	436,000	138,900		574,900	
Total included in executive recommendation	**8,744,148**	**2,570,347**	**100,000**	**11,414,495**	**25.0**
Additional Agency Requests				-	
Remainder of request package #1 (Workforce Initiative)				-	
Fully fund salaries after completion of reorganization, compensation for additional board members, fund internship program	122,358			122,358	
Addition of 2 FTE to support investment personnel added during special session	374,621			374,621	2.0
Additional staff development/certifications/dues		17,750		17,750	
Additional communications subscriptions/ memberships to support strategic communications plan		15,000		15,000	
Contingency funds for one additional executive search			100,000	100,000	
Total additional for request package #1	**496,979**	**32,750**	**100,000**	**629,729**	**2.0**
Remainder of request package #2 ("Pioneer" Pension System continuation)					
Additional funding for temporary increases and temporary salaries	50,000			50,000	
Total additional for request package #2	**50,000**	**-**	**-**	**50,000**	**-**
Request package #3 (Internal Investment Management)					
7 new FTE (5 investment/1 fiscal/1 admin) (1/2 biennium)	1,173,326			1,173,326	7.0
Equity increases for current investment staff	231,670			231,670	
Advertising		17,500		17,500	
Travel		53,000		53,000	
Software/data processing/telephone		44,240		44,240	
Office furniture/supplies		12,600		12,600	
Rent for new offices		86,500		86,500	
Professional development		3,000		3,000	
Pay study		50,000		50,000	
Total additional for request package #3	**1,404,996**	**266,840**	**-**	**1,671,836**	**7.0**
Total Requested Appropriation	**10,696,123**	**2,869,937**	**200,000**	**13,766,060**	**34.0**

SECTION 1. AMENDMENT. Section 54-44.3-20 of the North Dakota Century Code is amended and reenacted as follows:

54-44.3-20. Categories of positions in the state service.

All positions in the state service are included in the classified service, except:

1. Each official elected by popular vote and each person appointed to fill vacancies in an elective
   office, one principal assistant, and one private secretary.
2. Members of boards and commissions required by law.
3. Administrative heads of departments required by law, other than the superintendent of North Dakota vision services - school for the blind, the superintendent of the school for the deaf, and the state librarian.
4. Officers and employees of the legislative branch of government.
5. Members of the judicial branch of government of the state of North Dakota and their employees and jurors.
6. Persons temporarily employed in a professional or scientific capacity as consultants or to conduct a temporary and special inquiry, investigation, or examination for the legislative branch of government or a department of the state government.
7. Positions deemed to be inappropriate to the classified service due to the special nature of the
   position as determined by the division and approved by the board.
8. Employees of the institutions of higher education under the control of the state board of higher
   education.
9. Members and employees of occupational and professional boards.
10. Officers and employees of the North Dakota mill and elevator association.
11. Positions referred to under law as serving at the pleasure of or at the will of the appointing
    authority.
12. Licensed teachers engaged in teaching at the North Dakota youth correctional center, North
    Dakota vision services - school for the blind, and the school for the deaf.
13. Officers of workforce safety and insurance.
14. Officers and employees of the department of commerce.
15. Attorneys employed by the insurance commissioner.
16. Engineers, engineering technicians, and geologists employed by the director of mineral resources.
17. Officers and employees of the Bank of North Dakota.
18. Officers and employees of the state retirement and investment office.

SECTION 2. AMENDMENT. Section 54-52.5-03 of the North Dakota Century Code is amended and reenacted as follows:

54-52.5-03. State retirement and investment fund – Cost of operation of agency.

A special fund known as the "state retirement and investment fund" is established for the purpose of defraying administrative expenses of the state retirement and investment office. The actual amount of administrative expenses incurred by the state retirement and investment office must be paid from the respective funds listed under section 21-10-06 and are hereby appropriated to the state retirement and investment fund in proportion to the services rendered for each fund as estimated by the state investment board. The amount necessary to pay all administrative expenses of the state retirement and investment office must be paid from the state retirement and investment fund in accordance with the agency's appropriation authority and earnings lawfully available for such purposes. Any interest income earned on the state retirement and investment fund must be credited to the fund.

SECTION 3. AMENDMENT. Section 54-52.5-04 of the North Dakota Century Code is created and enacted as follows:

For the purposes of this section, “incentive compensation program” means a program approved by the state investment board with provisions that promote profitability, productivity, and responsible fund management. Any incentive compensation program approved by the state investment board must include provisions that ensure no payouts are made unless conditions are met that the investment program has added value when compared to pre-determined opportunity cost policy benchmarks.

2023-2025 Legislative Session RIO Bill Tracker

Bill #	Topic	Description	Sponsor	Hearing Date	Committee	Status
HB 1039	Closing DB Plan	Closing DB Plan (eff. 12/31/23)	Legislative Management: Weisz, Bosch, Boschee, Lefor, Mitskog, Vigesaa, Burckhard, Klein, Piepkorn, Schaible, Wanzek	1/13 - 9:15am	House GVA	
HB 1040	Closing DB Plan	Closing DB Plan (eff. 12/31/24)	Legislative Management: Weisz, Bosch, Boschee, Lefor, Mitskog, Vigesaa, Burckhard, Klein, Piepkorn, Schaible, Wanzek	1/13 - 8:30a.m.	House GVA	
HB 1088	SIB	SIB Membership changes	Government and Veterans Affairs: Schauer, Satrom, Bahl, Cory, Hoverson, Johnson, Karls, Louser, McLeod, Rohr, Schneider, Steiner, Vetter	1/12 - 10:15am	House GVA	
HB 1147	Legacy Earnings	Creating a county and township bridge fund from legacy earnings	Rep. Thomas, Rep. Anderson, Rep. Hagert, Rep. Lefor, Rep. Mitskog, Rep. Monson, Sen. Myrdal, Rep. Pyle, Sen. Sorvaag, Rep. Stemen, Sen. Vedaa	1/18 - 10:30am	House Approps	
HB 1150	Veteran Exemption for TFFR	Allows veterans with at least 20 years of military service to opt out of the TFFR in their first year of teaching	Thomas, Bekkedahl, Heinert, Meyer, O'Brien, Pyle, Richter, Ruby, Schaible, Schreiber-Beck, Vedaa	1/16 - 4:00pm	House Education	
HB 1183	PERS retirement for law enforcement	Amends description of participants.	Rep. Porter, Sen. Axtman, Rep. Dockter, Rep. Heinert, Rep. Karls, Rep. Kasper, Sen. Larson, Rep. Louser, Rep. Motschenbacher, Rep. Ostlie, Rep. Ruby, Rep. Schauer	1/20 - 8:30am	House GVA	
HB 1201	Employee recruiting	Prohibiting a state entity from employing an individual under contract with a school district	Reps. Heinert, Hauck, Koppelman, Meier, Porter, M. Ruby, Toman Sens. Larsen, Meyer, Schaible	1/18 - 2:00pm (3rd)	House Education	
HB 1216	ND Development Fund	Commerce Dept. funds to promote economic development.	Rep, Nathe	1/16- 9:00am	House IBL	
HB 1219	TFFR	TFFR Changes	Reps. Kempenich, Conmy, Kreidt Sen. Schaible	1/20 - 9:15am	House GVA	

HB 1227	Legacy Fund	Requiring a cost-benefit analysis for a measure or policy affecting the Legacy Fund.	Reps. Kempenich, Bosch, Cory, Mock, Swiontek, Thomas, Vigesaa Sens. Klein, Meyer, Patten	1/18 - 9:00am	House Finance & Tax	
HB 1251	Salaries for school superintendents	Capping salaries for school superintendents	Rep. Ruby, Sen. Cleary, Rep. Heilman, Rep. Heinert, Sen. Hogue, Sen. Krebsbach, Sen. Kreun, Rep. Lefor, Sen. Meyer, Rep. Schreiber-Beck		House Education	
HB 1271	TFFR	Opt-out for retired teachers returning to service from having to contribute to TFFR	Reps. Schatz, Hauck, D. Ruby, Strinden Sen. Myrdal		House Education	
HB 1278	SIB	Requiring contracts with custodians/managers include required written support of fossil fuel and ag industries in state.	Reps. Satrom, Grueneich, Headland, Lefor, S. Olson, Ostlie, Schauer, Steiner Sens. Conley, Wanzek		House GVA	
HB 1283	Financial Industry	Impacting and creating a list of banks that develop stances on ESG	Rep. Novak, Rep. Dyk, Rep. Kempenich, Rep. Lefor, Sen. Myrdal, Sen. Rummel, Rep. Steiner, Rep. Tveit	1/17- 2:30pm	House IBL	
HB 1285	Agency	Prohibiting executive branch agency bill submissions without legislator or legislative committee sponsor.	Reps. Toman, Christensen, Heilman, Henderson, Prichard		House GVA	
HB 1309	PERS	Plan design changes for law enforcement	Rep. Boschee, Sen. Braunberger, Sen. Cleary, Sen. Dever, Rep. Heinert, Rep. Martinson, Rep. Nathe, Sen. Roers, Rep. Ruby, Rep. Schneider		House GVA	
HB 1321	PERS Board	Changing PERS Board makeup	Reps. Kasper, Dockter, Lefor, Louser, D. Ruby, M. Ruby, Steiner, Vigesaa, Weisz Sen. Hogue	1/18 - 2:30pm	House IBL	
HB 1345	Procurement	All coontracts between a state entity and a vendor must include a provision of the vendor supporting the state's agriculture and energy industries	Reps. Satrom, Grueneich, Hagert, Headland, Kiefert, Ostlie, Steiner Sen. Conley, Erbele, Lemm, Wanzek	1/20 - 9:00am	House Agriculture	

HB 1347	Banking	State treasurer and financial institutions engaged in boycotts of energy companies	Reps. Satrom, Grueneich, Ostlie, Schauer, Strinden Sens. Clemens, Conley	1/18 - 2:30pm (4th)	House IBL	
HB 1368	Investments	Prohibiting investments and contracts with companies that boycott Israel.	Reps. K. Anderson, Bellew, M. Ruby, Strinden, Timmons, Tveit Sens. Clemens, Kannianen, Myrdal		House IBL	
HB 1379	Legacy Earnings Streams	Modifies Legacy Fund Earnings streams	Reps. Lefor, Bosch, Dockter, Headland, Nathe, Novak, O'Brien Sens. Bekkedahl, Hogue, Rummel, Sorvaag		House Approps	
HB 1400	Investing Land Assets	Allows Land to use SIB for Investment purposes			House IBL	
SB 2022	Budget bill	RIO's Budget	Senate Appropriations	1/19 - 10:00am	Senate Approps - Human Resources	
SB 2070	Teacher Permitting	Extends the length of time non-certified teachers can be permitted	Senate State and Local Govt - Roers, Barta, Braunberger, Cleary, Estenson, Lee	1/17 - 2:00pm	Senate Education	
SB 2164	PERS Board	Changing how legislative members of PERS Board are appointed	Sen. Dever Reps. Brandenburg, Hatlestad, D. Johnson, Monson, Schauer	1/19 - 9:30am	Senate State & Local	
SB 2165	Energy Commission	Funds to clean sustainable engery fund/ BND	Sen. Patten, Rep. Bosch, Sen. Kannianen, Sen. Kessel, Rep. Novak, Rep. Porter	1/19-10am	Senate Energy and Natural Resources	
SB 2196	Infrastructure Revolving Loan Fund	Resets terms of the infrastructure revolving loan fund.	Sen. Patten, Sen. Beard, Sen. Bekkedahl, Sen. Kannianen, Rep. Olson, Rep. Richter	1/19-10:30am	Senate Energy and Natural Resources	
SB 2220	Legacy Earnings	Adding a Housing Incentive Fund bucket to Legacy stream	Sens. Kreun, Barta, Hogan, Mathern Reps. Ista, O'Brien		Senate Finance & Taxation	
SB 2233	BND	Auditing practices of certain funds under management of BND	Sen. Klein, Sen. Bekkedahl, Sen. Hogue, Rep. Lefor, Rep. Vigesaa		Senate IBL	
SB 2239	PERS Plan	Changing PERS contribution rates and appropriating $250M to the fund	Sens. Cleary, Dever Rep. Boschee		Senate State & Local	
SB 2258	TFFR	Expands scope of Critical Shortage area qualification for rehired retirees	Sens. Paulson, Beard Reps. Heilman, Hoverson, Louser		Senate Education	
SB 2330	Legacy Fund	Legacy earnings definition and change in Legacy Fund IPS percentages.	Sens. Klein, Hogan, Meyer Reps. Bosch, Kreidt		Senate IBL	

Jan Murtha, JD, MPAP – Executive Director
Chad Roberts, MAc – Deputy Executive Director/Chief Retirement Officer
Scott M Anderson, CFA, MBA – Chief Investment Officer
Ryan Skor, CPA, MBA – Chief Financial Officer/Chief Operating Officer

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Be Legendary.

1

NORTH DAKOTA RETIREMENT AND INVESTMENT SUPPORTS TWO SPECIAL FUND PROGRAMS

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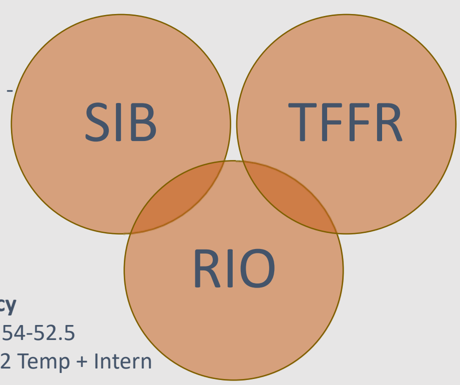
RIO was established in 1989 to coordinate the activities of the State Investment Board (SIB) and the Teachers' Fund for Retirement (TFFR). The SIB is the oversight board for RIO and TFFR Board is responsible for the administration of the TFFR benefits program.

State Investment Board -
Investment Program
NDCC Ch. 21-10
~$18 Billion in AUM
As of 10/31/22



Teachers' Fund For Retirement –
ND Teachers' Retirement Program
NDCC Ch. 15-39.1
~$3.0 Billion in Fund Assets
Over 21,000 active and retired members and beneficiaries

RIO Agency
NDCC Ch. 54-52.5
25 FTEs + 2 Temp + Intern

2

2

RETIREMENT AND INVESTMENT'S CORE PRIORITIES

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Engaging our Workforce:
Growth Mindset
Remote/Hybrid Office
Governance/Change Initiatives

3

3

STRATEGIC – HORIZON BASED TRANSFORMATION

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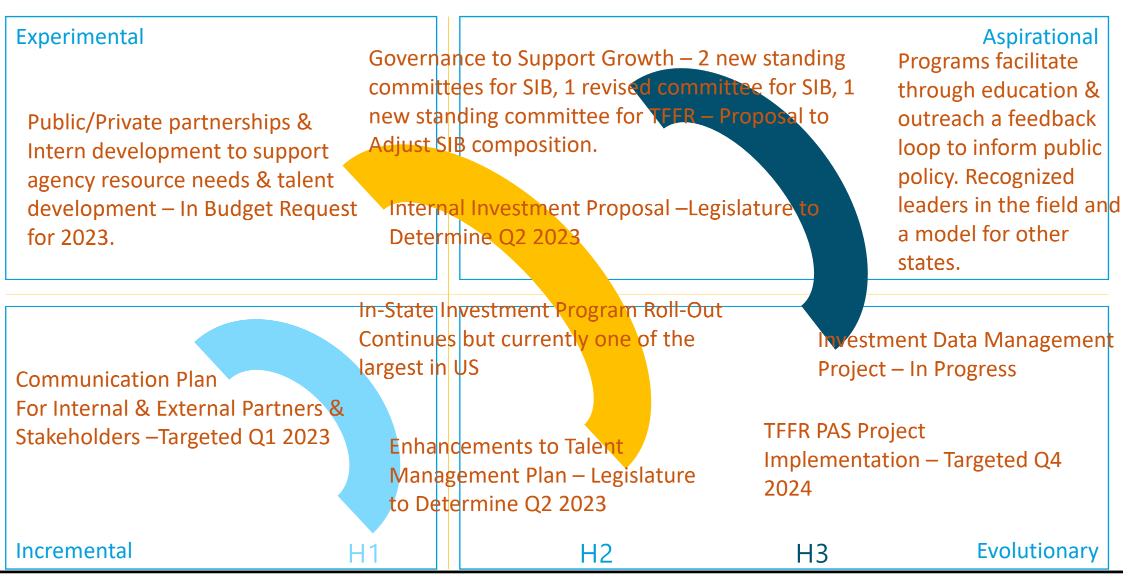

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STATE INVESTMENT BOARD – INVESTMENT PROGRAM

- State Investment Board (SIB) has the statutory responsibility for the administration of the investment program of several funds including:
  - TFFR, PERS, WSI, Legacy Fund
- SIB also maintains contractual relationships for investment management with multiple political subdivisions and governmental funds

- Currently nearly $19 Billion in Assets Under Management (AUM)
- 28 client funds
- 43 fund managers

Fund/Pool	AUM (11/30/22)
Pension Pool	$7.06B
Insurance Pool	$2.89B
Legacy Fund	$8.58B
Other Funds	$0.24B

5

5

TEACHERS' FUND FOR RETIREMENT

- Qualified defined benefit public pension plan for North Dakota public school teachers and administrators providing them with a foundation for retirement security.

- 11,800+ Active Members
  - 16.4% increase over past decade
- 9,400+ Retired Members and Beneficiaries
  - 26.0% increase over past decade
- ~$3.0B Fund balance

- On-track to be 100% fully funded by 2044

- New Pension Administration System in development (est. Q4 2024)

6

6

BUDGET REQUEST SUMMARY

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Line Item	Base Level	Cost to Continue/ Other Adj.	Executive Pay Package	Adjusted Base	Workforce Initiative	Pension System Upgrade	Internal Investment*	Total Request
Salaries & Benefits	$6,785,839	890,933	549,864	8,226,636	578,491	486,000	1,404,996	$9,035,591
Operating Expenses	1,323,528	(37,000)		1,286,528	200,250	1,116,319	266,840	3,006,937
Contingencies	100,000	(100,000)		-	200,000	-	-	200,000
Total Special Funds	**8,209,367**	**753,933**	**549,864**	**9,513,164**	**978,741**	**1,602,319**	**1,671,836**	**12,242,528**
(Included in Exec. Recom.)					349,012	1,552,319	-	
FTEs	25.0	-	-	25.0	2.0	-	7.0	34.0

* Amounts represent only 2nd year of biennium.
Requires authorization for performance pay within internal investment plan.

Estimated cost savings = $16M+/year

7

7

RIO AGENCY INITIATIVES

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WORKFORCE – ORG CULTURE - CONTINUE

INCREMENTAL

TO

EVOLUTIONARY

TFFR “PIONEER” PROJECT - COMMIT

INTERNAL INVESTMENT - EVOLVE

8

8

ORGANIZATION CULTURE – WORKFORCE INITIATIVE

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SALARIES
- ED/CIO SPLIT AND OTHER AGENCY RE-ORGANIZATION INCLUDING ACCOUNTING MANAGER, CFO-COO.
- Support Intern Program.

SUPPORT
- 1 ADDITIONAL ADMIN TO SUPPORT NEW INVESTMENT FTE'S.
- CURRENTLY HAVE 3 FULL TIME AND 1 TEMP PART-TIME TO SUPPORT 17.
- 1 ADDITIONAL FISCAL OPERATIONS POSITION TO FACILITATE INVESTMENT OPERATION ENHANCEMENTS.

CERTS.
- COST OF PROFESSIONAL CERTIFICATIONS THAT ARE EITHER REQUIRED OR ENCOURAGED TO PERFORM DUTIES
- SUPPORT HIGH PERFORMANCE AND GROWTH MINDSET.

INFLATION
- COST OF TRAVEL, TRAINING, AND SUPPORT OF A HYBRID/REMOTE WORKPLACE.

CONTINGENCY
- REQUEST FOR CONTINGENCY FUNDS.

9

9

INFRASTRUCTURE/TECHNOLOGY ENABLED PROCESSES- TFFR PIONEER PROJECT INITIATIVE

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2022

TEMP STAFF TO ASSIST WITH MANUAL PROCESSES UNTIL NEW SYSTEM LAUNCH.

IMPROVED DEATH AUDITING FUNCTION.

2023

START OF SUBSEQUENT ONGOING SYSTEM MAINTENANCE COSTS.

INCREASED NDIT SUPPORT COSTS.

2024

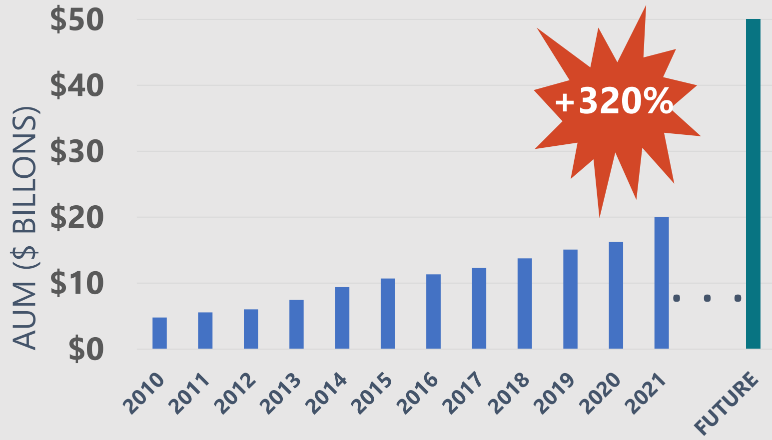
ANTICIPATED LAUNCH IN 4TH QUARTER, 2024.

POST LAUNCH: ROI REALIZED.

10

10

ASSETS UNDER MANAGEMENT GROWTH



11

11

INTERNAL INVESTMENT/ TALENT MANAGEMENT

- LOWER COST THAN WITH EXTERNAL MANAGERS
- APPLIED WHERE THERE IS A COST/BENEFIT
- ENABLES ENHANCED LIQUIDITY MANAGEMENT, REBALANCING AND EXPOSURE MANAGEMENT

12

12

THE BENEFIT SCALES WITH THE SIZE OF THE COMMITMENT

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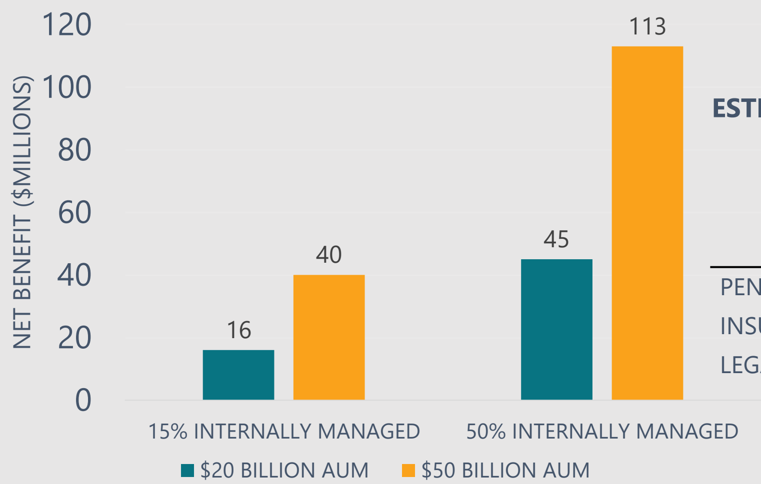

ESTIMATED ANNUAL SAVINGS PER YEAR ($20 BILLION AUM)

	15% OF ASSETS		50% OF ASSETS	
PLAN	$(MIL)	%	$(MIL)	%
PENSION	$6	0.08%	$16	0.23%
INSURANCE	$3	0.10%	$8	0.26%
LEGACY	$7	0.09%	$21	0.25%

13

13

THE COST OF THE PROGRAM IS LOW WHEN COMPARED TO THE FEES IT REPLACES

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PROGRAM COST

+0.07%

INCLUDES TOTAL REWARDS AND INFRASTRUCTURE

CURRENT COST

+0.28%

DOMESTIC EQUITY

+0.35%

INVESTMENT GRADE FIXED INCOME

14

14

MINIMAL REQUIREMENTS WHEN COMPARED TO THE BENEFITS[1,2,3]

5 INVESTMENT PROFESSIONALS[1]:
2 X SENIOR PORTFOLIO MANAGERS
3 X INVESTMENT ANALYSTS
2 X INVESTMENT OPS

TALENT MANAGEMENT:

- ADEQUATE CLASSIFICATION OF ROLES
- INCENTIVE COMPENSATION FUNDED ON A CONTINUING BASIS (Ex: OHIO, WISCONSIN, SOUTH DAKOTA, NORTH CAROLINA)

THE STRATEGY AND STRUCTURE WOULD EVOLVE WITH THE SIZE OF THE PROGRAM

1. The cost of staff is estimated to be approximately 10% of the total net cost savings.
2. Positive Client Fund feedback.
3. Supports greater control over investment strategies.

15

15

ESTIMATED TOTAL COSTS FOR INVESTMENTS (INCLUDES CONTINUING APPROPRIATIONS)

	CURRENT		INTERNAL INVESTMENT		TOTAL	
$MILLIONS/BP[1]	$[2]	PER $AUM	$[3]	PER $AUM	$	PER $AUM[4]
SALARIES/BENEFITS	2.6	1.4	1.4	0.7	4	2.1
OPERATING COSTS	0.9	0.5	0.8	0.4	1.7	0.9
TOTAL	3.5	1.9 BP	2.2	1.2 BP	5.7	3.0 BP
NET SAVINGS					16	8.5 BP

1. ONE BASIS POINT (BP) = 0.01%
2. INCLUDE $750,000 OF CONTINUING APPROPRIATIONS
3. INCLUDE ESTIMATED $500,000 OF CONTINUING APPROPRIATIONS
4. THE 3 BP OF TOTAL COST COMPARES TO 60 BP OF FEES TO EXTERNAL MANAGERS

16

16

SOME ADDITIONAL BENEFITS

- IMPROVED INVESTMENT CAPABILITIES VERSUS OUTSOURCING THOSE CAPABILITIES
- SCALABLE SAVINGS THAT GROW WITH THE ASSETS UNDER MANAGEMENT
- ADDITIONAL FLEXIBILITY AND AGILITY TO MARKET OR INTERNATIONAL EVENTS AS THE ASSETS ARE CONTROLLED LOCALLY
- ATTRACTION OF TOP TALENT WITH A REMOTE HYBRID WORKFORCE AND THE ABILITY TO MANAGE SOME ASSETS INTERNALLY
- ATTRACTION OF LOCAL TALENT FROM UNIVERSITIES USING INTERNSHIP PROGRAMS - BOOTSTRAPPING A MARKET FOR INVESTMENT TALENT IN NORTH DAKOTA

17

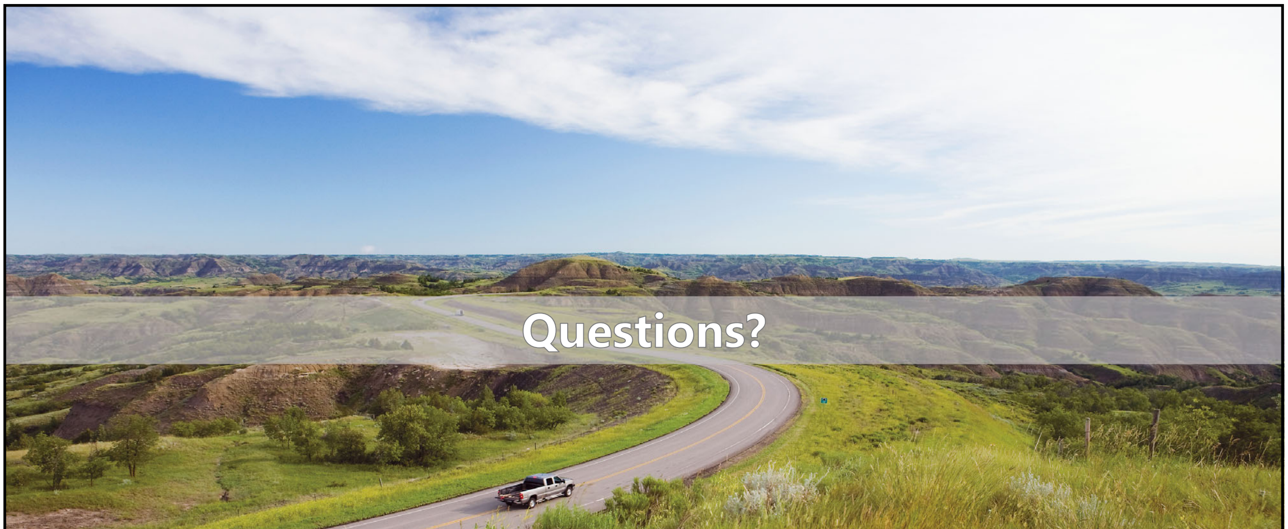
17

EXAMPLE STATES WITH INTERNAL INVESTMENT MANAGEMENT AND INCENTIVE COMPENSATION

ARIZONA
FLORIDA
NEW MEXICO
NORTH CAROLINA
OHIO
SOUTH DAKOTA
TEXAS
VIRGINIA
WISCONSIN

18

18



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19

Senate Bill 2258
North Dakota Retirement and Investment Office (RIO) on behalf of the Teachers' Fund for Retirement Board of Trustees
Neutral Testimony related to SB 2258 before the Senate Education Committee
Senator Jay Elkin, Chair
Senator Todd Beard, Vice Chair

Chad Roberts, MAc – Deputy Executive Director – Chief Retirement Officer

I. Introduction

The Retirement and Investment Office (hereinafter "RIO") was created by the 1989 Legislative Assembly to capture administrative and investment cost savings in the management of the investment program of the State Investment Board (SIB) and the retirement program of the Teachers' Fund for Retirement (TFFR). Statutory authority for the agency is found in North Dakota Century Code chapter 54-52.5 and the programs are governed by chapters 21-10 (SIB) and 15-39.1 (TFFR).

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

The plan covers North Dakota public school teachers and administrators. Benefit funding comes from member and employer contributions (43%) and investment earnings (57%). During the past decade, active membership has increased 16.4% from 10,138 to over 11,800 participants, while retirees and beneficiaries have increased 26.0% from 7,489 to over 9,400.

Our 2022 actuarial valuation projects the TFFR plan to reach 100% fully funded status by 2044. The successful funding path is largely attributable to the statutory changes to the plan, including the creation of a tiered benefit structure and increase in contributions passed by the Legislature in 2011.[1]

II. Neutral Testimony relating to SB 2258

The TFFR Board of Trustees believes that defined benefit plans provide a valuable recruitment and retention tool for government entities when managed correctly and funded appropriately. TFFR employers are largely school districts which employ both TFFR and Public Employee Retirement System (PERS) members. The TFFR Board recognizes that public pension reform is a major topic under consideration by the 68th Legislative Assembly. In addition to numerous bills addressing the NDPERS plan, there are several bills currently under consideration in both the House and the Senate to modify and/or alter the TFFR plan. The pending bills affecting TFFR are this bill; S.B. 2258; as well as H.B. 1219, H.B. 1150, and H.B. 1271. Each of these bills address

[1] H.B. 1134, 62nd N.D. Legislative Assembly (2011-2013).

different aspects of the TFFR program. Of note and importance in the consideration of S.B. 2258 is that in each of these bills there is an attempt to address the critical shortage of teachers in North Dakota. However, with each of these bills also comes an impact to the TFFR program and the path to attain fully funded status.

Presently the plan provides two options for retired teachers desiring to return to the classroom. The options may generally be referred to as: 1) the Annual Hour Limit Option and 2) the Critical Shortage area option. Option #1 – the Annual Hour Limit Option, applies to any teacher who retires and and subsequently returns to teach after thirty (30) days and less than one year. Such a teacher may continue to receive their retirement benefit so long as they work under the annual hour limit. In the event they exceed the annual limit set forth in code, their retirement benefit will be suspended until such time as they re-retire. Under Option #2 – the Critical Shortage area option – a teacher must be retired and not return to teach for at least a year to qualify. If they do qualify then after a year, they may return to teach in a critical shortage area without any hour restriction and still receive their retirement benefit. The Education Standard Practices Board (ESPB) defines what areas constitute critical shortage areas every year. Currently ESPB defines all areas of instruction (except administration) as critical shortage areas. Under either option, the employer must contribute the employer portion to the TFFR plan, and the member the member portion. The teacher, upon re-retiring, is not entitled to a recalculation of their monthly benefit based upon additional service credit or the new salary for re-employment period, unless they return to teach full time under Option #1 – Annual Hour Limit, have their retirement benefit suspended, and continue to teach for at least two more years.

This bill, S.B. 2258, will affect the plan by: removing the waiting period of one (1) year prior to qualifying for Option #2 – Critical Shortage Area and returning to teach in a critical shortage area, as defined by ESPB. Upon returning to a critical shortage area, the teacher will continue to receive their monthly benefit in addition to the salary for the position filled. The teacher must contribute the employee portion of the salary to the TFFR Fund. The employer must also contribute the employer portion of the salary to the TFFR fund. Upon returning to retirement, the teacher is not entitled to a recalculation of benefits based on the new service credit time or salary earned.

There is a competing bill to S.B. 2258 in the House of Representatives, H.B. 1219. Under H.B. 1219, which is supported by the TFFR Board of Trustees, a retired teacher electing to return to teach after 30 days under Option #1 – Annual Hour limit, a teacher who exceeds the annual hour limit and has their retirement benefit suspended will get the benefit of all of their additional service upon re-retirement; ie a teacher will not have to work for an additional two years before having their retirement benefit recalculated, rather any additional service will be incorporated and result in an increased benefit upon re-retirement. For example, if a retiree averaging a $60,000/year salary for their last three years of service, and receiving a monthly benefit of $2,500.00, returns to teach for two years at a salary of $70,000.00 under the provision for recalculation in H.B. 1219, then upon re-retirement their monthly benefit may increase to $2,999.99 per month.

When considering the implications of S.B. 2258, it is important to consider the other bills pending this session that will impact the TFFR program. Below is a table summarizing the changes proposed to the TFFR program:

Bill Number	Proposed Changes to TFFR plan	Actuarial Impact of Proposed Changes
SB 2258	• Allows a teacher receiving retirement benefits to return to teaching in a critical shortage area with no waiting period after retirement. • Allows a teacher to continue receiving their monthly benefit payment while re-employed. • Requires teacher to contribute employee portion of earnings to TFFR plan. • Requires employer to contribute employer portion of earnings to TFFR plan. • Does not allow a recalculation of benefits for additional service credit or new salary.	• Increases actuarial determined contribution rate by 0.09% to 12.21% • Increases unfunded accrued actuarial liability by $9.2 million on AVA and FVA basis. • Increases remaining time until reaching fully funded status from 19.4 years to 19.6 years.
HB 1150	• Allows exemption for participation in TFFR plan for qualified teachers with 20+ years of military service. • Qualified teacher must choose to opt out of plan during first year and choice cannot be changed.	• Increased administration cost of $5,000 for biennium to track and administer exempted person. • Increases remaining time until reaching fully funded status by one week. • Reflects a change in public policy that allows for exemptions to participate in TFFR plan.
HB 1219	• Section 7 in the bill allows for a recalculation of benefits upon re-retirement under the Annual Hour Limit option. • Retired teacher must contribute the employee portion of the salary to the TFFR fund. • Employer must contribute employer portion of salary to the TFFR fund • Also contains technical corrections to clarify existing plan provisions.	• Increases remaining time until reaching fully funded status by one month. • Incentivizes retired teachers to return to the classroom and continue to work for an increased benefit.

HB 1271	• Allows retired teachers returning to teach to **opt out** of contributing to the TFFR plan, as a result of a teacher opting out employers also **do not** contribute to the plan on behalf of the teacher. •	• Significant negative impact to the TFFR plan; actuarial analsysi indicates that if HB 1271 were to pass then the TFFR plan would never achieve 100% fully funded status.

In addition to these public policy implications there is an actuarial and fiscal impact to the fund and its administration. Our actuaries estimate that the enactment of S.B. 2258 as it is written would result in adding $9.2 million to the unfunded liability of the plan and an additional 0.2 years until reaching fully funded status.

III. Summary

The TFFR Board recognizes the need to attract retired teachers back to the classroom to assist in mitigating vacancies in critical shortage areas. In H.B. 1219, a bill supported by the TFFR Board, the importance of providing an incentive to retired teachers was evidenced by the recommended changes in the program to allow a recalculation of monthly benefits to include additional service credit and the new salary for the reemployment period. If S.B. 2258 progresses through the legislative process, H.B. 1219 would need to be amended to remove the language changes in section 7 addressing this area. The TFFR Board has taken a neutral position on S.B. 2258.

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Via Email

January 21, 2023

Janilyn Murtha
Deputy Executive Director/Chief Retirement Officer
ND Retirement & Investment Office
3442 E. Century Avenue
Bismarck, ND 58507-7100

Re: Actuarial Impact Analysis of Senate Bill No. 2258

Dear Jan:

As requested, we prepared an actuarial impact analysis for the North Dakota Teachers' Fund for Retirement (TFFR or Fund), regarding the proposed modifications to current TFFR provisions under Senate Bill No. 2258 (SB 2258). Under current law, a retired teacher may return to active service in a critical shortage area without losing any benefits after receiving a retirement annuity for at least one year. This bill would allow to return to active employment in critical shortage areas and disciplines immediately (under certain conditions) without losing any benefit if a school district has an unfilled position in a critical shortage area.

The proposed bill requires the retired teachers to pay the member contributions under Section 15-39.1-09. These member contributions will be included in the retired member's account value and may not be refunded except as provided under Section 15-39.1-17. In addition, the period of service will not be considered an additional benefit accrual. Also, the participating employers are required to pay contributions on behalf of the rehired retirees.

Summary of Actuarial Impact

The actuarial cost associated with SB 2258 will depend on the retirement behavior and demographics of eligible active teachers who choose to retire earlier than expected in order to return to work with no suspension of retirement benefits while receiving a salary. Approximately 100 unfilled positions, on average, in critical shortage areas and disciplines exist each school year. The effect of SB 2258 is modeled by assuming active members eligible for unreduced retirement retire at higher rates to fill these open positions over a number of years. For purposes of this analysis, we assumed the number of expected retirements increases by approximately 100 in the first year, with a slight increase in additional retirements per year thereafter, assuming that the bulk of these positions remain filled going forward.

As of July 1, 2022, the estimated impact is shown in the table below.

	Valuation	SB 2258	Increase/ (Decrease)
Actuarially determined contribution rate	12.12%	12.21%	0.09%
Actuarial Accrued Liability (AAL)			
Retired participants and beneficiaries	$2,606.5	$2,606.5	$0.0
Inactive vested members	133.5	133.5	-
Active members	1,722.4	1,731.6	9.2
Inactive vested members due a refund of employee contributions	17.6	17.6	-
Total AAL	4,480.0	4,489.2	9.2
Total normal cost	98.8	98.9	0.1
Fair value of assets (FVA)	$3,023.9	$3,023.9	$0.0
Actuarial value of assets (AVA)	3,133.0	3,133.0	-
Unfunded AAL based on FVA	$1,456.1	$1,465.3	$9.2
Funded percentage on FVA basis	67.5%	67.4%	(0.1%)
Unfunded AAL based on AVA	$1,347.0	$1,356.2	$9.2
Funded percentage on AVA basis	69.9%	69.8%	(0.1%)
Effective amortization period on an AVA Basis	19.4	19.6	+0.2 years
Projected Annual Payroll for Fiscal Year Beginning July 1	$810.0	$810.0	$0.0

$ in Millions

Change in Plan Costs

If adopted, SB 2258 would slightly increase the active Actuarial Accrued Liability (AAL) by $9.2 million (an increase of 0.5% of active AAL). The funded percentage on an AVA basis would decrease by 0.1%. The Fund’s Normal Cost increases, from $98.8 million to $98.9 million. Because the magnitude of the increase in liabilities is relatively minor, the proposed bill would not have a significant impact on TFFR’s actuarial valuation.

The analysis of the proposed bill assumes that it will have no actuarial impact on deferred vested participants. That is because the actuarial valuation already assumes that 100% of deferred vested participants retire at their earliest available unreduced retirement age.

Data, Methods and Actuarial Assumptions

The ND Retirement & Investment Office provided information that there are approximately 100 unfilled positions, on average, in critical shortage areas and disciplines each school year.

To reflect the anticipated changes in retirement behavior, adjusted retirement rates were developed based on professional judgement. Rates of unreduced retirement for active members were adjusted uniformly in the first year after the valuation date to estimate the additional expected retirements (and subsequent return to active status) necessary to fill approximately 100 unfilled positions in critical shortage areas. In the second year and beyond, the rates of unreduced retirement were increased uniformly by a factor of 1.01 for all years to approximate additional expected retirements over time.

For purposes of this analysis, the impacts on plan liabilities and funding ratios are calculated using the actuarial assumptions and plan provisions described in the Actuarial Valuation Report and Review as of July 1, 2022, for TFFR, dated October 20, 2022, unless stated otherwise. The proposed legislation would not change the July 1, 2022, actuarial valuation results, and the impacts as of July 1, 2022, are used as a proxy for the effect on plan costs.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

Risk

This analysis uses one set of actuarial assumptions. Actual results will vary from the assumptions. The July 1, 2022, actuarial valuation report includes a discussion of various risks that apply to the Fund, and those risks also apply to this analysis.

Caveats and Certification

Use of this information is subject to the caveats and limitations of use described in the July 1, 2022, actuarial valuation report. This report has been prepared in response to a request from the North Dakota Retirement & Investment Office on behalf of the North Dakota Legislature.

The signing actuaries 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 herein.

Please let us know if you have any questions, comments, or concerns.

Sincerely,

Matthew A. Strom

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